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THE

BRITISH MEDICAL JOURNAL:

BEING THE

JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

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EDITED FOR THE ASSOCIATION BY

ERNEST HART.

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BRITISH MEDICAL JOURNAL:

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EDITED BY ERNEST HART, ESQ.

LONDON: SATURDAY, JULY 6, 1872.

ORATION
ON
HARVEY'S "EXERCISES ON GENERATION."

Delivered at the Royal College of Physicians, on June 26th.

By ARTHUR FARRE, M.D.Cantab., F.R.S.,
Physician-Accoucheur to H.R.H. the Princess of Wales; formerly Professor of Midwifery in King's College; etc.

PRESIDENT AND FELLOWS,—This day serves to recall an event which, two hundred and fifteen years ago, must have been the occasion of much sorrow to the Fellows of our College then assembled. On the 26th of June, in 1657, Harvey was carried to his grave, a long train of his friends and colleagues following far beyond the city walls.

But of Harvey dead it is not my purpose further to speak. Rather let us regard him as living still among us, in the records of his works, in the memory of the benefits which he conferred upon this College, and in the bright example of his character and mind. On any occasion on which the countrymen of Harvey meet, with the object of carrying out his expressed wish, that annually an oration should be delivered, no difficulty need be felt on the part of him who is appointed to that duty in finding a subject suitable to the purpose. And although, in accordance with custom, such address need have no reference to the founder, further than with a view of recalling his desire to mind, that the orator should "exhort the members of the College to study and search out the secrets of Nature by way of experiment", yet, should the speaker find in Harvey's works matter which may have been selected by himself for particular study and investigation, he would naturally take that subject as furnishing him with the best material. It is on this ground, therefore, that I have taken the subject of *Generation*, as exemplified in the celebrated *Exercises* of Harvey, which, although constituting by no means the more important of his two great works, yet forms the larger one, and that which, at the same time, is perhaps the least generally read. It does not appear, moreover, from an examination of former orations, that this subject has been selected before; so that here I have the advantage—if, indeed, it be an advantage—of occupying untrodden ground.

In order that we may the better understand Harvey's position, when he commenced these studies of which the ultimate fruit was his celebrated treatise on Generation, it is desirable to bear in mind the prevalent physiological doctrines of that day. Harvey found the teachers of this branch of physiology divided into two principal parties. According to the teaching of Aristotle, the principles of generation were the male and the female, she contributing the matter, he the form; and immediately after conception the vital principle, and the first particle of the future fœtus—namely, the heart, in animals having red blood—were formed out of the secretions of the uterus. On the other hand, the followers of Galen, with whom were the physicians, taught that the semen of both parents alike, combined, furnished the offspring, which resembled one or other according as this or that predominated, and that by virtue of such predominance it became either male or female.

Neither of these doctrines, however, gave satisfaction to Harvey, but the contrary. "That they are erroneous and hasty conclusions," he says, "is easily made to appear: like phantoms of darkness they suddenly vanish before the light of anatomical inquiry"; nor, he adds, "is any long refutation necessary, when the truth can be seen with one's proper eyes, where the inquirer, by simple inspection, finds everything in conformity with reason; and where, at the same time, he is made to understand how unsafe, how base a thing it is to receive instruction from others' comments, without examination of the objects themselves, the rather as the book of Nature lies so open, and is so easy of consultation."

That Harvey assigned to himself the path of direct observation, as the only one which could satisfy him, is rendered plain by what I have just quoted. And in what way, and by what reflections, he intended to sweeten his labour, appears further from other passages, in which he has recorded his thoughts in language so illustrative of his own mind and character, that I cannot resist giving this also. "Nor is there any just cause," says Harvey, "wherefore the labour should deter any one, and neither indeed would the way I propose be felt as so barren and lonely, but for the custom, or vice, of the age we live in, when men, inclined to idleness, prefer going wrong with the many to becoming wise with the few, through dint of toil and outlay of money. And truly in such pursuits it is sweet not merely to toil, but even to grow weary, when the pains of discovering are amply compensated by the pleasures of discovery. It were disgraceful, therefore, with this most spacious and admirable realm of nature before us, and where the reward ever exceeds the promise, did we take the reports of others upon trust, and go on coining crude problems out of these, and on them hanging knotty and captious and petty disputations. Nature is herself to be addressed; the paths she shows us are to be boldly trodden for thus, and whilst we consult our proper senses, from inferior advancing to superior levels, shall we penetrate at length into the heart of her mystery."

That Harvey designed to write a systematic work on generation upon a large scale cannot, I think, for a moment be questioned by any one who carefully examines these celebrated Exercises. But that the work which has come down to us under this title is not that complete one which Harvey had contemplated, and must at one time have hoped to finish, is, I think, equally removed from doubt. In fact, the seventy-two exercises of which the treatise mainly consists should be regarded rather as constituting the materials out of which a more perfect book should be constructed. Many circumstances appear to lend colour to this view, but more particularly the great unwillingness of the author to part with it in its present form.

This we learn from Sir George Ent, to whom, perhaps, we are indebted for its publication at all, or, at any rate, during Harvey's life, and who thus graphically describes the circumstances under which he became possessed of it. Having waited upon Harvey, who had then in a great measure retired from public life, Ent, after some introductory conversation, proceeds to unfold the object of his visit by representing to the great physiologist that the world was still looking for some further work from his hands. To this Harvey replies, "And would you be the man who should recommend me to quit the peaceful haven where I now pass my life, and launch again upon the faithless sea? You know full well what a storm my former lucubrations raised. Much better is it oftentimes to grow wise at home and in private, than by publishing what you have amassed with infinite labour, to stir up tempests that may rob you of peace of mind for the rest of your days." Ultimately, however, the persuasive power of Ent appears to have overcome the reluctance of Harvey, who, giving up his papers, consented to their publication, either immediately or at some future time. Ent, having thus accomplished his purpose, retires with Harvey's portfolio of notes under his arm, feeling, as he says, like another Jason, laden with the golden fleece; and, after eagerly examining the contents, he hastens to carry out his promise of undertaking the correction of the press, and ultimately of performing what he terms the "midwife's part", by ushering into the light "this product of his colleague's genius".

But here it should be remarked that these exercises bear no evidence of having been carefully revised by the author previous to publication. Indeed, it is obvious that this was not the case; otherwise numerous continually recurring passages would have been omitted or abbreviated, and statements which appear in a certain sense to be antagonistic to each other would doubtless have been reconciled or explained. On account of this omission, which is the more to be regretted in a work bear-

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ing evidence of much devoted labour, and of the application to it of a mind of great power, very considerable and almost insuperable difficulties are sometimes encountered in the attempt to arrive at the author's precise meaning in regard to certain important particulars of which he treats.

Harvey commences his work on the generation of animals with the study of the egg; and, after explaining what he understands by an egg, he proceeds to select two examples which are marked out for special investigation.

The egg of the common fowl being readily obtainable, and admitting of comparatively easy observation, this is selected as Harvey's first study. But this particular path had been already trodden by two previous observers; viz., Aristotle among the ancients, and Fabricius of Aquapendente among more recent authors. Neither of these, however, had carried their observations to an extent sufficient to satisfy Harvey's mind, and accordingly we find him setting to work, and by his own labours endeavouring to supply what appeared to be wanting in the observations of either or both of these.

After devoting no fewer than sixty-two exercises to this special object, he proceeds to select a second example from the viviparous class; not, however, without first pointing out the artificial nature of the distinction between oviparous and viviparous reproduction. He asserts that such a division does not satisfy him, inasmuch as all animals whatsoever may be said, in a certain sense, to proceed from ova, and are entitled respectively oviparous or viviparous, rather in respect of their mode of bringing forth than of their first formation.

The second example chosen is from the viviparous class—and here he had advantages which neither of his predecessors possessed; for the liberality of the King, his master, had placed at his disposal the costly occupants of the Royal Parks, and from these he was permitted to select as many examples as might serve his purpose. Of this privilege Harvey fully availed himself; and to this opportunity we are indebted for those valuable and original observations on the gestation of the hind and doe which constitute some of the most valuable portions of Harvey's work. Interwoven with these observations, we find constant reference to the doctrines of Aristotle and of Fabricius, together with occasional quotations of the opinions of others; and when to these are added the speculations of Harvey himself, which we find scattered through every portion not only of the exercises but also of the four additional essays with which the work concludes, we shall have enumerated the leading features of Harvey's remarkable and most interesting treatise. Remarkable and most interesting it may well be termed, when we consider the circumstances under which its composition was attempted; for scarcely were any of the facts yet discovered upon which a consistent theory of generation might be based. Not one, indeed, of the main points which constitute the foundation of our present views regarding the physiology of this subject, had yet been ascertained. A long interval had still to be bridged over before the first of these elementary facts was fully established. And when now, looking back upon the past, we see with what persevering industry, and by what a long series of observation, conducted by many fellow-labourers, or rather by many labourers working in the same direction, the knowledge which we now possess has been gradually and slowly acquired, and contrast this with the comparative ignorance—it might almost be said the absolute darkness—which prevailed in Harvey's day, we may well contemplate with admiration the courage and energy of the man who, in the face of such difficulties, could assign to himself the task of composing a systematic work on the subject of generation.

Nor must we forget that the microscope, infinitely the most important instrument of research now possessed by physiologists, was at this period practically unknown. We do, indeed, find indications of some simple inventions with which magnifying power must have been associated, though they may not, perhaps, have been used for optical purposes, at a very early date indeed; and possibly of this nature were those burning glasses to which Aristophanes, in his comedy of *The Clouds*, makes reference. Moreover, lenses, such as are now used by engravers, are said to have been found in the ruins of Herculaneum. And even Harvey himself had some knowledge of magnifying or burning glasses; for, in speaking of different modes of producing fire, he says, "Nor even is a spark necessary, since by the solar rays transmitted through a small piece of glass, and concentrated to a focus, fire may be immediately produced, and the largest things be set on flames." But down to a period ten years later than Harvey's death, when the discovery of the spermatozoa was first announced by Leeuwenhoek, the microscope was so little known, and, even when known at all, existed in such an imperfect form, that Leeuwenhoek found it necessary to construct with his own hands not only the lenses, but even the framework of the very primitive instruments with which he conducted his observations.

One other point may also be noticed with reference to Harvey's original design. His observations were not limited to the vertebrate series, from which he had selected the two typical examples just named, but they were also extended to the invertebrates. This we may gather from several passages occurring in his work, but more particularly from the statement which he made to Ent as one ground of objection against parting with his papers—namely, that they must be held to be imperfect, as not containing his investigations on the generation of Insects—a class which is second to none in the whole range of the animal kingdom for the information which it affords in the study of this process. Harvey appears to have bestowed much care upon these, and his distress at the loss of them was correspondingly great. As Aubrey describes it, "they contained many curious observations; but these, together with his goods at his lodgings at Whitehall, were plundered at the beginning of the Rebellion; and he often said that, of all the losses he sustained, no griefe was so crucifying to him as the losse of these papers, which for love or money he could never retrieve or obtain." This, indeed, is the only point upon which we find, throughout Harvey's exercises, any expressions of this kind uttered by himself. Something in the course of his observations having occurred to him, upon which he desired to get further information, he refers to the circumstance noticed by Aubrey in the following touching expressions. "Whilst I speak of those matters, let gentle minds forgive me if, recalling the irreparable injuries I have suffered, I here give vent to a sigh. This is the cause of my sorrow. During our late troubles, and more than civil wars, certain rapacious hands stripped not only my house of all its furniture, but, what is subject of far greater regret with me, my enemies abstracted from my museum the fruits of many years' toil; whence it has come to pass that many observations, particularly on the generation of insects, have perished."

From this brief reference to the general scope and purpose of Harvey's work on generation, I pass on to notice more particularly some of its leading features, and to compare them with the established facts and doctrines of the present time; and, if any apology be needed for the tracing out of these in a certain historical order, I trust it will be found in the fact that many of our present views can be shown to have their representatives in the doctrines of a past age; and that what we occasionally regard as discoveries have been anticipated, in thought at least, by many of our predecessors. And, by way of introduction, I will proceed to consider what were Harvey's views in regard to the commencement of animal life. The dictum, "Omne animal ex ovo," or, as often quoted, "Omne vivum ex ovo," is commonly ascribed to Harvey; but, if any one desire to find in the exercises this phrase, in the aphoristic shape here quoted, he will, I think, be disappointed. There can be no question that the expression "omne vivum ex ovo" serves to represent in general terms the particular doctrine which it was a main purpose of Harvey to teach. It cannot, however, be said to be his exclusive doctrine, since he frequently uses certain qualifying phrases. Nor is it quite clear that he is averse from admitting the possibility of so-called spontaneous generation; as, for example, in the twenty-eighth exercise, where he says that "some animals arise spontaneously, or, as is commonly said, by putrefaction."

But, not to dwell here upon this last subject, to which, if time permit, I hope to return later on, we may proceed to inquire what Harvey understood by an egg. It would be easy to select passages illustrative of each of the particulars just noticed; but no single one, perhaps, could be found more generally representing his views than the following, taken from his sixty-third exercise. After referring to the statement of Fabricius that the greater number of animals are engendered from eggs, he says, as it were impatiently: "Now we, at the very commencement of our observations, affirmed that *all* animals are, in a certain manner, produced from eggs; for in the same sense and order in which a chick is formed and developed out of an egg, equally in the same manner is the fœtus of viviparous animals engendered from a pre-existing conception. Both species of generation constitute one and the same thing; and the beginning of either is termed an egg, or at least something which by analogy may be so regarded." And then he goes on to say, "For it is generally admitted, and is indeed manifest, that all embryos, even of man himself, are procreated from some conception or a certain primordium. And the matter stands thus: that which in things arising spontaneously is a primordium, in plants is seed, and in oviparous animals an ovum."

Further, it is a prominent feature in the work of Harvey, that he held the doctrine of epigenesis, of which he was one of the earliest advocates, against that of metamorphosis, in the sense in which it was maintained by Fabricius, as well as that of evolution or preformation, the favourite doctrine, more especially of a later time. Harvey leaves us in no doubt as to what he means by epigenesis. In his forty-fifth and fifty-first exercises, as well as elsewhere, he says, that from his his-

tory "it appears clear, that the generation of the chick from the egg is the result of epigenesis rather than of metamorphosis; and all its parts are not fashioned simultaneously, but emerge in their due succession and order." That there first exists a particular genital particle, in virtue of which, as from a beginning, all other parts proceed. That the origin, growth and consummation are brought about by a method of nutrition, and that at length the fœtus is thus produced. This is Harvey's doctrine of epigenesis, as stated by himself. And if we were to follow out these views to a later period, we should find him supported by Malpighi and by Wolff; while, on the other hand, carrying the investigation in an opposite direction, we should find Haller and Bonnet entirely opposed to these views. Haller maintained that the parts of the fœtus, although invisible, nevertheless exist in the egg, and that these, becoming gradually expanded or unfolded by degrees, constituted the embryo. But Bonnet's views represented another phase of the same doctrine, for he maintained that not only are all the parts of the fœtus pre-existent in the ovum, but that all germs, past and prospective, those that have been, and those that are yet to be born, were all existent in the ovary of the original parent; that these germs lie dormant in their abode, until one or more are aroused by the exciting influence of the male; and that, consequently, there is not in nature the new formation of any animal.

But these speculations, in so far as they are opposed to the doctrine maintained by Harvey, might be easily let alone, were it not that the controversy thus raised has been sustained, though with sundry variations, ever since. And although the ground has been in some respects shifted, yet the terms are retained, and the general principles involved in these two opposite doctrines represent the divergence of opinion exhibited by two opposite parties in the present day.

Drelincourt, whose principal work was published two centuries ago, collected together two hundred and sixty-two groundless hypotheses relating to the process of generation; the exact number I give upon the authority of Blumenbach. But whether rightly estimated or not, the result of all this labour appears to have been, that Drelincourt's own theory came in turn to be regarded as constituting the two hundred and sixty-third. And should a second Drelincourt appear, some two centuries hence, or possibly in less time, may he not perhaps find, in some of our own cherished theories, matters that may seem then quite as fanciful as those of which we have just been speaking?

I will now venture to draw your attention to some of the leading facts regarding the process of generation which have been ascertained since Harvey wrote, and especially those of recent times. Reversing the order which Harvey adopts, I will commence with the consideration of *the part which the male contributes to the process of generation*; a subject of which Harvey had no real knowledge. And this brings us at once to what is the most curious part in the history of those several discoveries which have led up to our present complete knowledge of the subject of generation. No physiological fact, perhaps, was ever established with greater difficulty than that of the necessity of the sperm-cell, or spermatozoon, for supplying the material or means by which the fertilisation of the ovum is accomplished.

Two hundred years and more have been occupied in the investigation of this part of the subject, and during this period the sperm-cell has been submitted to examination under microscopes of every form of construction, by observers, incompetent as well as most competent, and has given rise to numerous speculations, some of which may be said to represent the highest flight of human imagination, while others—and these, happily, the more numerous—bring us to the firm ground of sober truth. I cannot venture to take you through all this wilderness, which, on casting back our eyes, we see decaying or dead behind us. The more ridiculous fancies, the mushrooms of the day, perished of themselves long ago. But to other and more sturdy growths it was found necessary to apply the pruning knife or the axe, until at last we have arrived at materials sufficiently definite to admit of our basing upon them sound and rational conclusions. Some, indeed, of the more important conjectures which from time to time have been offered regarding the use of the spermatozoa must of necessity be noticed, in speaking of the mode in which the fertilisation of the ovum is effected. It will suffice, therefore, if we now examine briefly the structure and mode of formation of these bodies, as far as microscopical examination has yet gone.

The sperm-cell appears to undergo a process of development closely analogous to that of the germ-cell, which we shall have presently to trace: and since no material variation is observable in the formation of the spermatozoa in the different classes of vertebrates, the description of any one may serve for that of the rest. Hitherto in considering this subject, the term "sperm-cell" has been employed as a general expression, and as the equivalent of spermatozoon; but in speaking now of the development of these bodies, a greater strictness must be observed. Taking the Mammalia as a type, the testes are found to contain in considerable quantity free cells, the so-called parent cells. Within each of these again are found several smaller cells, the daughter cells or vesicles of development—each daughter cell containing a separate spermatozoon. These, by their growth, burst through the delicate cell wall that confines them, and, escaping into the parent cell, become aggregated into bundles, or lie coiled in the interior. Ultimately this outer wall bursts, and the spermatozoa are set free: they are not, however, generally as yet fully developed; they appear to go through a further process of growth, which has much engaged the attention of microscopic observers of late, and which seems to have not altogether escaped the attention of Leeuwenhoek, their discoverer, if we may credit the very extraordinary illustrations which are to be found in his work, not without some help, apparently, from the imagination of the artist.

When fully formed, the spermatozoa present very remarkable differences in different classes and species. These relate chiefly to the part commonly termed the body or head—for the caudal appendage is very similar in all, the chief difference being in its greater or less length. The variations just mentioned may possibly have reference to the mode of penetration of the spermatozoon within the ovum, according to the greater or less thickness of the enveloping membrane of the latter; but that which microscopic observers are at this time most intent on discovering is the nature and arrangement of those small granular particles which constitute as yet all that has been distinctly seen in the interior of the body, and which respond to the test of staining with carmine precisely in the same way as the granular contents of the ovum, while much observation has been expended and much speculation hazarded in the effort to determine the means by which the vibratory motion of the spermatozoon is effected. But even if nothing more satisfactory can be discovered than that which is already known, we may still safely regard this little portion of granular matter as constituting the living material that confers fertilisation upon the ovum, while we may look upon the vibratile appendage as the instrument by which this is carried to its destination, and the continuance of its motion as the sign that the power of conferring fertility is still retained.

We may now turn our attention to the part which the female contributes to the process of generation. "Propter solum uterum est mulier id quod est" is an aphorism often quoted, and originating with Van Helmont, a contemporary of Harvey; but the idea which it is intended to convey of the greater influence and importance of the uterus was the dominant one long anterior to Van Helmont's day. Take, for example, what Aretæus says of it in his wonderful description of that organ, and of its mode of producing hysteria and various other affections. "In the middle of the flanks of woman lies the womb, a female viscus, closely resembling an animal; for it is moved of itself hither and thither in the female, also upwards in a direct line to below the cartilage of the thorax, and also obliquely to the right or to the left, either to the liver or spleen; and, in a word, it is altogether erratic." Then, after describing the preference of the uterus for certain odours and its aversion to others, so that it advances towards the one or flees from the other, Aretæus concludes by saying that, "on the whole, the womb is like an animal within an animal". The leading idea which underlies all this extravagant expression is obvious enough. It is plain that Aretæus intended to represent the uterus as the principal agent in the production of those symptoms, which he here, however imperfectly, endeavours to describe. Doubtless here the term uterus is made to include the ovary, with the rest of the reproductive organs; and in this sense, as a comprehensive expression, we may be excused for employing it, as we still do, in the conventional language of the present day. But the time has long arrived when physiology, and especially pathology, might derive advantage from greater precision in the separate use of these several terms. In a physiological sense, the uterus, together with every other portion of the generative apparatus, should be regarded as an appendage of the ovary. In many animals it has not even an existence, as in Fishes and Batrachians, where the ova are expelled previously to fertilisation, and no uterus is needed. But in those classes in which it is found, the office of the uterus must be regarded as supplementary to that of the ovary. Its presence there, indeed, is necessary to complete the act of reproduction in its regular course, since it is the organ which receives and nourishes the ovum after conception, and it is the part which serves for its expulsion when sufficiently developed. But these are offices obviously subordinate to those of the ovary. On the other hand, the ovary is that part in which the generative element, essential to the act of reproduction, is first formed. It is that part which appears to regulate, in a great measure, the growth of the body, and to determine the periodical recurrence of conception and of other functions. When the ovary is artificially removed from the body, the individual becomes unsexed; and when its functional activity declines

or ceases, the power of exercising the generative faculty is altogether lost.

In every sense, then, the ovary must be regarded as the more important organ; yet its structure was little known in the times of which we are now speaking, and consequently its offices and homologies were entirely misunderstood. By Harvey the ovaries, in accordance with the then prevailing custom in regard to human anatomy, are almost always termed the testes; though he does, indeed, suggest that the ovaries appear to bear analogy to the male gland as regards Fishes. The merit of having been the first to announce an opinion that the so-called testis is to be regarded as analogous to the ovary is due to De Graaf, who in 1667 gave a full account, with most accurate illustrations, not only of the ovary, but also of the ovicapsule as well as of the corpus luteum. In his well known work he describes the use of the ovary as being to generate, to nourish, and to bring to maturity the ova; and further he suggests that these should be termed ovaria rather than testes, since no similarity either in form or in contents can be traced between the two.

We must, indeed, wait until a much later date before we arrive at a time when the structure and functions of the ovary and its contents began to be thoroughly understood, and this period may be fairly considered as having its commencement with the discovery, in 1825, of the "germinal vesicle" in the ovarian ovum of Birds by Purkinje, followed, two years later, by the observation of the ovum in the Mammalia by Baer.

[*To be continued.*]

LECTURES ON HUMAN MYOLOGY.

Delivered at the Royal College of Surgeons of England.

By G. M. HUMPHRY, M.D., F.R.S.,
Lecturer on Anatomy and Physiology in the College; Professor of Anatomy in the University of Cambridge; etc.

Lecture II.—*June 19th*, 1872.

In the former lecture, Mr. President and gentlemen, I endeavoured to show that the muscles of the trunk, ventral as well as dorsal, are derivatives from or modifications of the elementary tissue which, by other modifications of the developmental processes, is converted into the transversely segmented lateral muscle in the Fish. I proceed now to indicate that the same is true to a considerable extent of the muscles covering the limbs.

The muscular system, as well as the various other features of the upper and lower limbs, affords an interesting example of the influence of similar morphological impulses operating upon similar or serially homological elements of the frame, yet modified by the special future requirements of each limb. One limb is like the other, and is evidently the produce of similar germs, moulded by similar forces; yet the one limb, upper or lower, cannot be regarded as in any way a modification of, or a descendant from, the other. Neither is it quite certain that we should assume both to be modifications of, or descendants from, a common simple form. True, as we trace them back through their primitive developmental conditions, they seem to present a greater resemblance to one another, and ultimately to blend, together with the other structures of the body, in a formless unit. Still it must not be forgotten that the greater similarity in the earlier periods of development, as compared with the later, may be due simply to the peculiarities of each being less obvious—less within the range, that is, of our limited powers of observation. Each limb, from its initial as an individual—from its first outgrowth from the common mass—may be, and, so far as we know, is, potentially endowed with its special characters. Each originates, by an independent force, in its proper locality; and each by that same force works its way along its special path to its fitness for its special work. The forces in the two are, however, similar, and the materials are similar; and hence the result is similar, so far as is compatible with the purposes of each.

These remarks, suggested by the comparison of the two limbs of man with one another, apply to the comparison of the limbs of man with those of other animals. We really have little right to assume that any of these is a modification of any other, or that all or any of them are descendants from, or modifications of, a common simple form; though many things may incline us to that view. It is clear that they are all the produce of similar forces, working in a similar manner upon similar materials, and leading to results similar so far as is compatible with the purposes of each. How these recondite forces originate, and how, in each limb of man and in the several limbs of the different animals, they evolve the form and structure requisite for each, is perhaps at present a fruitless subject of inquiry; at any rate, it is foreign to my present purpose.

The limbs grow out from their respective girdles, which, being ossifications in corresponding parts of intermuscular septa in the ventral portion of the lateral muscle, are serially homologous elements, though each is found to suit the requirements of its limb. By the ventral portion of the lateral muscle I mean the elementary structure, which in the Fish would have formed the ventro-lateral muscle. It will be observed that the girdles are formed essentially in the ventral part of the lateral muscle—the part beneath the lateral septum; and have no primitive connexion with the components of the dorsal series of muscles. This is evident in the lower animals, though in Man and many of the higher animals the ala of the ilium has grown up into, partially interrupts, and has come to form an important basis of attachment to, the erector spinæ. As the osseous elements of the limb grow out from the girdles, they carry before them, or are covered by, a coating—a ventro-appendicular coating—composed of the elements which cover the girdles. These become developed into tissues—cutaneous, cellular, muscular, vascular, nervous, etc.; and they are severally continuous with the corresponding tissues that cover and surround the girdles. This is the case with the muscular tissue no less evidently than with the skin and the cellular tissue; and the muscular tissue in each limb forms a funnel-like investment surrounding the base of the limb, and extending upon it beneath the skin and the cellular tissue. In Man it does not, as do the skin and cellular tissue, retain its continuity over the whole limb; and it does not retain its connexion with the trunk-muscles or other components of the lateral muscle in its whole circumference. Still sufficient traces of these connections remain; and they are more fully preserved in some of the lower animals. The continuity is perhaps seen in its simplest, most complete, and most instructive form, in the rudimentary limbs or claws of certain Snakes, where the thin muscular investment radiates from the claw upon the adjacent region of the trunk.

In the case of the upper limb, which, together with its girdle, is freely movable upon the trunk, the funnel-like ventro-appendicular muscular investment is a main agent in effecting these movements. It is accordingly well marked, and is nearly a complete funnel; and its base is seen to radiate for some distance in the circumference. Indeed, its surrounding attachments range as widely as they can possibly do; and they thus give the fullest scope to the action of the component muscles. Above, it spreads to the head; below, to the pelvis; behind, to the vertebral spines; and in front, to the sternum and middle line. It is segmented into three sectors or parts—the pectoralis major, the trapezius and deltoid or trapezio-deltoid, and the latissimus dorsi. These all lie in the same plane. I may remark that the slight deviation from this, caused by the trapezius overlapping the latissimus dorsi at their origin, is of no particular import. In Birds and some Reptiles, the reverse arrangment is found, the latissimus dorsi overlapping the trapezius. All the sectors converge to a little above the middle of the humerus, so as to swing the limb with great force and freedom in every direction. I need scarcely say that the convergence and tendinous insertion of so many muscular fibres at this spot, is the cause of spontaneous fracture, and of failure of union after fracture being far more frequent at the middle of the humerus than in any other of the long bones.

The lines of division of the funnel-like sheath into the three sectors correspond, in the first place, with the passage through it of the marginal vessels and nerves of the limb—that is, the external cutaneous or cephalic vein and the accompanying artery above, and the internal cutaneous or basilic vein and the nerves below. These separate the pectoralis, or palmar, portion from the trapezio-deltoid and latissimus dorsi, or dorsal, portion. Secondly, the two sectors of the dorsal portion separate, to pass to the humerus on the two sides of the triceps extensor muscle of the forearm. The fibres of the contiguous binder or axillary margins of the pectoralis and latissimus dorsi usually disappear, or are not developed, leaving the axillary interval between the two muscles. Not unfrequently, however, bundles are found crossing and partially obliterating the interval by connecting the two muscles together; and in some animals, as Lepidosiren, the two muscles form a continuous sheet.

The anterior or cervical interval between the palmar and dorsal sectors of the ventro-appendicular sheath appears to be large above the clavicle, in consequence of the divergence of the pectoral from the trapezius; but the gap is in great measure filled by the sterno-cleido-mastoid, which, as stated in the preceding lecture, is the continuation of

this stratum upwards, and so may be regarded as part of the palmar sector of the limb-sheath. This sector—the pectoral or palmar sector—indeed, radiates from its humeral insertion downwards into continuity with the external oblique, and, in many animals, into continuity with the superficial fibres of the rectus. Upwards, it radiates by means of the cleido-mastoid to the skull, where it again comes into contact with the trapezius or dorsal sector. Between the clavicle and the skull, the palmar and dorsal sectors are separated by the lateral vein of the head —the external jugular. Behind the clavicle, they are separated by the anterior marginal vein of the limb—the cephalic vein. Behind the limb, they are separated by the posterior marginal vein of the limb—the basilic, continued into the axillary vein. There is thus seen to be a continuity between the sectors of this appendicular sheath with the abdominal and cervical representatives of the superficial layers of the ventro-lateral muscle ; and the whole forms, as well seen in some of the lower animals, and as described by me in another place (*Journal of Anatomy*, vi, 258 ; *Observations on Myology*, pp. 70, 130), a great brachio-cephalic sheet, segmented from the lateral muscle, and passing to the fore limb and the head. In the animals, as Snakes, in which the limb, limb-girdle, and sternum, are absent, the whole sheet passes on uninterruptedly to the head. Where the sternum and limb are absent, as in some limbless Saurians, the lateral part is interrupted by the girdle ; and the mesial or rectus part only is continued on and passes into the sterno-mastoid, and so to the head. But, where the sternum and the limb are present, the direct continuity of the sterno-mastoid with the rectus is interrupted by the intermediate elements arising from the sternum and its vicinity being diverted, as pectoralis major, to the humerus. Still, in Man and other Mammals, we not unfrequently meet with struggling efforts, as it were, of the rectus to extend upon the thorax and reach the sterno-mastoid ; the resultant of such efforts constituting what is called the rectus thoracicus, or musculus sternalis.

I have described the appendicular, or, as it may be designated, the superficial ventro-appendicular sheath, converging to and implanted into the humerus ; but each of the sectors is also commonly connected with the girdle. This is especially the case with the superior dorsal or trapezius sector. It, indeed, in Man, is quite interrupted and divided into two parts—an upper or trapezius, and a lower or deltoid part—by the superior edge or spine of the scapula and the clavicle growing into and solidifying and fixing the septum which crosses the sector in this situation. I may remark that the septum is usually present, marking the division into trapezius and deltoid in those animals—Cats and others—in which the formation of the clavicle may not have taken place in it. It is obviously one of the septa of the lateral muscle ; and it corresponds serially with the septa in the rectus abdominis, or with those in the aponeurosis of the external oblique covering the rectus. Hence the clavicle is the serial correspondent of the epicostal and costal bones, often called abdominal ribs, which are, in some Reptiles, found in the septa of the mesial part of the external oblique or of the rectus. It may also be mentioned, as a point of some interest, that in the human fœtus the superficial fibres of the trapezius are continued into the deltoid by means of short tendinous fibres passing over the spine of the scapula. These tendinous fibres represent the septum to which I am referring. As development goes on, they are, for most part, obliterated or interrupted by the spine of the scapula ; in other words, they become attached to the spine of the scapula, and the continuity of the two muscles effected by them is lost. This division into trapezius and deltoid, and the connexion of both with the shoulder-girdle, is very important to the free movement of the arm upon the shoulder, and especially to the difficult movement of raising the arm upwards and outwards. In that movement, the trapezius fixes the spine of the scapula and the clavicle, and renders them *points d'appui* for the action of the deltoid. In addition, broad strips are segmented from the deeper surface of this sector, and are inserted into the base of the scapula, forming the rhomboidei. A similar strip is segmented from the deep surface of the palmar sector, and is inserted into the coracoid, forming the pectoralis minor. The lower dorsal or latissimus dorsi sector is connected with the girdle only by the small slip accompanying it from the lower angle of the scapula. This slip, which is an intervening segment between the latissimus dorsi and the teres major, seems to assist the latter muscle in steadying the scapula, and preventing the lower angle from being drawn backwards during the backward swing of the arm, which is effected by the latissimus dorsi.

In the simple form of limb, as in the claw of the Snake, or the unbranched, tapering, many-jointed fin of Lepidosiren, the superficial ventro-appendicular sheath which I have been describing, being the outermost muscular covering, extends over the whole limb. In higher animals, however, and Man, it is, as just stated, arrested in great measure at the humerus. Fascial prolongations of it, however, may sometimes be traced onwards ; and even muscular extensions of one or other of the sectors are met with in various animals. The most remarkable of these is the cervico-alaris of the Bat and Bird, which is a prolongation of the trapezius, deltoid or pectoral, along the edge of the wing, to the digit on the radial side. A similar extension along the opposite or under aspect of the limb, from the ribs or the latissimus dorsi, forms the costo-alaris of Birds, or the dorso-epitrochlien of many mammals.

In the case of the lower limb, the fixity of the pelvic girdle to the spine, and the completeness of the pelvic ring in front, cause the superficial ventro-appendicular sheet to differ considerably from the disposition which we have observed in the upper limb. The chief difference consists in the fact, that the substratum detached from the several sectors, and designed to effect the movements of the girdle, and corresponding with the pectoralis minor, the rhomboids, and the scapular slip of the latissimus dorsi, is not needed, and is not present. Secondly, the several parts of the sheet are connected more extensively to the girdle, and derive more fixed points of attachment to, or origin from, it than is the case in the upper limb ; and they are also spread more extensively upon the distal regions of the limb, a part only of one of them —the gluteus—being inserted into the proximal bone, the femur. These features, it may be remarked, have also relation to the less range, precision, and rapidity of the movements of this limb, as compared with those of the upper limb, as well as to the greater fixity of its girdle.

The three sectors in the lower limb are represented, though with less distinctness than in the upper limb. The gracilis evidently represents the plantar sector ; and it corresponds, therefore, serially with the pectoralis. But, instead of being inserted into the femur, or proximal segment of the limb, it runs on to the tibia. The dorsal sectors are represented by the gluteus maximus, the tensor vaginæ femoris, and the sartorius, which, in some animals, are confluent, forming one muscle. These, therefore, correspond serially with the latissimus dorsi and the deltoid. The gluteus has an insertion into the fibular side of the femur ; but it is not confined to this proximal segment, for it is continued into the fascia of the vastus externus and the fascia of the thigh, by means of which it spreads over the extensor cruris, and over the side and back of the leg to the ankle and foot. This is seen in many animals more clearly than in the Man.

Any question as to the correspondence of the gluteus maximus with the latissimus dorsi is, I think set at rest by the fact that, in the Bird, it blends with the extensor cruris precisely in the same manner as, in Cryptobranch, the latissimus dorsi blends with the extensor brachii.

With regard to the superior dorsal sector, if we regard—as I think I have elsewhere shown there is reason to do*—the crest of the ilium to be the correspondent to the spine of the scapula, then the adjacent part of the external oblique must correspond to the trapezius part of that sector in the upper limb, and the tensor vaginæ femoris, with the sartorius, to the deltoidal part. Both the tensor vaginæ femoris and the sartorius extend upon the leg, and the sartorius passes to the tibial side of the leg. This arrangement is, in some animals, partially imitated by the passage of the deltoid, or a portion of it, to the radial side of the forearm. The crural arch, occupied by Poupart's ligament, which spans the interval between the spine of the ilium and the symphysis pubis, obviously corresponds with what may be called the brachial arch, occupied by the clavicle, which spans the interval between the spine of the scapula and the sternum. Poupart's ligament is one of the septa of the lateral muscle, corresponding serially with the septa in the rectus or in the external oblique, and corresponding, therefore, serially with the septum or inscription which, in many animals, separates the deltoid from the trapezius ; hence an ossification in the course of Poupart's ligament would correspond with the clavicle. The external oblique, above Poupart's ligament, corresponds with the trapezius and cleido-mastoid, above the clavicle ; and the femoral fascia, below Poupart's ligament, corresponds with the parts of the pectoral and the deltoid, below the clavicle. The saphenous vein, ascending along the tibial side, penetrates the fascial stratum in the one limb, much as the cephalic vein, ascending along the radial side, penetrates the corresponding muscular stratum in the other limb. Here I would observe that the return blood-current indicated by the course of large veins affords, I think, on the whole, a better guide to homology than does that of the advancing blood-current or the nerve-stream, as indicated by the large arteries or nerves. Thus the serial homologous relation of the several parts of the superficial ventro-appendicular sheaths of the two limbs is demonstrated, as closely as can be expected, under the different conditions which the limb-girdles and the limbs present.

[*To be continued.*]

* *Journal of Anatomy*, v, 67. In this and some other points connected with the correspondence between the shoulder and the pelvic girdles, I am sorry not quite to agree with the views expressed by the able Hunterian Professor of the College in the same journal, iv, 239.

CLINICAL LECTURES
ON
STRANGULATED HERNIA.

Delivered at St. Bartholomew's Hospital.

By SIR JAMES PAGET, Bart., V.P.R.S.,
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Lecture IV.

The former lectures have related to the diagnosis of strangulation of a hernia, and to the operation necessary for its relief. This last will be on the treatment of cases after operation. In looking over my cases of hernia for illustration of this matter of after-treatment, I was struck with the great difference between the practice of late years and that of thirty or more years ago. In reference to all the subjects of the preceding lectures—the discrimination of the cases needing operation, the modes of operating, and generally, the pathology of strangulated hernia—knowledge has, we may believe, increased, but without any material change of opinion; but, when we come to questions about treatment of patients after operation, we seem to know, and certainly we believe, things widely different from those which were generally believed when I was a student.

The present general rule of practice after operation, in cases likely to go on well, is to do what is called nothing; to wait till some reason for interference is manifest; and, while waiting, to take care that the patient shall have fit bedding, fit air, fit food, quietude, and good nursing. All these prime conditions of health are called "nothing." The contrasted "something" would be bleeding, active purging, or other restlesss interference with the natural course of recovery, such as was in vogue in the earlier years of my case-taking, and such as had not quite ceased twenty-five years ago, when I became assistant-surgeon to the hospital. In this contrast you will see only an illustration of the great change of opinion respecting treatment which may be observed in a wide range of medical practice, as in cases of fever, acute rheumatism, pneumonia, and all acute inflammations—a change shown, not by substituting one remedy for another, but by letting many diseases and the effects of many injuries take their natural course, in the confidence that they will come to a natural good end, and that we have no medicines potent to alleviate or cure them. But let me say that, while I have no doubt that the present general plans of treatment are better than the past, I yet do not believe that the past plans were so mischievous as some have told of them. I have no recollection of serious harm being often done by bleeding in the many cases of illness, whether slight or severe, in which, during my apprenticeship, I practised it. In a few cases I think it was mischievous, but in the great majority it was harmless. In many, it gave such relief from pain or other distress as naturally strengthened the belief that it did real good; and in a few cases I do not doubt that it was beneficial. Still, in cases of strangulated hernia, whether before or after operation, I think you never need bleed a patient. I do not believe that bleeding ever saved the life of a hernia-patient, which but for the bleeding would have been lost.

And as for purgatives, though I believe they were often mischievous and more often unnecessary, yet I do not doubt that they were, and still may be sometimes, very useful; and I wish I could tell you more exactly than I can the class of cases in which they should be used. At present, I know only one—the class, namely, in which it is clear that the strangulation has occurred while the bowels are overfilled, and in which the strangulation is acute and quickly relieved.

Now for general rules of treatment after operations for strangulated hernia. Bear in mind the complicated cases with which you may have to deal. In each case there are, or may be, these constituents: the intestine damaged by displacement and by being forcibly replaced; the operation-wound; the effects of chloroform; the intestinal disorders which, at least in many cases, preceded the strangulation, and may continue after the operation; the effects of aperients and other medicines given for this previous disorder or for the strangulation; the inflammation or worse than inflammation of the sac and its contents, which does not subside immediately after even a successful operation.

When a case has been timely operated on, all these things may amount to nothing worse than may be left to the course of spontaneous recovery; and a case that goes on well requires that "nothing" in the way of treatment of which I spoke just now. But, when anything goes amiss, you must have in mind all the things I have enumerated, in your endeavour to interpret the signs of wrong and to amend it. Very few cases are more difficult to manage than those which do not go on well after operations for hernia. There are terribly few which, having gone out of the right course of recovery, can be brought back to it.

What, now, are the signs of going on well? Chiefly a consciousness of complete relief; that is, not only of relief from the local distress, but from the general misery. Deceptive as sensations often are, this rarely is; and, if a patient be not conscious of relief, you must keep on the alert, and suspect that something is wrong. Besides, there should be no pain or acute fever. Mild traumatic fever there may be; but there should be no more; no nausea or sickness, but general quietude or sound sleep, a gradual recovery of appetite and strength, and, after a time, action of the bowels. I say after a time, wishing to be indefinite. Sometimes the bowels act very soon after the operation, and this may be harmless; but I think it is not good, for it indicates either the effect of physic wrongly given before the operation, or some irritation of the bowels which would be better at rest. They do best who, while relieved from their distress, have no action of the bowels for some days. I know no necessary limit to the quietude in which the bowels may be left. In one of my cases, they did not act for nine days after the operation; and I have heard of others where, without any disadvantage or discomfort, there was still longer inaction. But this is, I think, a good general rule—to leave the bowels at rest for four days after the operation; then, if all seem well (not otherwise), to order a simple enema; and, if this be not sufficient, some aperient. I know no advantage in leaving the bowels longer inactive than these four days; and I had one case in which great inconvenience, to say the least, was occasioned by a very large accumulation.

After the action of the bowels, if all still go on well, there is no need of considering anything but the patient's comfort and the local treatment, and the diet may be of the plainest kind. Excess is more likely to be mischievous than spareness.

Among cases that do not go on well, there is a great variety; but I shall speak of those alone in which the wrong is in something peculiar to hernia. Of course the wound of the operation may lead to any of the evils that may follow other wounds, as erysipelas, pyæmia, and the rest; but these I shall almost pass by.

Among my cases, I find some in which ill-looking symptoms, such as diarrhœa or colic, followed the operation, but meant no serious mischief, being only the continuation of the intestinal disturbance which preceded the strangulation. I have already spoken of this matter, but it is worth repeating: that it is common for the descent and strangulation of a hernia to be preceded by some intestinal disturbance, the signs of which may be suspended during the strangulation, and renewed after the operation. Whatever the disturbance, it may be treated, or left alone, as if no operation had been done; but it must not be forgotten in estimating the meaning of any symptom of ill-doing.

Of these symptoms, one of the chief is vomiting. If a patient vomit once or twice soon after an operation for hernia, it may only be because the stomach was filled with secretions before the operation, and now finally empties itself. In this is no harm—perhaps some good. But, if the vomiting continue, it may be a sign of the gravest import. It may, indeed, be due to chloroform. I have seen several instances of this, and among them one in which chloroform-sickness continued for three days after the operation, endangering the patient's life. Generally you may distinguish the vomiting due to chloroform from that due to peritonitis or unrelieved strangulation, by its being attended with horrible nausea, like sea-sickness; by its producing no fæcal fluid or abundant gastric secretion, there being more retching than vomiting; and by the patient's feeling relieved of his hernia, however wretched he may feel with his nausea. If the pain and distress of the hernia be relieved by the operation, and, except for vomiting, all seem well, you may be nearly sure that the vomiting is due to chloroform, and commonly you must wait till it spontaneously subsides. I believe you cannot cure it, and food put into the stomach only aggravates it. The patient had better be without food, if in fair strength; but, if very feeble, he had better be maintained with enemata of milk, eggs, beef-tea, and wine.

If vomiting go on for six or more hours, or for days, after the operation, and be not due to chloroform, it is a very bad sign—I had nearly said a mortal one; for generally it tells that the operation has failed in its design. Either the strangulation is not reduced, or the intestine is paralysed above the strangulation, or there is peritonitis or sloughing or perforation of the intestine, or some such trouble. Very rarely the untoward conditions indicated by continuous vomiting are relieved spontaneously or with repeated doses of opium.

The persistence of abdominal distress, with tension and pain and colic, after the operation, is not so serious. If other symptoms be relieved, these probably will be; and they may generally be treated with large enemata or aperients, such as the sulphate and carbonate of magnesia. But there is no need of haste to give these things. The abdominal troubles which they are to relieve are not due to serious disease, but probably to intestinal accumulation, which began before the strangulation, which would be very slow to destroy life, and may be allowed to remain till it can be treated without risk. In such a case as this—a not very rare case—when all seems well except the abdominal pain and tension, be on the watch. If there be no change, do nothing. With time, the intestines will empty themselves. If there be increase of pain, without increase of pulse or breathing or other evidences of fever or inflammation, give enemata or aperients. I am sure you may manage cases of this kind better and more deliberately than I did some of those which I have recorded. I see now that I was over-busy with them, and was only very fortunate in that I did no harm.

A large group of cases, much worse than these, may be made of those in which the operation gives little or no relief: all goes on after it as all did before, or everything becomes worse. Few cases can be more grave than these. You may think yourselves happy if, from twenty such cases, you can save one.

The failure of relief from the operation may be due to the utter exhaustion of the patient. I have had to operate on patients already dying. I could not refuse to operate, for I could not be certain that it would be useless; but it proved useless, and seemed mischievous. The intestine was returned, and all put right; but the patient was too exhausted, as one may say, to be conscious of relief, and went on dying, although carefully fed and nursed.

Or the failure of relief may be because the strangulation remains—a constricting band or misplacement of the intestine, or some such thing, having been overlooked. In such a case, especially if you have not opened the sac, you must open the wound and the sac; enlarge the opening through the stricture; find, if you can, the strangulated intestine or whatever may be wrong, and, if possible, set it right. You may be so fortunate as to succeed—more fortunate than I have been. But then, in two of my cases, an internal and distant strangulation coincided with that of the hernia. This was irremediable—could not be reached; and the second operation was as useless as the first.

But by far the most frequent cases in which the operation gives no relief, or only some slight and very brief relief, from the signs of strangulation, are those in which the intestine does not recover itself. It remains nipped, powerless, congested or inflamed, spoiled, and incapable of contraction; while the part of the canal above it becomes distended, and after a time powerless, the abdomen becoming constantly more tense, though it may be with less turbulence of the intestines. This condition is most frequent in the old, and after long strangulation; it is commonly attended with peritonitis; and no doubt the inflamed state of the muscular tissue of the intestine, both in and above the strangulated part, is often the cause of the loss of muscular power, or a serious hindrance to its recovery. But peritonitis is not a necessary part of the calamity. I believe I have had cases in which no peritonitis existed beyond the strangulated part. In such cases as these, you may find the best hope, though the best is seldom good, in opium, food, and wine, all of which you must give by the rectum, if the stomach will not retain them. Your object must be simply to keep the patient alive while, in time, the intestinal canal, being at rest, may regain power. Very small quantities of food may suffice for this—a few spoonfuls by the mouth every hour or two; and, twice or three times a day, injections into the rectum of milk, beef-tea, egg, wine, and laudanum, mixed all together,

Very similar to these cases are those in which peritonitis, having begun before the operation, is not relieved by it. There is, plainly, no reason why the relief of strangulation should at once remedy the peritonitis which the strangulation produced; and it sometimes seems to continue quite unaffected. Indeed, you had better expect that this will be so, and follow what is a very good general rule—that, namely, of giving opium directly after the operation in all bad cases of strangulated hernia, unless there be some clear reason for not giving it. I have seen no harm come from this plan, and I think it has sometimes done real good. What are the bad cases I have already told you. In any or all of them, you may give a grain of opium, or an equivalent subcutaneous injection of morphia, directly after the operation; and then watch and determine whether to give more, or what else to do. Especially, you may expect to have to give wine very soon after the operation, for the patients are generally feeble.

Thus, then, you may have in mind four sets of cases in which the operation for strangulated hernia, though, to all appearance, well done, does no good at all, or too little to be counted. It may be so in patients utterly exhausted; in cases of persistent strangulation at the hernia or elsewhere; of intestine rendered powerless; of continuous peritonitis. Of all these I have seen examples. There may be others which I have not seen or have overlooked. From all of these you may distinguish in thought, and generally in fact and practice, those sets of cases in which untoward events arise after a clear interval of relief from the operation. All may go on well, or at least not badly, for a time; the patient may have a clear sense of relief; and the sickness and other bad symptoms may cease for hours or some few days; and then come trouble and disappointment.

The cases that may be thus grouped are many and various. I find among my notes instances of acute inflammation of the hernial sac and its coverings; simple acute peritonitis, such as might be called traumatic; asthenic peritonitis, probably of erysipelatous nature; acute peritonitis, with rapid collapse, from intestinal perforation or rupture; simple inaction or paralysis of intestine. And to those which were peculiar to operations for hernia may be added other calamities, such as might occur after any operation, as diffuse cellulitis, erysipelas, phlebitis, and others.

It is not possible to speak of all these things now—hardly even appropriate; for, though those in the first list are associated with hernia, they are not peculiar to it, and their pathology and treatment must be studied on a broader field. The peritonitis must be dealt with according to the same rules as that which has nothing to do with hernia, using great care to determine which of the forms I have enumerated is in each case present. The strangulation may itself cause peritonitis; and this, as I have said, beginning before the operation, may continue after it. The wounding and exposure of the peritoneum may excite its inflammation, or greatly aggravate that which existed before the operation. In both these sets of cases, the signs of peritonitis will be observable directly after the operation, or, at the furthest, within twelve hours after it; and these will generally be cases of acute, or, so far as the constitution of the patient will allow, of asthenic inflammation. But you may generally distinguish from these the cases in which peritonitis sets in after a longer interval, and in which it is rather of an asthenic type, whether it come from giving way of the intestine, or from such conditions as would produce erysipelas after external injuries.

Do not suppose me to pretend that, in every case of peritonitis after hernia, you can easily determine to which of these different types of inflammation it belongs. You can determine often; you should try to do so always; for according to the type of inflammation must be your treatment. In the sthenic inflammations, you may give great comfort and help to recovery by free local bleeding with leeches, by large poultices over the abdomen, by weak saline and alkaline drinks, by the plainest and least stimulating diet. In the asthenic, opium is the only remedy that is generally useful. It used to be calomel and opium; but I believe the calomel did harm oftener than good. And with the opium must be rest and warmth, and liquid nutriment and diluted wine. And I can state no more general rules than these; for the rest of the treatment must be determined separately for each case.

Now, besides these very serious evils that may follow operations for hernia, some local troubles may ensue, of which a few are worth telling you of.

Perhaps the most common is acute inflammation of the hernial sac, alone or with the immediately adjacent part of the peritoneum. It is, I think, most likely to happen after operations for large herniæ in old people, when considerable force or time has been used in the reduction. You may know it best by the localised pain and tenderness with acute fever, without the signs of unrelief or of general peritonitis of which I lately spoke. There is no severe illness, but the general condition appropriate to a sharp local traumatic inflammation; and you may treat it, in this view, with complete rest and warm moist coverings of the part, and very little food; and in the acute cases in robust people, with copious leeching. In the acutest case which I have seen, I applied ninety-eight leeches in three days after the operation, with great comfort, and I think great advantage, to the patient. That was twenty years ago; but it would still be right to do the same.

Another local trouble is acute inflammation of the cellular tissue outside the sac. It is chiefly seen after operations for scrotal hernia and for deep-seated femoral herniæ. Commonly, the case appears going on well for a few days; and then comes a blaze of inflammation in and beneath the skin, leading sometimes to abscess, sometimes to diffuse suppuration. There is in these cases nothing peculiar to hernia. The same troubles may, as you know, follow any other operation; and they always need the same general means of treatment. I have never seen serious evil ensue in any case of the kind.

I might tell of other hindrances to recovery from the operation for hernia; but I limit myself to those of inflammation of the testicle, of sloughing of the scrotum, and others which I have been able to study practically, and I pass the others by, as I have done many other things, especially the complications of herniæ with various local diseases, such as hydrocele, varicocele, undescended testicle, and others. I have seen only one or two cases of each, and can tell nothing which is not already well told about them. Indeed, for a conclusion, I must say that, though to some of you it may have seemed excessive to give four lectures on strangulated hernia, I have treated the subject very superficially, very incompletely. One lifetime is not nearly enough for its complete personal study, in even so large a field as this hospital supplies.

ABSTRACT OF LECTURES

ON THE

SURGICAL TREATMENT OF ANEURISM IN ITS VARIOUS FORMS.

Delivered before the Royal College of Surgeons of England.

By T. HOLMES, F.R.C.S.,
Professor of Pathology and Surgery.

Lecture III.—*June 7th*, 1872.

The review of the table of cases in which the distal operation has been practised for thoracic aneurism was concluded. In seven cases, the left carotid has been tied for disease known to affect the arch of the aorta, and the operation has proved beneficial in all except one, in which the patient died from the direct effects of the ligature. One case was especially referred to, now under the care of Dr. Cockle, in which the carotid artery was tied by Mr. Heath in February last, and the patient was shown after the lecture to those present. The growth of the aneurism has been materially checked, and the patient is now in perfect health and able to walk fourteen miles without fatigue. The table of cases concluded with two of distal ligature of the third part of the subclavian for innominate aneurism, by Wardrop and Broca, in both of which also the operation was beneficial. The following conclusions appear to be those justified by present experience on the subject of Brasdor's operation on innominate aneurism. 1. The distal ligature of the carotid alone, or in conjunction with that of the third part of the subclavian, cannot be trusted to produce the complete consolidation of the tumour. 2. The natural effect of the ligature of the carotid artery is to produce coagulation in the part of the sac directly connected with the mouth of that artery. 3. This may suffice, practically, for the cure of the aneurism when the subclavian portion of the sac is small, and shows no disposition to grow. 4. In other cases where the mouth of the subclavian is previously obliterated by impacted clot, the ligature of the carotid alone may effect a radical cure. 5. For these reasons it is better, in any case which appears to require distal ligature, to commence with the operation on the carotid alone, and afterwards to consider the propriety of securing the subclavian in either its first or its third part.

The question of the justifiability of operating on the first part of the subclavian was then considered. The operation has always hitherto failed from secondary hæmorrhage, and the possibility of repeating it justifiably depends on the possibility of obliterating an artery without dividing it. A historical summary was given of the attempts made with this view by John Hunter, Cline, and others, in the early days of the ligature; by Sir Philip Crampton, Mr. Porter, and others, with the *presse-artère*, acupressure, etc., and with the silver ligature: and it was shown that, although occasionally successful, these methods had not hitherto proved trustworthy. The history of the catgut ligature was then traced from its introduction by Sir Astley Cooper. Porta's experiments and operations were referred to; and the experience lately acquired with the carbolised catgut ligature was related. A preparation was shown in which Mr. Holmes had tied the carotid and subclavian arteries in the human subject with this substance; the patient having died from another cause about nine weeks after operation. Both arteries were undivided; the subclavian permanently closed by organised tissue; the carotid obstructed by clot. The collateral circulation during life had hardly been developed to so great an extent as usual; the pulse being only very faintly perceptible in either the radial or the temporal, thus showing that the trunks were really obliterated. This case furnished anatomical demonstration of the possibility of tying arteries without subsequent ulceration, the material of the ligature being subsequently absorbed. The reason for the failure of catgut ligatures in the hands of the older surgeons appears to be, that the wounds were not treated so as to produce rapid consolidation of their deep parts, and possibly the ligatures were not properly prepared. If subsequent experience prove it to be generally possible to secure this result of tying an artery, it might be justifiable to operate distally on the first part of the subclavian artery, though the chance of finding it diseased would render the operation very dangerous. Reference was made to the uncertainty of diagnosis between innominate and aortic aneurisms; and it was suggested that the indications for operation in cases of supposed innominate aneurism should be drawn from the progress of the case—that is, from the apparent extension of the sac up the course of the carotid artery and towards the trachea. With respect to ligature of the left carotid for aortic aneurism, it appears also to be beneficial in the same way—that is, by obliterating the carotid and the portion of the sac through which the stream passed into the carotid.

The next subject treated of was galvano-puncture, and it was shown that by the galvanic current clots of more or less solidity could be formed in an aneurismal sac. It was also shown, by reference to a case of subclavian aneurism under the care of M. Abeille, that these coagula may ultimately attain sufficient firmness to obliterate the aneurismal sac. At the same time it must be allowed that such coagula are frequently not stable, but soften and melt down again into the blood-stream, thus rendering the operation nugatory. Further experience is required on many of the most essential details of this method; and these ambiguities and uncertainties form a valid ground for rejecting the operation—at least for the present—in any case in which the artery is fairly accessible above the tumour.

ON SOME ABNORMAL CONDITIONS OF THE LIVER, ACCOMPANIED BY JAUNDICE.*

By EDWARD LONG FOX, M.D., Physician to the Bristol Royal Infirmary, Clifton.

The cases referred to in this paper were not all due to one and the same condition of liver, but they were examples of peculiarities which are either unusual or obscure.

Case I.—A man, aged 50, was a patient in the Bristol Royal Infirmary, under Dr. Brittan (by whose courtesy I am allowed to mention the case here). He had only been ill for seven weeks, with intense jaundice, and the troublesome itching consequent on the jaundice. He had had hæmorrhage from various surfaces, and had passed blood *per anum*. The liver during life was seen to be much enlarged, but was smooth. At the necropsy, the heart was found to be fatty. The lungs were healthy. There was a little recent inflammation of the lower portions of the right pleura. The liver was very large; the ducts were much dilated all through the organ. The gall-bladder was enormously large, full of black bile. The ductus choledochus was very large down to within half an inch of what should have been its entrance into the duodenum. Here it was entirely blocked, not with gall-stones, nor with any thickened secretion, but apparently as the result of inflammatory thickening. What should have been the duct was transformed into fibroid tissue, and could never have again become patent. The pressure of the occluded bile had very nearly produced an artificial opening into the duodenum lower down. The spleen was rather large. The mucous membrane of the small intestine through its whole extent was covered with blood. The kidneys were much tinged with biliary pigment.

Case II.—A gentleman, aged 63, was first seen in May, 1870. He had been ailing for two months previously, and had complained of constant slight pain in the right hypochondrium. About five or six weeks previously he became suddenly jaundiced, and was very actively treated with calomel and podophyllin. In the first week of his illness, he once passed bile *per anum*, never since. He was always a spare man, but rapidly emaciated. He had lately been taking Turkish baths. Twenty years ago, he passed some gall-stones, but without pain and without jaundice. No tumour could be felt. There were some tension and tenderness over the head of the right rectus abdominis, especially on deep pressure. There were no ascites. He had intense jaundice. The bowels were confined. A little albumen was present in the urine. Sir William Jenner came down to see him, and gave as his opinion that the disease was probably a cancerous gland pressing upon the common duct, but that it was possible that the patient was suffering from a thickening, and a remediable thickening, of the duct itself. He suffered terribly from the icteric itching of the skin, and sank rather suddenly about a month after first coming under my observation. Death was preceded by twelve hours of coma. No *post mortem* examination was allowed.

* Read before the Bath and Bristol Branch.

CASE III.—Last autumn I saw in Monmouthshire, with my friend Mr. Essex, a gentleman, aged about 70, who was intensely jaundiced, and in whom, although the liver was large, there were no irregularities on the anterior surface. He would take no remedies, and sank rapidly. His death was doubtless hastened by constant vomiting, and he had some slight hæmatemesis. No *post mortem* examination was allowed. My opinion was that he was suffering from thickening of the duct, and not from cancer.

CASE IV.—A surgeon aged 70, who had been doing a large country practice for many years, was first seen in the autumn of 1870, at his own house some miles from Bristol. He had been ailing for ten months, and had been jaundiced for the last six months of the time. His state at the date of my visit was one of great mental and bodily depression, and he was much emaciated. The left lobe of the liver was enlarged, but smooth. There was no pain or tenderness. The itching of the skin was terrible. A very little bile had been passed at stool on several occasions during his illness. He answered questions pretty well, but wandered slightly at times. The diagnosis lay between cancer of the lower surface of the liver and a remediable thickening of the duct itself. Having regard to the latter possibility, he took iodide of potassium, and pills containing blue pill, belladonna, and taraxacum. Six months afterwards he paid me a visit at Clifton, looking ten years younger, and perfectly well.

These four cases illustrate to my mind this somewhat unusual condition, subinflammatory thickening of the duct itself. The diagnosis between this affection and cancer of the lower portion of the liver is very obscure and difficult. I think that in this condition the jaundice is more sudden, the icteric itching more intense, the emaciation more rapid, the tendency to cerebral symptoms greater than in cancer, whilst the pain or tenderness over the region of the liver is generally less. But either may cause death, either may lead to congestion of the portal vessels, and as a consequence of this to hæmorrhage into the stomach or intestinal canal, rather than to ascites. Three out of these four patients were very sober men, and of the fourth I have no record.

I believe it to be especially a disease of advancing age, and to bear the same relation to the catarrh of the duct often met with in the jaundice of childhood, that fibroid induration of the lung bears to catarrh of the bronchi and air-cells.

CASE V.—A lady, aged 26, having suffered all the winter and spring from debility and loss of appetite, came under medical notice in May, 1871. In spite of having felt unwell for many weeks, she had carried on the ordinary duties of her life, in which was included the going up and down a steep hill several times a day to services at church. At the first visit, she seemed to be suffering from ordinary jaundice, dependent on catarrh of the ducts. The liver was slightly enlarged and a little painful. She had vomiting, constipation, intense jaundice, entire absence of colour in the motions, and a very deep-coloured urine. She was decidedly weak, and not in a condition to bear much medicine. Under small doses of aloes and colocynth, the colour reappeared in the stools in the course of ten days. She did not convalesce thoroughly as to strength, and what little power she had was again injudiciously used in long church services. About the middle of July, she had an attack of jaundice again, and then was so weak that it seemed impossible to give any aperient medicine. She became greatly emaciated, unable to sit up; having some cough, and a little consolidation at the apex of the right lung. There was complete anorexia. The urine was of a very deep colour.

My friends, Dr. Beddoe and Dr. Fripp, who kindly gave me the advantage of their help, believed, as I did myself, that she was the subject of chronic atrophy of the liver; the more so, as the slight enlargement of the liver that existed in May had now given place to an abnormally decreased area of hepatic dulness. Still, however, she had no ascites, and no nerve-phenomena; nor was leucine or tyrosine found in the urine. The jaundice persisted for six weeks. She was taken into the country to satisfy a craving desire on her part; and during a portion of August and September she was carried from her bed to a sofa out of doors. The menstrual function ceased in August. Towards the middle of September, the bile was no longer excreted at all, the urine regained its normal colour, the skin lost the jaundiced hue, the fæces were perfectly white, whilst the general condition remained much the same. This complete abeyance of all hepatic function persisted for about seven weeks, whilst her pulse was always 120, her appetite very poor; the power of sitting upright, without feeling very faint, impossible. I need not say that the prognosis was as bad as possible. In the second week of November, the liver quite suddenly began to secrete bile again; a certain amount of appetite returned, and enough strength to enable her to drive out and to take short walks. In December, the menstrual function was regained. This improvement has steadily increased; and the young lady, though still rather weak, is convalescent.

The difficult point in this case is, of course, the fact of the liver resuming its action after seven weeks of complete inactivity; but in connection with the progress of the case are the interesting points of entire freedom from cerebral symptoms during the period of suppression, and the fact that digestion, sufficient to support life, went on without the help of the bile.

CASE VI.—A young lady, aged 21, had been ill for a week when first seen in December 1870. She was then deeply jaundiced, with some hepatic enlargement and tenderness, with high coloured urine and pale stools. On the third day of jaundice she fell into a state of torpor, and exhibited great moroseness on being roused. She did not know the people about her, and lay comatose if left alone, and with very dilated pupils. My friend Mr. Bryant and I spent much time with her, using calomel and castor-oil, enemata, and blisters to the neck and over the right hypochondrium. The temperature was normal throughout. The next day she had torpor, but was exceedingly morose; but on the 23rd, after these cerebral symptoms had persisted more or less for four days, she became perfectly rational, whilst no bile appeared in the stools until January 4th, twelve days after all cerebral symptoms had ceased. She made a good recovery.

One more point in connection with these cases of jaundice. Case II died in the summer of 1870. Case VI was taken ill in the same village in December of the same year. She was his niece, and had seen him often during his illness. During her convalescence, her sister sickened and had a troublesome attack of jaundice. This sister, during her convalescence, went to the seaside to stay with her cousins, the daughters of Case II. Soon after her arrival, one of them, a married cousin, had jaundice there, then a sister (Case V), also a daughter of Case II. During the convalescence of Case V, another of her sisters had a sharp attack of jaundice; and immediately afterwards another cousin, of a different family, who had seen something of them during their illness, also had an attack.

I have no hesitation in stating my conviction that the occurrence of jaundice in these ladies, one after another, was purely accidental; but I am not surprised to find that their friends are looking upon this symptom as a highly contagious disease. The fact is only mentioned here as an illustration of the looseness with which the spread of disease by contagion is often spoken of.

NOTES OF A FATAL CASE OF HYSTERIA.*

By ROBERT W. FOSS, M.D., Stockton-on-Tees.

ABOUT three o'clock in the afternoon of October 11th, 1870, as I was passing his house, I was called in by B. to see his daughter, aged 19, who, he informed me, had been in convulsions all day. When I saw her she was perfectly conscious, throwing her arms and legs about, laughing and crying alternately, in fact, having hysterical convulsions. She complained of pain in the right side of her head, also of the *globus hystericus* rising up from her abdomen to her right chest, where it stopped. Her chest was normal both to percussion and auscultation. Pulse about 80, small. She also stated that she had had leucorrhœa, with much offensive discharge, for the last fourteen months, and since that time had had these hysterical attacks. She had been under medical care all this time, and was for some months a patient in an infirmary. Her father stated to me that all the medical men who had seen her said that she was simply suffering from hysteria with leucorrhœa, and that in time would be well again. I expressed a similar opinion, believing that it was a case more for moral than medical treatment. Within three hours of this she was dead, having expired in one of these paroxysms. Her father was anxious that the real cause of his daughter's death should be discovered, therefore Mr. A. E. H. Trotter and myself, assisted by Mr. Ruck, next day made a *post mortem* examination of her body.

The right lung was normal, as was also the left, with the exception of some slight hypostatic congestion at the base. There was some frothy mucus in the bronchial tubes. There were no pleuritic adhesions. The heart was pale in colour, and rather flabby. There was a small clot of blood at the apex of the right ventricle; the other cavities were empty. The liver, which seemed rather larger than usual, on section, was normal, as were also the kidneys and suprarenal capsules. The contents of the cranium appeared perfectly natural. The base of the uterus was congested, and its walls were thicker than usual. The mucous membrane lining the interior was covered with a thick

* Read at the Annual Meeting of the Northern Branch.

glassy mucus like white of egg, which was also exuding from the os. The left ovary was about the usual size, and, on section, was found to present a honeycombed appearance, consisting of numerous little cavities filled with gelatinous matter, constituting what is called colloid tumour of the ovary. The right ovary was of the size of a large walnut, and, on section, consisted of one large parent cyst containing many smaller ones springing from its internal surface. There is nothing here to account for death taking place so suddenly as it happened in this case; and the only hypothesis we can offer is, looking at the state of the cavities of the heart, that it was death from syncope.

I would not have ventured to bring this case under your notice, had I not remembered a similar one in the clinical wards of the Royal Infirmary, Edinburgh, which was under the care of Dr. Douglas Maclagan during the summer session of 1868, the subject of which was a strong well-developed woman between twenty and thirty years of age, who was admitted for hysteria, and who died suddenly in one of the paroxysms. At the *post mortem* examination of the body subsequently made, every organ was found to be perfectly healthy, and the cause of her death, I presume, must therefore have been syncope. Whatever may be the pathology of hysteria, most medical men regard it as a disease curable, and not one in which an unfavourable termination is to be expected; therefore, besides any other value which this case may have, it teaches one thing, that death may take place during the hysterical paroxysms, and that when they exist there must be a certain amount of danger to life.

OBSTETRIC MEMORANDA.

STATISTICS OF OVARIOTOMY.

VI.

I SEND a very modest contribution to the statistics of ovariotomy, in the shape of a short abstract of my notes of the only case of ovarian disease in which I have been called upon to operate. The unfavourable result was anticipated; and the operation was undertaken at so late a stage of the case, only at the earnest desire of the patient, who, although she had previously declined to submit to any operation, in consequence of a hope having been held out to her that the disease might undergo a spontaneous cure, was now anxious to be spared the lingering death which she might otherwise expect.

Miss ——, aged 55, had suffered for more than twelve years from ovarian disease, commencing on the left side. She was greatly emaciated and cachectic looking, her complexion being very sallow. She had occasional attacks of vomiting, with constipated bowels and frequent micturition. The tongue was pointed, fissured, red, and dry in the centre; pulse 120, and feeble. The abdomen was very tense, uniformly distended, and distinctly fluctuating; the circumference at the umbilicus was forty-eight inches. On July 6th, 1871, the operation was performed under chloroform. After the incision, no adhesions could be felt, as the hand glided easily between the abdominal walls and the tumour, which occupied the whole of the abdomen as high as the ensiform cartilage. About forty pints of liquid were drawn off, at first very fœtid and of the colour and consistence of thick cream, but subsequently becoming prune-juice coloured, and so gelatinous as to necessitate the slitting up of the cyst before it could be evacuated. Rather extensive adhesions were met with in the pelvis, and these were separated partly with the hand and partly by cautious dissection. The pedicle, which was very short and broad--the tumour being almost sessile—was tied with a double whipcord ligature, and the end secured in the wound. The weight of the solid tumour removed, which consisted of a unilocular cyst, amounted to about 14 lbs. Its walls were very thick and vascular anteriorly, but much thinner posteriorly, and stained with bile where lying in contact with the gall-bladder. The patient was much exhausted by the operation, but rallied considerably in a few hours; and this favourable condition was maintained until the evening of the following day, when symptoms of exhaustion supervened, and she died on the second day after the operation. No necropsy was permitted.

Sandon, Stone, June 11th. J. H. TYLECOTE, M.D.

VII.

I BEG to contribute my mite to your Statistics of Ovariotomy in the two following cases.

CASE I.—Mrs. P., aged 34, the mother of four children. The last pregnancy was coincident with ovarian disease. She had rheumatic cardiac disease. After tapping, ovariotomy was performed under most unfavourable circumstances. There were extensive adhesions (the incision was seven or eight inches long). The ends of the ligature were cut off short. The tumour weighed 32 lbs. (having been diminished by the removal of ten pints by tapping six days before). She recovered; but died six months afterwards from cardiac disease with dropsy.

CASE II.—Mrs. J., aged 41, mother of five children, had rapidly growing ovarian disease. Double ovariotomy was performed; the first pedicle was secured by the clamp, the second by a hemp-ligature, of which the ends were cut off short. The weights of the tumours were 10 lbs. and 2 lbs. She recovered from the operation; but died within two days of a year afterwards of extensive cancerous infiltration of the stomach, liver, mesenteric glands, abdominal walls, and the stump of the pedicle that had been secured by the clamp. There was no trace of the left pedicle. The knot of the ligature was found embedded in the edge of the broad ligament.

GEORGE GRANVILLE BANTOCK, M.D.

INERTIA OF THE UTERUS.

No doubt Mr. Lawson Tait will forgive me freely if I express the belief that his surmise, given in the JOURNAL of June 22nd, that his new plan of external pressure might be found not at all new, is well founded. This is certainly the case; nor is the belief that the method does not date prior to 1856 quite correct.

The plan of external pressure in inertia, especially incomplete inertia, which is not uncommon in protracted cases, where, as Dr. Playfair mentions, we often have "feeble and ineffective pains", has been a part of my principles and practice since 1845. To the practice of this plan I attribute partly my loss of faith in ergot before labour; and especially the fact that I attended more than 680 cases before having to resort to forceps on more than one occasion. As to deaths, I believe I never had but one, and that arose from blood-poisoning after labour. I mention this to show the *safety* of the method of pressure, which ought to be invariably made with the palmar surface. Not for a moment do I think this plan new in my case either, for it seems to me to have been one of the first routine duties which I acquired when I commenced the practice of obstetrics. Will Mr. Tait allow me to suggest a less arduous method of applying intermittent pressure than the one which he tried with two hands locked? A stout, well-applied, wide *flat binder*, gives a wonderful fulcrum for the back of one or both hands during the moments of pressure, and affords the means, also, of *regulating* that pressure.

WILLIAM HINDS, M.D.,
Professor of Botany in Queen's College, Birmingham.

CLINICAL MEMORANDA.

SUBLUXATION OF THE KNEE.

ABOUT 11 o'clock on the night of the 11th instant, I was summoned by the husband of Mrs. H., visiting this health-resort, to see his wife, aged 58, who, shortly after retiring to rest, when in the act of turning round in bed, was suddenly seized with a most severe and sickening pain in the right knee, which seemed rigid and in a semi-flexed state. I was for some little time puzzled as to the nature of the symptoms; and, in the absence of concomitant indications of paralysis, I was fearing it would prove—especially as the pulse seemed slightly irregular, though somewhat feeble—a case of idiopathic embolism. I recommended a bottle of hot water to the foot, and prescribed a mixture containing carbonate of ammonia, henbane, and camphor. Shortly afterwards, I was again summoned by Mr. H., who fortunately lodged near at hand, and who said that his wife was no better, and at the same time expressed a wish that something more should be done if possible. Thinking the case might be one requiring surgical interference, I consulted Erichsen's *Surgery*, and there found a description of the symptoms from which my patient was suffering, and was inspired with hope soon to free her from the intense and alarming pain which she was enduring. On again visiting her, I forcibly flexed the joint, and then rapidly extended it, using, at the same time, a rotatory motion; comparative ease was immediately experienced, to the great satisfaction of the sufferer, who said, so great had been the pain, that "she thought she could scarcely have lived till morning, unless she had been relieved." An evaporating lotion was applied to the joint; sleep was soon procured; and the following morning she rose to breakfast as usual. The joint had been the seat of chronic rheumatism, and a knee-cap had been worn as a support; this impaired state of the part may account for the apparently trivial cause of the accident.

JOHN WARD, M.D., Grange-over-Sands.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. THOMAS'S HOSPITAL.

CASES UNDER THE CARE OF MR. SIMON, F.R.S.: WITH CLINICAL REMARKS.

IN the course of a recent visit to St. Thomas's Hospital, we had the pleasure of seeing a number of interesting cases, and of hearing some very instructive clinical remarks from Mr. Simon. We will endeavour briefly to describe a few of the former, and to give the substance of some of Mr. Simon's observations. We do so the more readily since, owing to the hour at which the visits at this hospital are made (9.30 A.M.), few practitioners can hope to follow our example and to see and hear for themselves.

Skin-Grafting.—We saw several cases of skin-grafting. In one case, a large chronic ulcer above the inner malleolus had been almost entirely closed by this means; twelve out of thirteen grafts had taken. As to durability, the cicatrix looked unusually promising, considering the unfavourable situation. Close by was a boy with a large ulcer on the thigh: here the plan had failed—only two grafts had lived out of a large number. Mr. Simon remarked that the exact conditions necessary for the success of this operation had not yet been satisfactorily ascertained; it was certainly useful in some cases, but did not always succeed in the cases in which its success would be most desirable.

Scurvy.—In Alfred Ward was a well built middle-aged man, a carrier, who presented in a marked degree most of the symptoms of scurvy. He had dark fungating ulcers on the legs, purpuric bruises and petechiæ over the body, spongy ulcerated gums, and a peculiar icteroid complexion; he had suffered much from hæmorrhages from the mouth, ulcers, etc. Mr. Simon remarked that scurvy is now rare, even among seafaring men, and especially rare among landsmen; but that he had met with unmistakable examples of the disease in landsmen, even in patients of good position, as the result of long-continued errors in diet. He believed this to be such a case: the man had been in the habit of seldom dining at table, but took bread and meat with him to consume on his journeys, and had thus lived almost entirely without vegetables. In the hospital he has an extra allowance of fresh vegetables, lemons, etc., and on this treatment has been steadily improving.

Delirium Tremens following Scalp-Wound.—Concerning a man who was recovering from a severe scalp-wound, complicated by the supervention of delirium tremens, Mr. Simon observed that the old routine practice of giving opium in such cases was certainly hurtful. He did not mean to say that opium was never required, but that undoubtedly the bromides were much more generally useful. He thought, too, that there was a beneficial tendency towards a more discriminative use of stimulants in these cases. This man had at first full doses of bromide of potassium; this was followed by a nourishing diet, with one pint of porter daily, and he had got on exceedingly well.

Chancres.—There was a man with a couple of sores on the penis; they were round, with but little discharge, and there was no induration about them. Mr. Simon reminded the students that, though these sores were soft, they might have been contracted from a hard chancre, and might be capable, if inoculated, of producing a hard chancre in other subjects. In the male subject, not previously infected with constitutional syphilis, the primary sores which initiate the constitutional infection are generally hard, and inoculation from them on other previously uninfected subjects produces hard chancres again; while simple soft sores on one subject produce simple soft sores on others. Ricord, however, had established the fact that a person who has once had constitutional syphilis is very inapt to get another hard chancre; and that inoculation from hard chancre may, on such a subject, produce a sore which, though itself soft, is capable of infecting other persons with a hard chancre and constitutional syphilis. This man has had severe constitutional syphilis: it is possible, then, that these ambiguous ulcers may have been obtained from a hard chancre, and that they would produce a hard chancre in another. Secondary syphilitic ulcers, which also by inoculation can produce a hard chancre on other subjects, may appear on the penis just as on any other surface of the body. It was possible that these might have belonged to this class; but if so, iodide of potassium would have at once produced its usual specific effect upon them. It has not altered these in the least; they are probably, therefore, not secondary.

Morbus Coxæ, that plague of house-surgeons, was well represented. One youth had a sinus which passed by the joint into the cavity of the abdomen: fæces occasionally passed through it; yet the patient was improving, thanks to cod-liver oil and good feeding.

Ovariotomy.—We saw Mr. Simon perform ovariotomy on a patient aged 56. The tumour was composed of one large cyst, with a little solid fibro-cellular material near the pedicle; there were no adhesions. The tumour was tapped, easily extracted through an incision about three inches long, and the pedicle was secured in the wound by a clamp. Mr. Simon observed that "it did not follow that because the case had been a simple one the result would probably be satisfactory. Absence of adhesions makes great difference to the facility of the operation; but, as regards the risk of peritonitis, not quite as much difference as one might expect. Sometimes where there are adhesions, and where you have in consequence to make larger incisions—perhaps even to use some force in separating the tumour, and then perhaps to apply the cautery to arrest hæmorrhage—there is afterwards such a remarkable absence of ill effects as to suggest that the previous attacks of localised inflammation have rendered the peritoneum more callous; have exhausted, to a certain extent, its irritability. In cases like the present, which in the theatre may seem to be but minor operations, we can never be quite sure beforehand that peritonitis, immensely out of proportion to the apparent injury, may not follow the operation". We are glad to be able to add that, up to the 15th June (eighth day), the patient had not a bad symptom, and was doing exceedingly well.

OPERATIONS, WEDNESDAY, JULY 3RD, 1872.

Rheumatic Arthritis in Knee.—The patient, a man about middle life, had had rheumatism for several years; and two years ago it seemed to culminate and centre in the knee, which had since then gone on swelling, until it was now enormously distended. The bones of the leg seemed to have not the slightest relation to each other, as the lower half of the limb could be turned about or bent in any conceivable way. Mr. Jones made two punctures with trochars, and let out as much fluid as would freely come. He then injected two ounces of a solution of iodine, containing two drachms of the tincture to the ounce of water, hoping thereby to set up such inflammation as would lead to the absorption of the fluid left. The limb was put upon a long splint, to give the knee perfect rest, and ice ordered over the joint. Mr. Jones said that he had amputated in a precisely similar case some time before, but with a bad result; the woman dying two days afterwards from very severe inflammation in the opposite hip-joint. He did not amputate in the present case for that reason, and also because the patient was paralysed on the opposite side, and had only this to depend on for walking in the future.

Excision of the Hip-Joint.—This was a sickly boy, who had been unable to use his limb for some years, but who only three months before grew acutely worse; an abscess forming and bursting in front of the thigh, just outside Scarpa's triangle. In consequence of the unfortunate position of the natural opening, Mr. Jones had to make another freely over and above the trochanter major, and so excise the head of the femur and gouge out the diseased acetabulum. He also detached the tendons connected with the trochanter major, to allow a freer discharge from the wound, and more ready healing.

Lipoma on the Shoulder.—Mr. Jones removed a large fatty tumour from the shoulder of a woman, but had some difficulty in dissecting its multitude of separate nodules and fibrous adhesions from the skin and muscular tissue.

Morbus Coxæ.—Mr. Croft placed before those present an interesting case of a boy from whom he had removed the head of the femur a year ago. He was then suffering severely from hip-disease, with various abscesses about the joint, and five detached pieces of necrosed bone in the acetabulum of the size of a pea, and larger. Mr. Croft on that occasion, instead of cutting through the muscles attached to the trochanter and removing the periosteum, dissected it carefully off the head of the bone, and left both it and the attachments of the muscles. The boy is now in a remarkably improved state, being able to use the limb with little help, flexing it to a right angle with the pelvis, and having complete rotation. There is but little shortening of the limb—about an inch and a half—much less than would have been looked for; but lately it seems to have shortened slightly more.—Another case of precisely the same kind was put upon the table; but in it severe inflammation had been set up, and it now became necessary to remove some dead bone. Mr. Croft did so, extracting a sequestrum half the length of the femur, which was encased in new bone. He still hoped that the boy would do well and have an useful limb. The cause of failure in this last case, he said, might have arisen from his not having been careful enough in dissecting off the periosteum, and inflammation having in consequence run down the bone.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

SUBCUTANEOUS INJECTION OF ERGOTIN IN UTERINE FIBROMYOMATOUS TUMOURS.—Dr. Hildebrandt of Königsberg has used subcutaneous injection of ergotin in nine cases of uterine fibroid. He employs a solution of 3 parts of aqueous extract of ergot in 7.5 parts of distilled water and the same quantity of glycerine. Langenbeck's solution he has found to produce pain, on account of the alcohol contained in it; while the use of the solution which he recommends is unattended with pain, and is not followed by suppuration. Somewhat tender indurations are now and then left for some time at the seat of injection. In general, however, the treatment is unattended with inconvenient results. The lower part of the abdomen is more sensitive to the puncture and the injection than is the neighbourhood of the umbilicus. At the time of menstruation, and for a few days before and after, slight bleeding takes place from the punctures. The general result of the injections has been a diminution of the tumours; and Dr. Hildebrandt accounts for this by supposing that the increased compression produced by the ergot interferes with their nutrition, and leads to their degeneration and absorption.—*Berliner Klin. Wochenschr.*, June 17, 1872.

A REMEDY FOR CATARRH.—Dr. E. Brand (*Berlin. Klin. Wochenschrift*, No. 12, 1872) speaks in terms of recommendation of the following formula for an anticatarrhal olfactory, prescribed by Dr. Hagner: ℞ Carbolic acid, 5 parts; rectified spirit of wine, 15 parts; strong solution of ammonia, 5 parts; distilled water, 10 parts. The mixture is kept in a stoppered dark glass bottle. When a catarrh is commencing, a few drops are placed on three or four layers of blotting or filtering paper; the patient, holding this in his hand, and closing his eyes, inhales deeply from it as long as any smell is perceptible. The effect of the treatment is to cut short the acute stage of the cold, to prevent the occurrence of subsequent coryza and bronchial and laryngeal catarrh; while all troublesome symptoms are rendered much milder. The remedy should be applied every two hours.—*Wiener Med. Wochenschrift*, June 15, 1872.

RENAL DISEASE FOLLOWING THE EXTERNAL USE OF JUNIPER TAR.—Dr. Kirchheim relates the case of a man aged 23, suffering from eczema, for whom a mixture of juniper tar (*huile de cade*) and glycerin was ordered for external application. After he had applied it about three days, he felt unwell, had headache, lost his appetite, and his urine was scanty, dark-coloured, and cloudy. These symptoms were followed by pain and tenderness in the region of the kidneys, œdema of the lungs (and afterwards pneumonia), and albuminuria. He was treated with benzoin and warm baths, and with iron and quinine as tonics, and recovered after an illness of two months.—*Berliner Klin. Wochenschr.*, May 6.

FEEDING BY THE RECTUM.—The feeding of patients by nutritive enemata in cases of stricture of the œsophagus or pylorus, or whencver the upper part of the digestive tube must be relieved of its functions, has hitherto been anything but a satisfactory proceeding. The ordinary fluid food which is generally used for that purpose is either not retained long enough in the rectum, or cannot be digested there for want of a digestive ferment. Even the proposal of Meissner, to use an artificially prepared meat-peptone, has not always been found practicable, and the long time necessary for its preparation makes it quite unsuitable for daily practice. A decided step in advance has recently been made by Dr. W. O. Leube of Erlangen (*Deutsches Archiv für Klin. Medic.*, vol. x). Starting from the idea that it would be best to let the digestive changes which must necessarily precede absorption go on in the rectum itself, with its equable temperature, he devised a mixture of food and digestive ferment which, he found, is easily retained in the rectum from twelve to thirty-six hours. The digestive ferment is the fresh pancreas of the ox or pig, which, finely minced, he mixed with scraped meat, rubbing them well together with a little warm water, so that the mass may be easily injected. The most suitable proportion is one part of pancreas to three of meat. Fat may be added, but its quantity ought not to exceed one-sixth of that of the meat. Before this food is injected, the rectum ought to be washed out with water. Dr. Leube mentions that the first enemata sometimes apparently remain undigested, but that this must not prevent their being continued. Generally the fæces resulting when this food has been retained sufficiently long have the character of ordinary fæcal matter. By a series of experiments, Dr. Leube has proved that by this method of feeding *per rectum* a considerable quantity of nitrogen is taken up into the system. In a dog, which for several days had been deprived of nitrogenous food, and whose system, therefore, was in a state of nitrogen-hunger, an increase in the nitrogen-elimination by the kidneys took place when these nutritive enemata were given; and, on the other hand, in several experiments on a dog, and likewise on a healthy young man whose system was in a state of satiation with regard to nitrogen, the quantity of nitrogen excreted through the kidneys was not materially diminished when most of the nitrogenous food was introduced by the rectum instead of the stomach. A chemical examination of the fæces remaining when the food had been retained long enough showed that almost the entire quantity of nitrogen contained in the food had disappeared. The same was found with regard to fat; and in a dog that was killed on the second day of the experiment, the epithelial cells of the mucous membrane of the colon were found filled with fat globules. Dr. Leube also relates three cases of patients in whom this method of feeding had been used, and has completely answered the expectations which had been formed from his experiments. Of particular interest is the last case, in which, in consequence of tincture of iodine having been accidentally swallowed, no food whatever could be taken by the stomach, and the feeding by the rectum had to be continued for more than four weeks. In all three cases the general condition of the patients was much improved, although the nature of the cases precluded any but temporary benefit, two of the patients suffering from carcinoma.

REVIEWS AND NOTICES.

A TEXT-BOOK OF PATHOLOGICAL HISTOLOGY: An Introduction to the Study of Pathological Anatomy. By Dr. EDWARD RINDFLEISCH. Translated from the second German edition by Drs. W. KLOMAN and F. J. MILES. London: Trübner. 1872.

WE have had occasion again and again to allude in terms of praise to the work of Dr. EDWARD RINDFLEISCH, the talented Professor of Anatomy in Bonn, and to the great value of his contributions to the literature of the subject of which he chiefly treats—viz., pathological histology. The mine offered to the student in Germany was duly appreciated in that country; but to the English and American members of our profession, few of whom were conversant with German, and to whom pathology was a less generally understood field, its merits were very partially recognised. By the appearance, however, of a translation in English, the admirable treatise of Dr. Rindfleisch is now placed within the reach of all. By the energy and enterprise of American publishers, some of the best continental works on medicine have been issued within the past few years; and by the New Sydenham Society, the profession has been furnished with the ideas of some of the most renowned clinical and scientific authors of France and Germany. Of these, the present volume occupies a deservedly prominent position. The work is well got up; it is printed on excellent paper and in large clear type, and is illustrated with upwards of two hundred illustrations.

NOTES ON BOOKS.

The Pharmacopœia of the Hospital for Diseases of the Throat. London: Churchill. 1872.—With the introduction of the laryngoscope into this country, a rich and almost unworked mine was opened in the therapy of laryngeal affections. Here was the real practical difficulty which met our early laryngoscopists—the relief of those diseases rendered so apparent by the new art. The surgical treatment of growths and some other diseases of the larynx has been elaborated, and now stands on a well marked position; but, when we come to grapple with chronic organic lesions and other well known affections of the larynx, we find that our knowledge is there limited and uncertain—largely, no doubt, because their therapeutics have not been generally studied. We are glad, therefore, to receive the results of the long experience of Dr. Morell Mackenzie and the other medical officers on the medical treatment of laryngeal affections. This is embodied in an useful manner in the small volume, edited by Dr. Mackenzie, now issued as the *Pharmacopœia* of the hospital; for the book contains, not a mere catalogue of remedies, but useful and instructive notes, expressing the mode of preparation and use and the therapeutic value of the various inhalations, lozenges, gargles, applications, and other medicaments, with a classified index at the end for reference. Such a *Pharmacopœia* has long been wanted, and will prove most useful to practitioners.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Strect, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 6TH, 1872.

PUBLIC HEALTH BILL.

THE Public Health Bill, "as amended in Committee," has at length made its appearance before going into Committee. It is shorn of its fair proportions, having been curtailed, by its framers, of thirty-seven of its ninety clauses. These dropped clauses contain nearly all that was really valuable in the Bill; and for the sake of them alone the British Medical and Social Science Associations have refrained from offering an uncompromising opposition to the measure, the organising clauses of which were highly objectionable. The Bill now consists wholly of these organising clauses, which have been deprived of at least one safeguard that was calculated to disarm the opposition of many who viewed with suspicion the measure as a whole.

The Boards of Guardians are still constituted the rural sanitary authorities throughout England and Wales, and are enjoined "to appoint from time to time a medical officer or officers of health, an inspector or inspectors of nuisances, a clerk and treasurer, and such other officers and servants as they may deem necessary for the efficient execution of the purposes of the Sanitary Acts." But that subsection of the original Bill which provided that "the Local Government Board shall have the same powers with regard to the appointment, qualification, duties, salary, and tenure of office of a medical officer of health as in the case of a district medical officer of a union" has disappeared from the new Bill. "The sanction of the Local Government Board" is required for the appointment of "the same person" as "the medical officer of health or the inspector of nuisances for two or more rural sanitary districts, by the joint or several appointment of the sanitary authorities of such districts"; and also for the appointment of "any district medical officer of a union as a medical officer of health." It is also provided by sect. 31 that, "where in any local Acts the consent, sanction, or confirmation of one of Her Majesty's principal Secretaries of State is required with respect to the appointment of any officer for sanitary purposes, the consent, sanction, or confirmation of the Local Government Board shall, after the passing of this Act, be required instead of that of the Secretary of State." But for all other officers of health, engineers, etc., there appears, so far as we can discover, to be absolutely no protection whatever. The delusive reference to the fortieth section of the Public Health Act 1848—a section which referred to the Board of Health, and was repeated by the eighth section of the Act 1858—retains its place in the altered Bill, though its worthlessness was expressly pointed out to Mr. Stansfeld by the second deputation which waited on him.

The new Bill, therefore, compels the appointment of medical and other officers by Town Councils, Improvement Commissioners, and Boards of Guardians, and hands them over without appeal to the tender mercies of their local patrons. If this is acceptable to aspirants to office under the propose new sanitary authorities, by all means let them petition and agitate for the new Public Health Bill. Above all things, if they, being men of education and belonging to a learned profession, covet the distinction of being *inspectors of nuisances*, let them give their strenuous support to the Bill which provides, according to the offensive and insulting recommendation of the Royal Sanitary Commission, that "a medical officer of health may exercise any of the powers with which an inspector of nuisances is invested by the Sanitary Acts or any of them." If, on the contrary, they heartily disapprove of these provisions of the Bill, let them lose no time in individually and collectively offering their strenuous resistance.

THE NEW VOLUNTEER MEDICAL REGULATIONS.

WHETHER from a consciousness of an original sin, of carelessness, or from a quite unofficial susceptibility to conviction, Mr. Cardwell has shown a candid and immediate intention to consider favourably the objections which we have urged to enforcing of the new regulations promulgated concerning volunteer surgeons. The Volunteer Service is much indebted to Lord Elcho and Col. Chas. Lindsay for the promptitude and earnestness with which they urged the considerations which the first perusal of these extraordinary regulations suggested to us, and which were immediately echoed by the whole volunteer medical force. The force of them was quickly perceived by the volunteer colonels, and they were stated with great clearness and strength by Lord Elcho, Col. Lindsay, and Mr. Whitwell, in the House.

In the course of the debate on the Army Estimates, Colonel Charles Lindsay moved that the sum of £2600 for medical attendance be reduced from the vote. With respect to the rules with regard to the medical officers, he said he was at a loss to conceive why a body of gentlemen, who were, under the existing system, necessary to the establishment of their regiments—gentlemen of high-class professional attainments, and whom it was by no means easy to obtain, and who were indispensable, in time of peace, in their attendance at the various assemblies, in case of accident, where ammunition is used, and who would be equally so in time of invasion, by bringing their professional experience to bear upon the duties which they would have to perform in the field—duties which could be easily learnt by such men when the time approached, without having to pass through an unpalatable and unnecessary ordeal for an event which, to say the least of it, was profoundly remote;—he said he was at a loss to conceive why these officers were suddenly to be called upon to undergo additional tasks to those which gave them their diplomas for medicine and surgery, when they entered their profession. He said this because he found in clause 31, paragraph 5, that they were to be examined before a board of the Principal Medical Officer of the district and two other Army medical officers. Now, he considered that this raised an important and delicate question, and one which would deprive the service of valuable men whom it would be very difficult to replace; and it was one which appeared to him to display a want of knowledge of the professional responsibilities of medical men who are civilians; and, from what he understood, they would not be likely to submit to any test examinations for commissions, which they feel, and have expressed, to be unbecoming their status in the profession. He felt no doubt, therefore, that if this rule were enforced, their services would not be much longer at the disposal of the commanding officer. Then he found in clause 43, paragraph 1, under the head of "Medical Attendance", that the surgeon was to attend professionally the adjutant and his family, and the assistant-surgeon to attend the sergeant-instructors and their families, and find medicines, receiving an allowance of twopence per week for each person. The term "family" to include wife, unmarried

daughters, and sons under sixteen years of age; so that, if this rule be enforced, those gentlemen who are in full civil practice are to enter into a contract, as it were, with the Government at the rate of 8s. 8d. a-head per annum, to attend upon an unlimited number of persons, and find an unlimited quantity of medicine into the bargain. He said unlimited, for, if those officers belong to an administrative battalion, the various corps of which are spread over a whole county, and in each of which corps there may be two families of eight or ten persons in each, there would be no end to their obligations—to say nothing of the number of miles which they would have to travel—and for which they are to receive no other allowance than twopence a week for each person. The consequence would be that the medical officer would resign, and the regiment would be left without any; for it must be borne in mind that these medical officers are not only civil practitioners of considerable eminence, but they are Volunteers in every sense of the word and gentlemen; and they, therefore, would be prejudicing their position as Volunteers, and acting in opposition to the rules of their colleges, if they were to accept any such pecuniary contract as has been suggested. He thought it would be far better for the Government to pay the twopence to the adjutant and his sergeants, and let them find their own medical advisers. Before he left the subject, he wished to ask the right hon. gentleman if he was aware that the medical officers were at a considerable pecuniary loss every time they were called upon to attend reviews and rifle prize meetings, and without the slightest counterbalancing advantage to themselves, and if he expected them to continue their gratuitous services on the terms laid down in the rules to which he referred. No doubt, the adjutant and staff-sergeants and families had a right, by the rules and custom of the military service, to be attended professionally at the public expense, but to call upon civilians and professional men to do so, and upon a miserable and unrecouping allowance, would totally fail, and would drive them from the service altogether. He had dwelt upon the subject because it was one of vital import, and had been much discussed in the profession; and he trusted the right hon. gentleman would reconsider the question, it being one to which both the commanding officers, as well as the medical officers, strongly objected.

Lord Elcho said that absolute ignorance of human nature had been exhibited in this rule relating to the surgeons of the Volunteer corps. Men of great professional distinction volunteered for the service—men who had taken medical degrees at the best universities. Was it to be supposed they would submit to an examination at the hands of Army surgeons whom they regarded as inferior in professional standing? Mr. Whitwell was very sensible of the willing services rendered by medical men for no remuneration, and he would rather accept those services on the terms on which they were now given than after the proposed examination and for the proposed pay. At present the Volunteer medical officers earned a capitation grant for their corps, but without any conditions of service.—Mr. Cardwell, in reply, urged that two proposals had been made, neither of which, however, was intended to be injurious to the medical officers; and he did not know that either of them would be insisted upon if they should prove unacceptable to the medical profession or to the Volunteers generally. One of them was, that medical officers should be experienced in those parts of medical science which had special reference to military duties. If a medical officer qualified in the manner specified in the Regulations, he would be allowed to earn £2 10s. for his corps, just like any other officer. With regard to the particular motion which his honourable friend had brought forward, he trusted it would not be pressed. It was thought that the permanent staff of the Volunteers ought to be placed on the same level with that of the Militia, and therefore it was proposed to allow the medical officers of Volunteer regiments to attend them on the same terms as the medical officers attended the permanent staff of the Militia; but, if this proposal were unacceptable, it need not be insisted upon. He supposed, however, his honourable friend wished that the attendance of the medical officers should be secured to the permanent staff.—On Thursday, Mr. Cardwell again promised that the case of the surgeons would be reconsidered. It never was intended, he said, to apply the new Regulations in any case in which the corps had not had due notice of them. Every commanding officer and every adjutant had a copy sent to him in the beginning of the present month; and inspecting officers had received instructions not to apply the article with regard to inspections to any corps inspected before the 6th July.

The Volunteer medical officers may be congratulated on the excellent effect which their prompt and united action has produced. Mr. Cardwell can certainly not doubt, after reading the reports of the meetings in London, Edinburgh, and Liverpool, what are the sentiments of those officers. In reply to a communication addressed to him officially by Dr. John Murray, Honorary Secretary of the English Volunteer Medical Association, by direction of the London meeting, Mr. Cardwell has, it will be observed, expressed a desire to be furnished with a full statement of the matters which it is desired to submit to him. This will, of course, be furnished to him; and the candid feeling which he has already expressed on the subject gives sound hope that he will not suffer this important branch of the Volunteer force to be wrecked, as it would certainly be, by the practical introduction of these utterly absurd regulations. We cannot readily forgive the War-Office for thoughtlessly, and in complete ignorance of the nature of the position, services, and duties of Volunteer surgeons, promulgating regulations which could only render their position untenable, and make the service quite unacceptable to them. The leading idea was obviously to apply a certain military principle of service to permanent staff-officers; but the widely different conditions of the volunteer and the regular medical service were left quite out of view, and the result was not less absurd than offensive. Prompt withdrawal will, however, be some reparation; and this, we expect, will very quickly follow. It is a matter in which our profession have no material interests. They are willing to continue to give their services as freely and as unbought as hitherto for the purpose of strengthening the provision for the national defence; but they ought never to have been asked to do so on impossible conditions, and they may fairly expect that this requirement will be promply withdrawn.

PUBLIC HEALTH OFFICERS.

We beg to recall the attention of our readers in the Poor-law Medical Service to the very important letter of Dr. Rumsey in the JOURNAL of last week, of which the text ran as follows.

"Sir,—The alternative placed before Poor-law medical officers by Mr. Wickham Barnes, in the pages of your contemporaries, is—doubtless unintentionally on his part—a remarkable perversion of the real points at issue in this controversy. He, being a practitioner in the metropolis, which is hardly touched by this Bill, may be excused for ignorance of the question as regards the remaining six-sevenths of the population of England to which the Bill does apply. I beg leave, therefore, to ask every Poor-law medical officer in the provinces to send me, on a post-card, an answer to the following inquiry, which states correctly the rival propositions, and I promise every one who favours me with a reply that it shall be made good use of for the improvement of his position.

"Which of these two alternatives do you prefer: (A) In urban districts, being set aside by the single officer of health who is proposed to be appointed by each urban authority, and who will generally be your rival in practice; and in rural districts, being appointed sole health-officers under the Board of Guardians, and occasionally inspected by an itinerant official from the local Government Board? or (B) being constituted, in town and country alike, deputy officers of health, under (not 'one of your local medical men', but) a county or principal officer of health, debarred from private practice, who would be ready at all times to support you and to relieve you from the disagreeable duty of initiating proceedings against nuisances created by your private patients, and whose post, on a vacancy, would be filled by one selected for good service from your own ranks?

"Mr. Wickham Barnes has secured an advantage by having been the first to put the question elsewhere; but the members of the British Medical Association need hardly be cautioned against any conclusion which may be drawn from false premises."

To these queries, Dr. Rumsey has received already a large number of replies, of which we learn that the overwhelming majority are in favour of the alternative B.

With characteristic thoroughness and sincerity, Dr. Rumsey desires to completely poll the Poor-law Medical Service, for which our pages, which fall under the notice now, we believe, of nearly every Poor-law medical officer in the kingdom, afford an excellent opportunity. We urge all our country members to post cards to Dr. Rumsey, stating their wishes on the subject. A simple A or B is quite sufficient reply for those who have not time or inclination for more ; and those who feel a public-spirited interest in assisting their eminent associate in establishing upon a firm basis the declaration of the wishes of the service, may perhaps assist in ascertaining the feeling of their more busy or less energetic colleagues.

The following is an extract from the reply of a very distinguished young medical officer. It is deserving of thoughtful perusal by all Poor-law medical officers, and by those who have charge of the Bill.

"I give my voice emphatically for plan B. . . . I do not disdain the duties or responsibilities of being the sole health-officer in my district, provided there were sufficient guarantees for my independence ; but I do not consider a verbal promise from a transitory President, of a vague amount of remuneration, anything the least approaching the required security. . . . Failing the passing of an absolute law for very material augmentation of salaries for the purpose of securing our independence —of which I have no hope, for the expense would be much greater than that of the county chief and the district deputies—I fully believe that the creation of sole health-officers out of district medical officers will be an immense break down, because no amount of inspection will keep them up to their work when all their interest will be against it. There is a great show of chafing at the superintendence of a superior *medical* health-officer, while at the same time it is proposed to increase the lay inspectorate. Whether is the better—to be overlooked by a county medical officer or a London barrister? I confess, on *sentimental* grounds, I see little difference ; and, on *practical*, the difference is immeasurably in favour of the former. I am as open as my neighbours to the vanity of a name ; but I cannot, on the other hand, help being alive to the fact that the name would be vanity indeed if unsupported by the sinews of position. Mr. Barnes has stolen a march upon us by presenting a totally false issue to the profession ; but I hope your *exposé* will be in time to prevent any serious mischief."

THE Canada Medical Association will hold its annual meeting in September.

DR. EUSTACE SMITH has been appointed Physician to the East London Hospital for Children.

A TELEGRAM, dated July 2nd, states that intense heat prevails throughout the country in the United States. Fifty deaths from sunstroke occurred in New York on the previous day.

ADVICES from the Cape of Good Hope announce that a Bill to repeal the Contagious Diseases Act had been read a second time in the House of Assembly without a dissentient voice. A petition, signed by nearly 1,200 women of all classes resident in and about Cape Town, was presented against the Act, some of the ladies who signed it being the leaders in charitable institutions connected with the various churches.

BESIDES the Minor Scholarships or Exhibitions at St. John's College, Cambridge, there will be offered for competition this year an Exhibition of £50 *per annum* for proficiency in Natural Science, the Exhibition to be tenable for three years in case the Exhibitioner have passed within two years the previous examination as required for candidates for honours ; otherwise the Exhibition to cease at the end of two years.

GERMAN SOCIETY OF NATURALISTS AND PHYSICIANS.

THE forty-fifth annual session of this society will be held in Leipzig next month. The meetings will commence on Monday, August 12th, and end on Sunday, August 18th. The secretaries announce that visitors from foreign parts will be welcome.

APOTHECARIES' HALL.

AT the recent competitive examination for the prizes in Botany, given annually by the Society to medical students who are in attendance on the second summer session of the medical studies, the successful candidates were :—1. Augustus Joseph Pepper, University College, a Gold Medal ; 2. Robert Edmund Carrington, Guy's Hospital, a Silver Medal and a Book.

CHOLERA INTELLIGENCE.

THE report of the appearance of cholera in Bessarabia (at Khotine) is confirmed. Fifty-three persons are stated to have been attacked since its outbreak, of whom eleven have died ; and, in view of the outbreak of cholera in places near Odessa, orders have been given to erect wards in the Jews' hospital and quarantine buildings in Odessa for persons who may be attacked there. Cholera is also reported to have broken out at Krementchong on the Dnieper, and on the borders of the government department of which Odessa is the principal seat. The disease at Khotine is stated to be of the true Asiatic type ; the patients suffering, though in some cases mildly, from cramps and vomiting, and diarrhœa collapse occurring in a few hours. Cases are reported to have occurred in Odessa itself. The disease is also said to exist at Kiew, Khober, Kichineff, Ekaterinoslav, and Kherson. The *Journal of St. Petersburg* states that, since the commencement of the epidemic of cholera in Kiew to June 28th, the cases have been 2,328 ; the recoveries, 715 ; deaths, 1,032 ; cases under treatment, 531. A quarantine of ten days has been ordered to be imposed at Constantinople and Sulina on all arrivals from Russian ports. The master of a British vessel is reported to have died at St. Petersburg of cholera.

A VICTIM OF SCIENCE.

MANY sad reflections of much more than personal import attach themselves to the sad announcement of the death of the distinguished young chemist, Mr. E. T. Chapman, whose name is well known as one of the authors of the ammonia-process of water-analysis. He was killed by an explosion in his laboratory at Rübeland, in the Hartz, on the 25th June. Four years ago, Mr. Chapman was the most industrious contributor to the Chemical Society. He will be especially remembered by chemists for his very beautiful researches on "limited oxidation", and for his remarkable faculty of performing unpromising chemical operations with quantitative accuracy. Last autumn, he left England to take charge of a large wood distillery in the Hartz, and a short time ago had commenced the manufacture of nitrate of methyl on a gigantic scale. Under certain conditions, nitrate of methyl is terribly explosive, and it is supposed (for no one survives to tell what took place) that the terrible explosion which shivered a bomb-proof building, killing Mr. Chapman and two workmen who were with him, was an explosion of nitrate of methyl. Mr. Chapman was only 26 years old at the time of his death. A few years ago, it would have been deemed a strange thing for England to send out a chemist to take charge of a German factory ; but that the most promising of the young chemists of England should have no room found for him here, and should have taken service in a foreign land and perished there, is melancholy in the extreme.

BRANCH ORGANISATION.

AS an incentive to exertion for the increase and extension of the Association, and an illustration of what may be accomplished by the judicious and energetic action of the Branches, we draw attention to the success of the appeal for new members which was issued by the Council of the Lancashire and Cheshire Branch in the early part of the present year. No fewer than one hundred and one new members have been added to the Association and the Branch in this district alone ; and this, together with the satisfactory results of a similar movement in the previous year, has resulted in increasing the numerical strength of that Branch, which now numbers upwards of four hundred, by one-fourth, with a corresponding addition to the list of the Parent Society.

CONJOINT EXAMINATIONS.

THE Vice-Chancellor and Proctors of Oxford have nominated H. W. Acland, M.D., F.R.S., Regius Professor of Medicine, and G. Rolleston, M.D., Linacre Professor of Physiology, to represent the University of Oxford on the Committee of Reference for the Medical Examining Board for England.

PROSPECTS OF THE PUBLIC HEALTH BILL.

IN answer to Mr. Rylands, Mr. Stansfeld stated on Monday in the House of Commons that he meant to proceed with that part of the Public Health Bill which constitutes and consolidates local authorities, and gives them certain facilities. The other parts relating to nuisances, river pollutions, hospitals, etc., he should withdraw, but he could not fix a day for the Bill until the Mines Regulation Bill was disposed of. Sir H. Selwin-Ibbetson asked whether it was to have precedence of the Licensing Bill; and Sir M. H. Beach asked the same question as to the Corrupt Practices Bill. No answer being given, the questions were repeated to Mr. Gladstone, who said the Government hoped to deal with all three subjects, but until more progress was made with the Mines Bill he could not see his way clearly to fixing any order of precedence.

ROYAL COLLEGE OF SURGEONS.

THE annual election of Fellows into the Council of this institution took place yesterday, the 4th instant, without a contest—a circumstance which has not occurred for twelve years. On the present occasion, the retiring Councillors, Messrs. Hancock and Curling, the Vice-Presidents of the College, were re-elected; and Mr. Barnard Holt, of the Westminster Hospital, was elected in the vacancy occasioned by the decease of Mr. Samuel Solly. The Westminster Hospital has not been represented in the College since the death of Mr. Guthrie in 1856. The votes were: Hancock, 41; Curling, 31; Holt, 30. In the evening, the Fellows dined together at the Albion Hotel, on which occasion the chair was filled by Sir William Fergusson, Bart., F.R.S.

VON GRAEFE.

AT the Ophthalmological Congress in Heidelberg last year, a committee was formed, of representatives of various countries, for the purpose of taking the necessary measures for the erection of a statue of the eminent ophthalmic surgeon, Albert von Graefe, in the vicinity of the scene of his teaching in Berlin. The scheme has received the approval of the Emperor-King; and local committees have been formed, especially in Berlin, where active measures are being taken for obtaining subscriptions, in order that the work may be worthy of its object.

THE PHYSIOLOGY OF TEARS.

DR. DANIEL TUKE, who has been investigating the physiology of tears, thinks we must confess with Brodie that we cannot answer the simple question why or how does a certain state of mind augment the secretion of the gland? Gratiolet inferred, partly from his own sensations, that tears result from reflex irradiations which traverse the fifth pair of nerves; that is to say, the emotion of joy or sorrow acts first upon the heart or other viscera through motor channels, and is then reflected upon the sensory nerve supplying the gland. But this track does not seem anatomically or physiologically justifiable. Much more likely it is that the influence is transmitted directly either to the capillaries of the gland by actively dilating motor nerves, or through nerves to the lacrymal cells themselves, directly exciting their functional activity. We might apply to the lacrymal gland Sinitzin's conclusions in regard to the trophic influence of the cervical sympathetic and the fifth pair on the eyeball; but some difficulties present themselves, into which, however, we cannot now enter. The *quality* of the secretion seems to be altered by powerful emotions; the saline ingredients being increased, causing "a strong brine". Lastly, the secretion may be checked. The intensity of the feeling or the suddenness of the sorrow is the most frequently witnessed cause. Daily observation shows that the first result of distressing intelligence is the negative one—inability to cry. See, too, what the want of a handkerchief may do. "I went," says Hunter, "to see Mrs. Siddons acting. I had a full conviction that I should be very much affected; but, unfortunately, I had not put a handkerchief in my pocket; and the distress I was in for the want of that requisite when one is crying, and a kind of fear I should cry, stopped up every tear, and I was even ashamed I did not, nor could not, cry." (*Posthumous Papers*, vol. i, p. 257.)

THE CONVERSAZIONE AT THE COLLEGE OF PHYSICIANS.

ON Saturday evening, the library and ante-rooms of the College of Physicians were, as on previous similar occasions, most uncomfortably hot and very much crowded. The grim neglect of all attention to the hygienic principles taught within the walls of the College must have reminded the author of *Ginx's Baby*, who was one of the guests of the evening, that he had failed to notice at least one of the incongruities of our social fabric. Amongst the guests were the Earl of Rosse, Lord Talbot de Malahide, Sir E. Ryan, Lord Borthwick, Archbishop Manning, the Lord Mayor, and others; while the *élite* of the profession, metropolitan and provincial, mustered in strong force. Of the numerous works of art and curiosity displayed in the library, Mr. Henry Barraud's clever autotype group of Fellows of the Royal Society attracted some attention. A really ingenious electric forceps for the extraction of bullets, the invention of Dr. John Taylor, was exhibited by that gentleman. Dr. John W. Ogle, the Baroness Burdett Coutts, Sir J. Lacaita, Mr. Jabez Hogg, and others, exhibited objects of interest. Two microscopes with one-fiftieth and one-eightieth object-glasses, exhibited by Messrs. Powell and Lealand, attracted much notice. Some Paris siege-bread, presenting very much the same characters as ordinary stale brown bread of this country, bore company to the more palatable-looking dietetic productions of Mr. Van Abbott. On the whole, the *conversazione* did not excel the average entertainment of the Royal College.

WESTMINSTER HOSPITAL.

A MOVEMENT is on foot amongst the past and present pupils of the hospital to raise funds for a testimonial to Dr. Basham, who has been attached to the staff for twenty-two years, and who recently resigned the lectureship on Medicine. Mr. G. E. L. Pearse is acting as honorary secretary, and Dr. Octavius Sturges as treasurer to the fund.

HEALTH OF FACTORY-WORKERS.

AT a meeting of the Century Club, Pall Mall, on June 28th, Mr. Motteshead made a statement that, on account of the greater speed of the machinery used in factories, the results to the workpeople were an overstrained nervous and physical condition, feverish excitement, and heart-disease. To this assertion Mr. Hugh Mason gives an emphatic denial, declaring that, both from his own personal and practical experience in factories, the physical and mental condition of the workpeople is greatly improved by the machinery used, and by the sanitary regulations enforced; and he challenges Mr. Motteshead to prove the statement made. We should be glad to hear the opinions of factory surgeons on this subject.

LONDON WINDOWS.

PHILANTHROPIC ingenuity is sometimes sorely, and it must be said often unsuccessfully, taxed in its attempts to carry comfort and happiness to the poor by distributing the miserable crumbs which fall from the rich man's table. That much should be expected from little, does not tally with the ordinary experience of the world; and, until we have more imperial, more comprehensive health-measures than those of the present day, we cannot fairly expect any great or rapid improvement in the social condition and habitations of our lower classes. If, however, for instance, we cannot point with pride to the dwellings of our working classes in large towns, we are able to recount numerous recent improvements in their construction, and efforts at increasing their comfort and healthiness by very varied means. A

visitor on Monday to the Middlesex Hospital would be surprised at the extensive show of flowering and other plants displayed in the garden of that institution, forming the annual exhibition of window-grown flowers held under the patronage of the Marchioness of Waterford and a large number of influential ladies of St. Marylebone. The objects of the promoters are simple enough. Although their efforts aim at the encouragement of an interest in plants, the main idea has been, by offering a considerable number of prizes for the best grown plants, to encourage the poorer classes to open their windows—a necessity for good cultivation—and thus ensure the ventilation of their rooms, and the better growth and health of themselves and families. It is a roundabout method of promoting a hygienic measure, and is somewhat amusing; but the results, after seven years' experience, have been, we understand, most gratifying.

THE EFFECTS OF SPINAL CONCUSSION.

ATTENTION is likely to be earnestly recalled to the difficult and obscure subject of "railway shock", by a case tried this week in the Court of Exchequer, Guildhall, before the Lord Chief Baron and a special jury. The action was brought against the Great Western Railway Company to recover compensation in damages for injuries caused to the plaintiff by reason of the train in which he was travelling coming into collision with a train belonging to the defendants. The plaintiff, described as a Volunteer, and a fine strong athletic fellow, is a young man aged 25, with an income of £350 a year. As he was travelling homewards by the Metropolitan Railway, his train, near Bishop's Road Station, came into collision with the engine of a train running on the defendant's main line. The plaintiff, who was riding with his back to the engine and his feet placed against the opposite seat, received a series of violent jerks, and was thrown bodily backwards and forwards. When the plaintiff left the train, he walked home in company with a friend. For the next few days he attended to his business as usual, although complaining that he felt ill; and about the sixth day, by the advice of a friend, he sent for Dr. Day-Goss, of Kennington Park Road, to attend him. Dr. Day-Goss said that the plaintiff complained of sleepless nights and persistent headache; and, although compelled to go to business, he could do nothing. He looked worn, and had evidently borne pain; complained of pains in his back, and was obliged constantly to shift his position when sitting. He could only walk slowly, and with much pain. There was pain on pressure of the spinal column; he became feverish and weak, and his pulse rose to 89. In attempting to walk, he dragged his left foot. Hysteria supervened; he had fits or convulsions, when his hands were tightly clasped, his arms became rigid, his eyes fixed, and he was delirious. He wept constantly, and was in a state of the highest nervous excitement. He became thin and emaciated. He was taken both to Brighton and Hastings by Dr. Day-Goss, and had to be removed to London, and at present lay at the Tavistock Hotel, unable to be moved. Sir William Fergusson and Mr. Erichsen both stated that the plaintiff had mentally and bodily broken down; that, in fact, he might become imbecile or die, and that it would be dangerous to his life to bring him to the court. Mr. Erichsen said that beyond doubt his downward progress had not yet been arrested; and all agreed that if he recovered at all, it would not be before the expiration of three or four years. On behalf of the company, Mr. Barnard Holt, Mr. Le Gros Clark, Mr. Savory, and Dr. Sedgwick Saunders, were called. They examined the plaintiff last month, and were of opinion that there was nothing to indicate any lesion of, or structural change in, the spinal cord or other nerve-centres. The plaintiff was in a very hysterical condition, the result of an irritative fever produced by the accident. Mr. Le Gros Clark thought the condition of the plaintiff had been a little aggravated by the treatment he had undergone; it would have been better for him had he been encouraged to exert himself. He should have been kept from all things either emotional or exciting, and that could have been done without confining him to his bed, and thus preventing him from taking a sanguine view of either his own case or his powers of endurance. They one and all thought that at the end of twelve months at most the plaintiff would be perfectly well. Dr. Saunders saw him move both legs in bed with freedom; and the loss of flesh complained of arose from the disuse by the plaintiff of his limbs. The plaintiff, it appeared, was engaged to be married to a young lady in July last, and shortly after the accident he had been removed to her father's house in order that he might be the better nursed. His lordship summed up, contrasting most carefully the medical testimony called on one side with that produced on the other. The jury found for the plaintiff—damages, £3000.

HOSPITAL DISCIPLINE.

THE Seamen's Hospital Society are under obligations so numerous and considerable to the energy and capacity of their medical officers both for continuous professional service, and for special aid of the most effective character in times and positions of emergency, that we receive with equal surprise and regret the following brief statement from an independent and respected correspondent, unconnected with the hospital, but well acquainted with its affairs.

"Dr. Swan was elected House-Surgeon of the Seamen's Hospital in April last, and agreed to all the regulations; in other words, he was responsible to the Senior Medical Officer, who was responsible to the House Committee for the entire conduct of the medical department. Last month (June) the House Committee placed the entire control of every medical officer in the hands of the House-Governor—a layman; depriving thereby the Senior Medical Officer of all control. The consequence of this has been that two of the juniors, Dr. Swan being one, have left, or have been summarily dismissed, because they will not go to the House-Governor and ask for leave of absence. The whole arrangement is at variance with hospital custom, and conceived in a retrograde spirit. The medical staff ought to resign in a body until the obnoxious regulation has been withdrawn."

We do not approve of "resignations in a body" except in the last resort, and after all means of argument, persuasion, and combat in every other legitimate way, are exhausted. It may be hoped that the Governors will yield to clear and urgent representations of the injustice and impropriety of the course which they have adopted, probably without completely considering the effect of their resolution.

RELIEF OF THE POOR.

AN analysis of the sources, extent, and objects of local taxation, published this week in the *Times*, includes the following valuable summary of our expenditure in relief of the poor. *Paid out of Poor's-Rate.*—Relief of the poor (less cost of lunatics in asylums), £6,669,579; pauper lunatics in asylums, £722,613; law charges, £27,002; two-thirds of "other purposes", partly connected and partly unconnected with relief, £350,000. *Paid out of County Rates.*—County lunatic asylums, £237,421; county lunatics, £50,063. *Paid out of Borough Rates.*—Borough lunatics (estimated), £10,000. Total, £8,166,678.—The "Relief of the Poor" represents not only the expense of the food, clothing, shelter, and care in health and in sickness which the paupers get at the ratepayers' cost, but also the disbursements in salaries and other purposes necessary to the due administration of that relief. So far as we can discern, the cost of maintaining the insane poor exceeds one million sterling yearly—the guardians paying (we use round numbers), £723,000; the counties, £50,000; the boroughs, £10,000. Then the counties spent in building asylums, or in enlarging them, during the year, £237,000—together £1,020,000. What expense, if any, the municipal boroughs were put to for works similar to those represented by the last item, the returns do not disclose. The tendency to expansion in the cost of pauper lunacy is striking. The Poor-law Guardians' share of the burden has increased £180,000, or 32 per cent., in the course of five years—1866-71. If the charge were placed upon the Imperial revenue, and administered, as at present, by the local authorities, the rapidity of growth would be enormously accelerated. If there were no such being as a pauper in this country, the

ratepayers would be spared an outlay which, at the present time, exceeds £8,000,000 yearly. Had we, however, no poor relief, we should have more crime—more to pay for its suppression and punishment.

POISONING BY FOUL GASES IN A SEWER.

OUR Liverpool Correspondent writes as follows:—Considerable interest has been excited by an inquiry before the borough coroner into the circumstances connected with the death of one man, and the peril to the lives of several other men, while working in a tunnel sewage reservoir belonging to the Liverpool Sewage Utilisation Company. The tunnel in which the accident occurred, was about one hundred and fifty yards long, six feet high, and four feet wide, and had four man-holes, all of which were open, one end being connected with an outlet sewer, and the other end with the well and pumping-engine which sent away the sewage by a nine-inch pipe. Before the four men went into the sewer, it had been washed out with water by a hose for an hour and a half. The men were all experienced in sewerage works, and aware of the danger, and had been cautioned to take necessary precautions. They had no difficulty in keeping their candles burning, but these had a peculiar bluish flame. The men were all overcome in about ten minutes, and, before they could be brought out, one had died, and the rest, together with two who descended to assist their companions, were in various degrees of insensibility, but eventually recovered. The men had been working in the tunnel for several days previously, and at times they had to desist from work, from their eyes being affected, and from a sensation of choking; on one occasion a man had to be raised in a bucket, as he was overcome. One most important point to be determined was whether the noxious emanations were from the ordinary contents of the sewer, or whether they proceeded from chemical refuse which abounds in the neighbourhood and had accumulated in the well, and thence found its way to the place where the men were working. The mischievous character of this chemical refuse has been demonstrated in many ways; and, as the deposits are more than eleven feet deep, and in immediate proximity, it seems at least probable that the sulphuretted hydrogen may have been given off from them. The borough engineer stated that the well was constructed through a bed of chemical refuse about twenty years ago. He thought that, during the wet season, a great deal of chemical refuse had passed in a state of solution into the well, and the gas had been evolved during the night. Dr. Campbell Brown, Lecturer on Chemistry at the Royal Infirmary School of Medicine, deposed to having analysed the contents of the sewer, and that the result tended to support the theory that the sulphuretted hydrogen emanated almost entirely from chemical refuse; while the testimony of Mr. Charles Beloe, civil engineer, as to the action of the noxious gases upon a man who was killed in the same works about two years ago, on which occasion Mr. Beloe himself narrowly escaped with his life, was in an opposite direction. After a careful investigation, the jury returned the following verdict:—"That the deceased came by his death through being suffocated by noxious gases in the tunnel where he was working. And we present that the question of these gases being evolved from the chemical refuse deposited there, or from the sewage (or from both), is a subject of serious practical consideration, and is of grave import to the authorities, who, to some extent, have under their charge the lives and health of the inhabitants, and whose duty it is immediately to take precautionary measures to prevent any further evils arising from this tunnel reservoir. We are of opinion that sufficient counteracting influences were not brought into operation after the warning given on the Monday by the accumulation of injurious gases; neither does it appear that any competent person examined the works in a morning previously to the men going down, or that ropes were provided to facilitate the escape of the men in the event of an emergency; and had it not been for the voluntary watching of the witness Isaacs, who was alarmed at the state of things, it is probable that all the men would have been sacrificed. This is a lamentable statement to make, and the jury hope it may never occur again."

SCOTLAND.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE annual general meeting of the Medico-Psychological Association will be held at Edinburgh on Wednesday, July 31st, under the presidency of Sir James Coxe, M.D.

THE GLASGOW CHAIR OF JURISPRUDENCE.

A STATEMENT has appeared in several daily papers to the effect that the Chair of Medical Jurisprudence had been filled up by the appointment of Dr. P. A. Simpson. We understand that this is not correct, and that no appointment will probably be made for some little time.

IRELAND.

DUBLIN SANITARY ASSOCIATION.

A NUMBER of the leading citizens of Dublin, despairing of any decided action on the part of the Sanitary Committee of the Corporation, have formed an Association for the following purposes: 1. To create an educated public opinion with regard to sanitary matters in general; 2. To direct attention to those points on which the existing powers for the maintenance of the sanitary condition of the city are either not duly exercised or are inadequate, or on which the machinery at the disposal of the sanitary authorities is insufficient; 3. To watch the course of sanitary legislation on behalf of the public; 4. To form a body in which the public may have confidence, and through which they may, if necessary, act. While it is intended that the proposed Association shall co-operate with existing sanitary authorities as far as practicable, it is understood that it will be independent of all other bodies in its constitution. The objects for which it is proposed to form this Association are of great importance; and it is to be hoped that the citizens of Dublin will not only heartily co-operate in its formation, but will give it their strenuous support when formed. Such an Association, if worked with judgment, cannot fail of success.

SMALL-POX IN DUBLIN.

THIRTY-SIX deaths from small-pox were registered in Dublin last week. More than 1,500 deaths from that disease have now taken place in Dublin since the commencement of the present epidemic in January 1871. This mortality represents 12,500 cases of small-pox in a population of 314,409. The deaths have been about one in every 210 of the inhabitants. Careful analysis of the ages of those 1,500 persons who have died would lead to the conclusion that about one-third of them were heads of families. The sum of £3,500 has been contributed to the small-pox relief fund. Of this, nearly £2,500 has been carefully distributed to cases of immediate distress; but a large number of widows and orphans will inevitably be thrown on the rates, probably for the remainder of their lives, in consequence of the effects of the epidemic. No steps have been taken, however, by any of the authorities for its stay or prevention; and, although it was by no means certain, yet it is probable that the disease is dying out—from want of pabulum rather than from any other cause.

MEDICAL OFFICER OF HEALTH FOR CORK.

THE Corporation of Cork are about to appoint a medical officer of health; incited thereto, no doubt, by the small-pox visitation. The present epidemic appeared in that city in February 1871, and since that time over 400 deaths from it have taken place. It is estimated that this death-rate represents over 3,000 cases of the disease in a population of 90,851, or one death in every 244 of the inhabitants. The Corporation, therefore, cannot be accused of acting precipitately in this matter. It is not yet determined whether the officer of health will be required to act as city analyst. It is not usual that one person should hold both offices; and we think that it would be impossible that one person could efficiently perform the double duty in a city of the area and population of Cork.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
FORTIETH ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in Birmingham, on the 6th, 7th, 8th, and 9th days of August next.

President—JOHN WHIPPLE, Esq., F.R.C.S., Consulting-Surgeon to the South Devon and East Cornwall Hospital.

President-elect—ALFRED BAKER, Esq., F.R.C.S., Senior Surgeon to the General Hospital, Birmingham.

An *Address in Medicine* will be delivered by SAMUEL WILKS, M.D., F.R.S., Physician to and Lecturer on Medicine in Guy's Hospital.

An *Address in Surgery* will be delivered by OLIVER PEMBERTON, Esq., Surgeon to the General Hospital, and Professor of Surgery in Queen's College, Birmingham.

The business of the Annual Meeting will be conducted in *five* Sections, viz. :—

SECTION A. MEDICINE.—*President:* Dr. Bell Fletcher, Birmingham. *Vice-Presidents:* Dr. J. W. Ogle, London; Dr. Wade, Birmingham. *Secretaries:* Dr. Sutton, 9, Finsbury Square, London; Dr. Johnston, 9, Easy Row, Birmingham.

SECTION B. SURGERY.—*President:* Sir William Fergusson, Bart., F.R.S., London. *Vice-Presidents:* George Southam, Esq., Manchester; J. Vose Solomon, Esq., Birmingham. *Secretaries:* Furneaux Jordan, Esq., 22, Colmore Row, Birmingham; T. Vincent Jackson, Esq., Darlington Street, Wolverhampton.

SECTION C. MIDWIFERY.—*President:* Dr. Evory Kennedy, Dublin. *Vice-Presidents:* Samuel Berry, Esq., Birmingham; Dr. J. Matthews Duncan, Edinburgh. *Secretaries:* Dr. Underhill, Summerfield, West Bromwich; Lawson Tait, Esq., Great Charles Street, Birmingham.

SECTION D. PUBLIC MEDICINE.—*President:* The Rev. Dr. Haughton, D.C.L., F.R.S., Dublin. *Vice-Presidents:* Dr. Birt Davies, Birmingham; Dr. T. P. Heslop, Birmingham. *Secretaries:* Dr. Arlidge, Newcastle-under-Lyme; Dr. Alfred Hill, Winson Green, Birmingham.

SECTION E. PSYCHOLOGY.—*President:* Dr. Maudsley, London. *Vice-Presidents:* Dr. J. Batty Tuke, Cupar, Fife; Dr. J. Crichton Browne, Wakefield. *Secretaries:* Dr. G. F. Bodington, Sutton Coldfield; Dr. J. Thompson Dickson, 59, Queen Anne Street, Cavendish Square, London.

Notice of Motion by DR. A. B. STEELE.

That the Treasurer be authorised to pay the travelling expenses of members attending the meetings of Committee of Council, and of its Subcommittees in all cases in which provision for such payment does not already exist.

Notice of Motion by Dr. A. B. STEELE.

That Laws 15 and 16 be so altered as to read as follows.

Law 15.

1. The subscription to the Association shall be one guinea *per annum*, which shall entitle each member to receive the publications of the Association for the current year. The subscription shall date and be considered due in advance on the 1st of January in each year, except in the case of a member admitted on or after the 1st July, when the subscription for such part of a year shall be half a guinea in advance.

2. Any member whose subscription shall not have been paid on or before the 31st December of the current year shall be suspended from all privileges of membership; and at the end of the succeeding year, if the arrears be still unpaid, he shall cease to be member, and shall be ineligible for readmission until he shall have paid all arrears due at the period of his suspension.

3. Any member wishing to withdraw from the Association shall give written notice of his intention to the General Secretary on or before the 1st December of the current year; and neither withdrawal, suspension, nor erasure of a member's name from the books of the Association, shall be deemed either in honour or equity to relieve such member from his liabilities to the Association.

* * * * *

Gentlemen desirous of reading papers, cases, or other communications, are requested to forward the titles to the General Secretary, or to one of the Secretaries of the Section in which the paper is to be read. All papers should be forwarded to one of the above named officers *on or before the 1st of August.*

No paper must exceed *twenty* minutes in reading; and no subsequent speech must exceed *ten* minutes.

All speeches at the General Meeting must not exceed *ten* minutes each.

FRANCIS FOWKE, *General Secretary.*

General Secretary's Office, 37, Great Queen Street, W.C.,
July 3rd, 1872.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

AN annual general meeting of the above Branch will be held in the Imperial Hotel, Aberdeen, on Saturday, July 6th, at 1.30 P.M.

Dinner at 3 o'clock.

An exhibition of rare and curious surgical instruments will be arranged. Further particulars by circular afterwards.

ALEX. OGSTON, M.D., *Honorary Secretary.*

Aberdeen, June 5th, 1872.

CUMBERLAND AND WESTMORLAND BRANCH.

THE annual meeting of the above Branch will be held at the County Hotel, Carlisle, on Wednesday, July 10th, 1872. The President, Dr. CLOUSTON, will occupy the Chair, and deliver his Inaugural Address. The annual election of office-bearers of the Branch will also take place.

At the conclusion of the ordinary business, dinner will be provided in the Hotel. Tickets 5s. each, exclusive of wine. Members are entitled to introduce friends.

HENRY BARNES, M.D., *Honorary Secretary.*

Carlisle, June 12th, 1872.

BATH AND BRISTOL BRANCH.

THE annual meeting of the above Branch will be held at the Mineral Water Hospital, Bath, on Thursday, July 11th, at 4.20 P.M.: T. G. STOCKWELL, Esq., President-elect.

The members will afterwards dine together at the York House.

R. S. FOWLER, E. C. BOARD, } *Honorary Secretaries.*

6, Belmont, Bath, June 1872.

WEST SOMERSET BRANCH.

THE annual meeting of the above Branch will be held at the Railway Hotel, Taunton, on Thursday, July 11th, at 2.30 P.M.; Dr. E. C. GARLAND, President.

Dinner punctually at 5 o'clock.

Gentlemen having papers or communications to bring before the meeting, are requested to give notice of the same to the Secretary, as early as possible.

It having been suggested that some members attending the meeting would like to see the Hospital, the staff will be happy to afford every facility for that purpose at 12 o'clock, before the general business of the meeting commences.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, June 22nd, 1872.

METROPOLITAN COUNTIES BRANCH.

THE twentieth annual meeting of this Branch will be held at the Crystal Palace, on Friday, July 12th, at 3 P.M. *President* for 1871-72—J. RUSSELL REYNOLDS, M.D., F.R.S.; *President-elect* for 1872-73—Sir WILLIAM FERGUSSON, Bart., F.R.S.

Dinner at 5.30 P.M.

A. P. STEWART, M.D. ALEXANDER HENRY, M.D. } *Honorary Secretaries.*

75, Grosvenor Street, W., June 11th, 1872.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE arrangements for the second annual meeting, which will be held at Merthyr, on July 17th, are as follows.

Invitation breakfast at the Bush Hotel, at 10.15 A.M.

Council Meeting at 11, and General Meeting at 11.30, in the Board Room of the Guardians of the Merthyr Union.

Dinner at the Bush Hotel at 3.15 P.M. Tickets 5s. 6d., without wine.

The titles of papers, etc., intended to be brought forward at the meeting, should be sent to us without delay.

A. DAVIES, Swansea, A. SHEEN, M.D., Cardiff, } *Local Secretaries.*

NORTHERN BRANCH: ANNUAL MEETING.

THE eighth Annual Meeting of this Branch was held in the Council Chamber of the Town Hall, Stockton-on-Tees, on Thursday, June 20th; CHARLES TROTTER, Esq., F.R.C.S., President, in the chair. There were also present thirty-eight members, and nine visitors. Previously to the meeting, the majority of those who were present were entertained at an elegant luncheon, by the President, at his residence.

President's Address.—The PRESIDENT said that the members in Stockton were deeply indebted to the Northern Branch of the Association for having selected that town as the place for the annual meeting. Speaking of the medical institutions of the town, he stated that there had been a dispensary for many years, and it had proved of considerable use and advantage. They had also for a few years had a surgical hospital, which could accommodate six patients. It was proposed to increase the accommodation; but he was grieved to say the increase was not, in his opinion, equal to the extent of the existing requirements, much less than that which they had every right to expect. This, however, rested with those who had the arrangement of the matter. Yet he could not help believing that it was the bounden duty of those who brought the population to the town, and to the dangerous employment, to provide sufficient accommodation to meet all requirements likely to arise from accidents. As to the prevailing diseases of the district, he had very little to say. In 1832, the town suffered severely, and was one of the earliest towns in which the outbreak of cholera occurred. This was a very fitting time, indeed, to consider this important subject, because it was to be feared that before the next annual meeting the disease would again have been planted in our land. He hoped such might not be the case; but at the same time he would warn all those in authority to be prepared for it should such an outbreak take place. Then there were typhoid and typhus fevers here, about the same as in other places. He believed these diseases would always be met with in a rapidly increasing population. From his own observation, he thought this was always worse where there were newly built houses. They were generally badly drained at first, the building going forward more rapidly than the sanitary arrangements could be made effectively. He did not believe that at the present time sanitary arrangements were sufficiently understood. He thought there would have to be very great improvements before they could consider themselves in a perfect sanitary condition. There was one subject with which he had long been mixed up, and it was the subject of water-closets. He believed that those connected with houses were most fruitful of all sorts of diseases. He passed on to speak of the prevention of small-pox. There was an outcry, but it was confined to a very small and insignificant few, against the utility of vaccination. After practising vaccination for nearly half a century, he was fully convinced of its protecting influence against the ravages of such a dire disease as small-pox. Probably it was right and wise that individuals should be vaccinated once after they came to adult age, because they did not know how it had been performed in the first instance, or whether efficiently carried out. He believed, however, from what he had seen, that one efficient performance would be effectual for an individual's life. Having spoken strongly in favour of the Contagious Diseases Act, which, if it had a fault, he maintained it was that its provisions were not strong enough, and not carried out to a sufficient extent, he went on to allude to the small professional medical element to be found in the House of Commons, and expressed the opinion that it would be better if the medical profession were more fully represented. In complaining of the treatment of medical men in criminal cases, he said that the result had been that in Stockton there was no properly qualified medical man who would undertake these cases. He was sure that there was a great wish in this country that justice should be done; but he was quite sure that under present arrangement justice was not done. The President concluded his address by stating that in 1851 the population of the Stockton Union was 21,400 persons, in 1871, twenty years later, it was increased to 77,227 persons.

Dr. CHARLTON (Newcastle) warmly endorsed all the remarks of the President. There might be some difference of opinion respecting the atrocious outcry being raised against the Contagious Diseases Act by "weak minded men and strong minded women"; but, after experience gained both at home and in foreign countries, he trusted that the only outcome would be a more extensive application of the Act. He concluded by moving the best thanks of the meeting to the President for his able address.

This was seconded by Mr. S. E. PIPER (Darlington), and carried by acclamation.

Thanks to the Retiring Officers and Council.—Dr. EASTWOOD (Dinsdale Park) proposed that the thanks of the meeting be accorded to Dr. Bramwell, the retiring President, the Council of Management, and the other officers, for their services during the past year.

This was seconded by Mr. W. C. BLACKETT (Durham), and unanimously adopted.

Officers for 1872-73.—On the motion of Mr. PAXTON (Norham), seconded by Dr. CLARK (Ferry Hill), it was unanimously resolved—"That the next annual meeting be held at Newcastle-upon-Tyne; that Dr. Heath be President-elect, Dr. Philipson Honorary Secretary and Treasurer; Dr. Charlton, Dr. Gibson, Dr. Frain, and Dr. W. H. Dixon, the Council of Management."

Representatives in the General Council.—On the motion of Mr. MERRYWEATHER (Guisborough), seconded by Mr. C. S. JEAFFRESON (Newcastle), the following members were elected to represent the Branch on the General Council of the Association: J. B. Bramwell, M.D.; J. W. Broadbent, Esq.; M. Burnup, M.D.; J. W. Eastwood, M.D.; C. Gibson, M.D.; H. G. Hardy, Esq.; G. Y. Heath, M.D.; John Jobson, Esq.; Charles Trotter, Esq.; George Welford, Esq.; Robert Wilson, M.D.; and G. H. Philipson, M.D. (*ex officio*).

Representative in the Parliamentary Committee.—It was moved by Mr. MACKIE (Heighington), seconded by Dr. DIXON (Sunderland), and unanimously agreed to—"That Dr. Philipson be the representative of the Branch in the Parliamentary Committee."

Treasurer's Report.—Dr. PHILIPSON read the Treasurer's statement, which showed that the balance in hand, at the commencement of the year 1871, was 9s. 3d., and the amount received in annual subscriptions was £27 : 2; total, £27 : 11 : 3. The expenses during the year amounted to £26 : 7 : 4; leaving on December 31st, 1871, a balance of £1 : 3 : 11. Dr. Philipson also read the following statement of the number of members of the Branch. At the annual meeting in 1871, the Northern Branch had 235 members, of whom three have died, twelve have resigned their membership of the Association, seven have ceased to belong to the Branch from change of residence, and three have been removed for non-payment of their subscriptions. During the year three new members have been elected. At the present time, the Branch consists of 213 members.

Increase of Meetings.—Dr. EASTWOOD (Dinsdale Park), in accordance with notice, moved—"That three meetings of the Northern Branch, including the annual meeting, be held every year; and that some town in Northumberland, North Durham, and South Durham, be chosen for each meeting, so that no two meetings be held in any one of those divisions during the same year."

The resolution was seconded by Dr. DIXON, supported by Dr. CHARLTON, and unanimously adopted.

It was then resolved that the autumn meeting should be held in September at Durham, and the spring meeting in April at Sunderland.

Instruments.—1. Mr. C. S. JEAFFRESON exhibited and explained a new form of Demonstrating Ophthalmoscope.

2. Mr. H. HIND exhibited and explained Sayre's Instrument for the treatment of Hip-joint Disease.

Papers.—The following papers were read.

1. On the Medical Declaration respecting Alcohol. By J. W. EASTWOOD, M.D. Dr. Eastwood specially directed the attention of the meeting to the preamble, which in his opinion was the only objectionable part. He proposed to substitute the following: "The undersigned members of the Northern Branch of the British Medical Association have paid much attention to the use of alcohol in health and disease, and whilst they admit its value as a remedial agent, they are satisfied a large amount of mortality, disease, and suffering, is produced by the immoderate use of alcoholic liquors." On this being put to the meeting, it was decided that the time was now past for the adoption of a declaration like that proposed.

2. On the Influence of Zinc and Magnesia in Drinking Waters in the production of Disease. By J. C. Murray, M.D.

3. On a Case of Feigned Disease. By R. W. Foss, M.D.

4. Notes of a Fatal Case of Hysteria. By R. W. Foss, M.D.

On the motion of Mr. DIXON, a hearty vote of thanks was accorded to the readers of the papers.

Thanks to the Mayor and Corporation.—The PRESIDENT moved that the best thanks of the meeting be given to the Worshipful the Mayor and Corporation of Stockton for their kindness in granting the use of the Council Chamber of the Town Hall for the purposes of the meeting.

Dinner.—The members and their friends dined together at the Black Lion Hotel; the President (Charles Trotter, Esq.) in the chair, supported by the Deputy-Mayor of Stockton (Joseph Richardson, Esq.), the Rev. Thomas Law, the Rev. J. Coulson, Dr. Charlton (Vice-

President of the British Medical Association), etc. The President apologised for the absence of G. Lockwood, Esq., the Mayor of Stockton, who could not attend on account of domestic affliction, and of Mr. Dodds, M.P. for Stockton, who was very anxious to attend, but was prevented by other important business.

MIDLAND BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held in the Board Room of the General Hospital, Nottingham, on Thursday, June 20th. The chair was taken by W. TINDAL ROBERTSON, M.D., the President-elect, and about thirty members were present. Dr. Robertson, who had been suffering from illness, addressed the meeting, and the chair was then taken by JOSEPH WHITE, Esq., the Honorary Secretary for Nottinghamshire.

A Vote of Thanks was unanimously accorded to the retiring President, Dr. Ogle, of Derby, for the ability with which he had filled the office during the past year.

New Members.—Eight gentlemen, who were already members of the Association, were elected members of the Branch. J. E. Smith, Esq., of Nottingham, and A. B. Norman, Esq., of Ilkeston, were elected members of the Association and of the Branch.

Representatives in the General Council.—The following were appointed to represent the Branch in the General Council of the Association. Derbyshire: J. W. Baker, Esq., Derby. Leicestershire: T. W. Benfield, Esq., Leicester; Thomas Paget, Esq., Quenyborough. Lincolnshire: T. Sympson, Esq., Lincoln; W. Newman, M.D., Stamford. Nottinghamshire: W. T. Robertson, M.D., Nottingham; and S. Job, Esq., Newark.

The Secretaries of the Branch were re-elected.

Next Annual Meeting.—It was resolved that the next annual meeting be held at Leicester, and that Henry Lankester, Esq., of Leicester, be the President-elect for 1873.

Papers.—The following papers were read and discussed.

1. Case of Amputation at Shoulder-joint complicated by Secondary Hæmorrhage. By J. W. Baker, Esq., Derby.
2. Notes on Uterine Surgery, with Cases. By F. W. Wright, Esq., Derby.
3. Case of Fracture of Skull, with Loss of Brain-substance. By W. A. Norman, Esq., Ilkeston.
4. Cases of Hydatid Disease of Liver treated by Puncture of Cyst. By George Elder, M.B., Nottingham.
5. On Overlooked Glaucoma. By Charles B. Taylor, M.D., Nottingham.
6. On Bee-Poisoning. By R. B. Morris, M.D., Nottingham.

Dinner.—The members and friends afterwards dined together at the George Hotel, under the presidency of Mr. White.

LANCASHIRE AND CHESHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of the Lancashire and Cheshire Branch was held on Wednesday, June 29th, at the Royal Institution. The chair was taken at the commencement of the proceedings by Dr. DESMOND, the retiring president, who introduced the incoming president, Dr. MELLOR, of Manchester.

President's Address.—The PRESIDENT delivered an address. He adverted to the great prosperity of the Branch, which in numbers and importance was second only to the Metropolitan Counties Branch. The present times were characterised by an irresistible mental activity, testing almost all their previously admitted facts in the alembic of new and more enlarged modes of investigation, and consigning to the limbo of antiquated doctrines many of those cherished theories upon which medical men were wont to rear their superstructure of practice. Medicine laid no claim to be considered an exact science, and yet how immensely had the pathological investigations of this time contributed to the unravelling of the web of morbid action, and taught them with unerring accuracy to indicate the nature and site of the disease, even when they had been powerless to effect its cure. What a mine of wealth, too, the recent investigations of Dr. Brunton promised to reveal in relation to therapeutics, enabling them to predicate, with something like precision, the several processes by which the recovery of the patient might be accomplished. The scheme, too, for registering disease, ably and perseveringly advocated by the energetic associates Drs. Rumsey, Philipson, and Ransome, offered inestimable blessings for suffering humanity in the endeavour to trace health-disturbances to their source, and arrest the onward course of the tidal wave whose unrestricted diffusion would otherwise result in an incalculable amount of preventable mortality. In connection with the future progress of medicine and its auxiliary sciences, he adverted briefly to the admirable organised system of instruction provided by the medical schools. To Manchester belonged the proud pre-eminence of possessing the first complete provincial organisation of that character; and to their venerated associate, Mr. Turner, it must afford unmixed satisfaction to witness the growing prosperity of an institution to which he had devoted many hours of anxious and unremitting toil. Now a still brighter future awaited his nursling—namely, its amalgamation with the noble foundation, Owen's College; and, enriched by the munificent gift of Miss Brackenbury to the extent of £10,000, and supplemented by the liberal donations from other private sources, in order that the additional sum of £10,000 should be secured for the erection of suitable buildings and the sustentation of its professorate, their medical school must assuredly attain a more elevated status and contribute its share towards the foundation in the not far-distant future of a great northern university. In conclusion, he expressed his sympathy in connection with the loss which this city had sustained by the recent death of Mr. Watson Beever, the senior surgeon to the Infirmary. He was universally recognised by his brethren as a most accomplished surgeon, and as one who enjoyed in a pre-eminent degree the unbounded confidence of an extensive circle of sorrowing friends. Mr. Mellor's intimacy with him dated back to a lengthened period; and although he did not possess the privilege of frequent interchange of social communion with him, yet a steady and undivided friendship had been uniformly maintained between them, and he might be permitted to share the grief which all felt at his loss. Nor would he wish to forget the loss they had also sustained, though not so recently, in the death of Mr. A. W. Dumville.

Report of Council.—The Honorary Secretary, Mr. Reginald Harrison, read the report of the Council, in which allusion was made to the Public Health Bill, and the presentation to the House of Commons of a petition from the Council approving the general principles of the Bill, but strongly advocating certain modifications which had been suggested by the Parent Association. The prosperity of the Branch during the past two years was shown by the unprecedented increase in its numerical strength, 72 new members having been enrolled in 1871, and 101 in 1872, being the result of the action taken by the Council to make known the objects and advantages of the Association and the Branch to the profession resident in the two counties. The losses by deaths, resignations, and removals, amounting to thirty-one for the past year, was unusually large, as was the case in the previous year. The withdrawal of many subscribers during the past two years was almost entirely owing to the unsatisfactory state of the laws of the Association in reference to subscriptions and arrears; but as it was proposed to alter the law at the annual meeting at Birmingham, the Council believed that for the future the Branch would not be subjected to this source of annoyance. Allusion was made to the deaths of Dr. Lawrence Spencer, of Preston, an ex-president of the Branch, Mr. Bickerton, of Liverpool, and Mr. Dumville, of Manchester.

The Secretary.—Mr. REGINALD HARRISON, the Honorary Secretary of the Branch, announced his desire to resign in consequence of increasing professional engagements. The resignation was accepted with an expression of regret, and of cordial thanks for the valuable services rendered by Mr. Harrison, during whose tenure of office the Branch had largely increased; and Dr. Steele, of Liverpool, was unanimously elected as his successor.

THE BRITISH MEDICAL JOURNAL.—The following resolution was proposed by Dr. HARDIE (Sale), and seconded by Dr. BORCHARDT (Manchester): "That this meeting, while expressing its satisfaction with the general management of the JOURNAL, strongly approves of the resolution of the Committee of Council to the effect 'that editorial comments upon questions of personal difference between members of the Association should not be published in the JOURNAL;' and this meeting is further of opinion that the advocacy of particular views on all matters of controversy on the part of the editor should be carefully avoided, except with the sanction of the Committee of Council, and that such editorial articles as may be inserted should, as far as possible, be limited to the expression of matters of fact."

After considerable discussion, the motion was put to the meeting and lost, five voting for and ten against it.

Next Annual Meeting: Officers and Council.—It was resolved—"That the next annual meeting of the Branch be held in Warrington; that C. White, Esq. (Warrington) be President-elect, and Dr. J. Smith (Warrington), and Reginald Harrison, Esq. (Liverpool), Vice-Presidents-elect."

The following gentlemen were elected representatives of the Branch

on the General Council of the Association :—R. Beales, M.D., Congleton ; T. Davies-Colley, M.D., Chester ; L. E. Desmond, M.D., Liverpool ; W. Hall, Esq., Lancaster ; W. Howitt, Esq., Preston ; D. W. Parsons, Esq., Liverpool ; H. Simpson, M.D., Manchester ; T. Mellor, Esq., Manchester ; G. W. Mould, Esq., Cheadle ; W. Roberts, M.D., Manchester ; J. Hardie, M.D., Sale ; R. Harrison, Esq., Liverpool ; C. Johnson, Esq., Lancaster ; A. Ransome, M.D., Manchester ; T. L. Rogers, M.D., Rainhill ; G. Southam, Esq., Manchester ; J. Vose, M.D., Liverpool ; A. T. H. Waters, M.D., Liverpool ; E. Waters, M.D., Chester ; M. A. E. Wilkinson, M.D., Manchester ; and the Honorary Secretary *ex officio*.

The following gentlemen were elected members of the Council of the Branch to fill the vacancies caused by retirement of five members in rotation :—J. H. Gornall, Esq., Warrington ; W. Coultate, Esq., Burnley ; J. Thorburn, M.D., Manchester ; J. E. Morgan, M.D., Manchester ; J. Haddon, M.D., Eccles.

Papers.—After the usual votes of thanks to the retiring officers, the following communications were read.

1. Note on the Treatment of Chronic Inflammation of the Non-pregnant Uterus. By A. B. Steele, L.K.Q.C.P.
2. On Duchenne's Form of Muscular Paralysis with apparent Hypertrophy. By A. Davidson, M.D.
3. Total Absence of the Uterus after Repeated Pregnancies. By Walter Whitehead, Esq.
4. The Duration of Infection. By A. Ransome, M.D.
5. Mr. Whitehead showed a case of almost complete Amputation of the Glans Penis by the accumulated detritus of underclothing.

The Dinner took place at the Albion Hotel. Fifty-one gentlemen were present. The Chair was occupied by Mr. T. MELLOR, and the Vice-chair by Dr. CROMPTON.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE AND EAST ANGLIAN BRANCHES : ANNUAL MEETING.

THE annual meeting of these Branches was held at Ely, on Friday, June 28th, under the presidency of R. MURIEL, Esq. There were twenty-two members present, and several visitors, amongst the latter being Bishop M'Dougall and the Archdeacon of Ely.

New Members.—The following gentlemen were proposed and elected Members of the Association :—J. Brady, Esq., M.P., Ely ; W. B. Holderness, Esq., Huntingdon ; and J. R. Baumgartner, Esq., Norwich.

Next Meeting.—There was considerable discussion as to where the next meeting should be held, and whether the two Branches should again combine or not. On the proposition of Dr. LATHAM, it was ultimately decided to hold a combined meeting at Yarmouth in June 1873, under the presidency of J. C. Smith, Esq. The Cambridgeshire and Huntingdonshire members also agreed to hold a meeting at Royston in April or May, under the presidency of R. Pyne, Esq.

Representatives in the General Council.—The gentlemen who had acted in the previous year were re-elected.

The JOURNAL.—It was proposed by Mr. HARRIS, and seconded by Mr. Foster, and resolved—"That this meeting expresses its satisfaction with the manner in which the JOURNAL is conducted."

Vote of Thanks.—Dr. BRADBURY proposed, and Dr. PITT seconded, a vote of thanks to the Governors of the Dispensary for allowing the meeting to be held there.

Papers, etc.—The following papers were read :—

1. Two cases of Small-Pox occurring in Convalescents from Typhoid Fever. By P. W. Latham, M.D., Cambridge.
2. Remarks on a case of Bright's Disease, attended with Cardiac Thrombosis and Hæmorrhagic Infarctions of the Spleen, Kidney, and Lungs. By J. B. Bradbury, M.D., Cambridge.
3. The PRESIDENT showed a case of Deficiency of the Abdominal Walls over the Bladder, exposing the Ureters ; also a morbid specimen of Gun-shot Wound of the Kidney, and one of Ossification of the Aorta.
4. Mr. ANNINGSON showed a specimen of Diseased Bone from the Jerboa Kangaroo.

Dinner.—At 6.30, the members and their friends dined together at the Lamb Hotel, the President in the chair, and Dr. Bradbury acting as vice-chairman. Amongst the visitors present at the dinner were the Lord Bishop of Ely, Bishop M'Dougall, Archdeacon Emery, Rev. J. King, Rev. — Bulstrode, and Mr. Marshall, of Ely. The Bishop of Ely proposed the toast of the "Medical Profession," and spoke of the self-denial which medical men frequently undergo in terms of high commendation. His lordship also sketched the relationship which formerly existed between those who ministered to the spiritual and to the bodily wants ; and, in conclusion, strongly impressed upon the members of a scientific profession the dangers of scepticism as regards spiritual matters.

SOUTH-EASTERN BRANCH : ANNUAL MEETING.

THE twenty-eighth annual meeting of this Branch was held at the Crystal Palace, on Wednesday, June 26th. Previously to the meeting, a number of the members partook of luncheon hospitably provided by Dr. Cresswell, of South Norwood, and afterwards visited the Croydon sewage-farm. At half-past three, the members assembled ; and Mr. THOMPSON (Sevenoaks) was called to the chair, and, after a few remarks, introduced the new President, ALFRED CARPENTER, M.D., who thereon took the chair.

Vote of Thanks.—Dr. A. HALL (Brighton) proposed a vote of thanks to the President and Vice-Presidents for the past year for their services. The motion having been seconded, was carried unanimously.

President's Address.—Dr. CARPENTER then delivered an address. After thanking the members for his election, he spoke of the beneficial influence of the Association. He wished it were possible for every practising member of our profession to be enrolled within its ranks. Its controlling influence upon each one was an unknown quantity ; the nature of that influence was not unknown, for it had assisted much in making the Association an assemblage of gentlemen. Circumstances which used to be common, and to some extent considered venial, were now uncommon, and looked upon by our members as decidedly incorrect—an alteration of feeling which had been produced by conversations of the members at the various meetings periodically held in all parts of the United Kingdom. Thus one of the main objects of the Association was accomplished. He spoke in terms of regret of the deaths of Mr. Samuel Solly, whose dresser he had once been, and Mr. Trustram, of Tunbridge Wells. He then proceeded to comment on the general principles of action which should guide the medical profession, taking as his maxim the saying of Ovid :

> "Principiis obsta : sero medicina paratur,
> Cum mala per longas convaluere moras."

He insisted strongly on attention to the rule of "doing to others as we would that they should do to us ;" holding that attention to this would be the first step towards staying the progress of those disagreements which sometimes occurred. The practice of securing elections to medical appointments by the purchase of votes was condemned ; and the proper plan was pointed out to be the selection by a committee appointed for the purpose. The position of medical witnesses in courts of law was commented on ; and Dr. Carpenter advocated the appointment of skilled assessors, occupying a position analogous to that of the Trinity Masters in the High Court of Admiralty. Regarding small-pox and vaccination, Dr. Carpenter said that the fee for each case of successful vaccination at the public expense should be five shillings, together with half-a-crown for a certificate ; and he recommended that the children should not be brought to stations, but should be vaccinated at the parents' homes. Referring to the prevention of disease, he said that this was the most glorious part of the profession. Such successes as those obtained in the recovery of the Prince of Wales must not turn the profession from the duty of impeding the establishment of disease in any preventable shape. The State must be urged to make proper provision for such services. Surely whilst one of the great political parties in the State raises the cry "*Sanitas sanitatum, omnia sanitas*," and eminent members of the other side of the House of Commons take for their motto, "*Salus populi suprema lex*," we may hope for some positive advancement in State medicine, and that some officials will be necessarily appointed in every district who shall compel obedience to sanitary law, and who shall adopt the motto of *Principiis obsta* as their basis of action. As to the means of carrying out the prevention of epidemic diseases, Dr. Carpenter said : "It is preposterous to suppose that medical men who have to live by the practice of their profession are to be the only class of men who are to practise their profession, and at the same time destroy their own income without any recompense. The same parsimony which now impedes the working of the Vaccination Acts will prevent the possibility of carrying into effect proper sanitary laws, unless those who have to make them effective are independent of the local authorities. The appointment of a medical officer of health for every drainage area should be made imperative upon every district ; and he ought not to be paid out of the local rates, but from the imperial exchequer. To ask that local bodies, whose own election depends upon the amount of the local rates which are levied, should themselves fix the salary to be paid to the health officer, is about as sensible as to ask the inmates of Wandsworth gaol to appoint and pay the warders of the prison. The local officer must be as completely independent of the local authority as is the policeman of the pickpocket

or disorderly characters of his district. We ought to insist upon the appointment of officers of health, of high standing, and of special training. They ought to be paid according to their position and their ability, and so long as they do their duty they ought to be independent of any local authority. This is a noble work, and one worthy of prosecution by such an Association as ours."

Mr. J. CORDY BURROWS (Brighton) said that some of the suggestions made in the address were already being carried out at Brighton. In that town, the moment a death from typhus was made known to the local inspector, he visited the house in which it occurred, or order to discover, if possible, from what it originated. The Association, by its Branches, had done a great deal to promote the honour and dignity of the medical profession; and he was quite sure that if they paid attention to what was going forward in the medical world, organised themselves, and carried out the suggestions of their excellent President, great advantage must result to the profession and to society. He moved, "That the thanks of the meeting be given to Dr. Carpenter for his practical address."

Mr. W. MARTIN (Hammersmith) seconded the motion, which was carried unanimously.

The late Mr. Trustram.—Mr. CORDY BURROWS moved—"That this meeting, having heard of the death of one of their oldest and most valued friends, who filled with great credit a place in the Branch Council of the Association, desires to express to Mr. Trustram's family their sincere regret at the irreparable loss they have sustained."

Mr. BLACKALL MARSACK (Tunbridge Wells) seconded the motion, which was carried.

Report of Council.—Mr. HODGSON, Honorary Secretary, read the report of Council. The report for last year announced the number of members of the Branch to be 313. Since then the list had been reduced by twenty-two, in consequence of changes of residence, withdrawals, or deaths. There were twenty-nine new members, making the present total 320. Of the twenty-nine new members, only two were resident in West Surrey, and not one in West Sussex as compared with ten in East Sussex, and nearly as many in each of the other eastern districts in which the meetings are actively carried out, thus corroborating the experience of former years, that the district meetings conduced materially to the growth of the Association. Last month the members of the West Sussex district had a meeting at Horsham, with such cordiality and success as to augur well for that district in future. The Council had earnestly attempted to devise means for developing the remaining district—the West Surrey; but they were not sanguine of accomplishing it until the number of members resident there shall have been increased, and to this extension they would urge the present members there to give their attention. To all the district honorary secretaries the best thanks of the Branch are especially due. The Council, in March last, held a meeting to consider the clauses of certain Bills before Parliament, and they resolved to petition the House of Commons in favour of the Infant Life Protection Bill; also in reference to Mr. Stansfeld's Public Health Bill, many of the clauses of which latter they could not but protest against. Adopting, in reference to both Bills, the views which had been advanced by the Parliamentary Committee of the Association, the Council directed the Honorary Secretary to take steps for twelve copies of the respective petitions being signed, and sent up through local members of Parliament, by as many parts of our Branch. At a recent meeting of the members of our East Sussex district, Mr. Holman, of East Hoathly, reported that a pension for which he had applied after more than *forty years'* service as a surgeon to the poor had been refused by the Guardians—"on the ground of his circumstances not requiring it." The Council directed the Secretary to communicate the facts of the case to Mr. Ernest Hart, the Chairman of the Poor-law Committee of the Association; and the Council doubted not that it would be duly dealt with by the committee.

On the motion of Mr. THOMPSON, seconded by Mr. W. J. HARRIS (Worthing), the report was received and adopted.

The *Financial Report* was next read, which showed the receipts during the year to have been £34 : 16 : 4, and subscriptions, £61 : 13; total, £96 : 9 : 4. The expenditure was £43 : 15 : 1, leaving a balance in hand of £52 : 14 : 3.

Dr. HENRY (London) said the report showed the efficient manner in which their Secretary and Treasurer had performed his functions. He proposed that it be adopted.

Mr. T. B. GREENWOOD seconded the motion, which was carried.

Officers and Council.—On the motion of Mr. MARSACK, seconded by Mr. GRAVELY (Newick), it was resolved that H. Denne, Esq., of Canterbury, be the President-elect, and that E. W. Thurston, Esq., of Ashford, and R. L. Bowles, M.D., of Folkestone, be the Vice-Presidents for the year ensuing. It was also resolved that Ashford should be the next place of meeting.

Representatives in the General Council.—The following were declared to be elected:—John Armstrong, M.D., Gravesend; R. L. Bowles, M.D., Folkestone; John M. Burton, Esq., Lee; J. Cordy Burrows, Esq., Brighton; A. Carpenter, M.D., Croydon; W. Carr, M.D., Lee; Edward Clapton, M.D., Southwark; Henry J. Collet, M.D., Worthing; Frederick Fry, Esq., Maidstone; Alfred Hall, M.D., Brighton; J. Braxton Hicks, M.D., F.R.S., Southwark; Constantine Holman, M.D., Reigate; Albert Napper, Esq., Guildford; Thomas Heckstall Smith, Esq., St. Mary Cray; Nicholas Tyacke, M.D., Chichester; John R. Wardell, M.D., Tunbridge Wells.

Council of the Branch.—The following were elected:—J. S. Bostock, Esq., Horsham; T. M. Butler, Esq., Guildford; J. Cooper Forster, Esq., London; Edward Garraway, Esq., Faverham; Richard Gravely, Esq., Newick; Charles C. Hayman, M.D., Eastbourne; H. M. Holman, M.D., Hurstpierpoint; J. Lee Jardine, Esq., Capel; Blackall Marsack, Esq., Tunbridge Wells; W. Withers Moore, M.D., Brighton; Stephen Monckton, M.D., Maidstone; James Reid, Esq., Canterbury; Samuel G. Sloman, Esq., Farnham; James R. Stedman, M.D., Guildford; John B. Thomson, Esq., Ramsgate; W. Wallis, Esq., Hartfield.

Dr. N. W. BARRINGTON (Bexley Heath) moved a vote of thanks to the retiring members of the Executive Council for their services during the past year.

Mr. W. MARTIN seconded the resolution, which was carried.

Secretary.—Dr. HOLMAN apprehended no one could more legitimately claim the right to propose the re-election of the Treasurer and Secretary than himself. Having known intimately the working of the Branch, and knowing, too, how much depended upon his business habits, he had very much pleasure in proposing the re-election of Mr. Hodgson. They could judge of the work he had performed by the success which had attended his efforts.

Mr. WALLIS (Hartfield) seconded the motion, which was supported by Mr. HECKSTALL SMITH, and was carried.

A vote of thanks to the Chairman terminated the proceedings of the meeting.

Dinner.—The members and friends of the Association assembled at dinner at five o'clock in the dining-room of the south-eastern wing. Dr. Carpenter presided, supported on the right by his Grace the Archbishop of Canterbury, J. Watney, Esq., M.P., the Rev. J. G. Hodgson, vicar of Croydon, and Rev. — Benham, vicar of Addington; and on the left by Sir William Gull, M.D., Bart., Dr. Bristowe, and Cuthbert Johnson, Esq.

REPORTS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

WEDNESDAY, JUNE 19TH, 1872.

P. D. HANDYSIDE, M.D., President, and afterwards J. MATTHEWS DUNCAN, M.D., Vice-President, in the Chair.

Fracture of Skull.—Mr. ANNANDALE shewed a little boy whose left parietal bone had been fractured, the broken fragments removed, and a small hernia cerebri resulted. He had been hemiplegic, but was making a good recovery.

Amputation of Forearm.—Mr. ANNANDALE shewed the remains of a hand which, after an attempt to save a finger and thumb, had to be amputated on account of uselessness and intense pain. Small tumours were found on the median and radial nerves.

Stone in Eyeball.—Mr. ANNANDALE exhibited, on behalf of Dr. IRVINE of Pitlochry, a small pebble which Dr. Irvine had removed from the eyeball of a young man. He had been supposed only to have a lacerated wound of the eyelid.

Stone in Vaginal Wall.—Dr. SIMPSON shewed a calculus, which seemed to weigh nearly an ounce and a half, which he had removed from an aperture in the vaginal wall of the bladder, at a spot where a partially successful operation for vesico-vaginal fistula had been performed by the late Sir James Simpson about four years ago.

Entozoon of Fish.—Dr. HANDYSIDE then left the chair, and read an account of Filaria Piscium within the muscles of a salmon. This entozoon, not uncommon in the branchiæ and in the intestinal canal of fish, is not hitherto described as occurring free in the muscles. Thirty-four were found alive and wriggling in the muscular substance of a small slice of a fish, the rest of which had been sold to the public. Dr. Handyside gave a careful description of the appearance and general anatomy of these entozoa, and detailed some experiments which gave the reassuring results that a very slight increase of temperature to 98 deg.

was soon fatal, and even the removal of the worms from the muscles to water was sufficient sooner or later to kill them; so that little danger seemed to exist of these retaining their vitality in the human stomach.—Dr. RUTHERFORD HALDANE suggested that, in the event of another example of a fish infested by these parasites being obtained, experiments should be made by feeding cats or other animals with the flesh and watching the results.

Swelled Leg in Fevers.—Dr. WARBURTON BEGBIE, after giving extracts and references to the principal notices in the medical literature of this century to this subject, described the appearances of the swollen limb; traced the connexion which it bore to the variety of fever, being seen after typhus and typhoid, but not observed after relapsing fever; shewed how, after pneumonia and pleurisy, such swellings were occasionally seen, and generally on the same side of the body as the lung lesion. He gave his views as to the pathology of the disease, shewing how it did not resemble either anarsarca or the white leg of phlegmasia dolens; and expressed his opinion that at least three varieties might be distinguished, varying from each other, in the exact seat of the lesion. Two were the result of obstruction: 1. of the veins; 2. of the lymphatics. He described their appearances as they differed from each other, gave cases, and explained in what manner the obstructions probably were caused, shewing a beautiful water-colour drawing of a typical case of lymphatic obstruction. The third variety, he believed, was caused by changes in the areolar tissue of the limb; and he described how, in some cases, the swelling was observed to spread gradually up one limb from the foot to the pelvis, then apparently to cross over and extend down the thigh of the other leg, the lesion diminishing in the first limb as it spread in the other. On the question of treatment, some brief practical remarks were made; Dr. Begbie's experience being that careful, persistent bandaging, with rest, was the chief therapeutic agent; that counterirritation was generally useless, if not positively hurtful; but that in many cases, especially if neglected at first, the swelling was apt to be persistent, even after many years.—Dr. RUTHERFORD HALDANE remarked that extended experience may shew that, in cases of typhoid fever, the swelling resulting will probably be lymphatic in its origin, and in typhus, venous. He made some interesting remarks on the question of the causation of embolism, and the different results that followed such blockings up, according to the nature of the thrombus.—Mr. ANNANDALE and Dr. T. G. STEWART mentioned cases of swelled leg which had occurred in their experience.—Dr. SMART expressed his sense of the value of the paper, and his adherence to the pathological views it contained.—Dr. MATTHEWS DUNCAN alluded to the form of swelling of the leg in puerperal women, and also expressed his opinion as to the importance and interest of the paper.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.

WEDNESDAY, MAY 17TH, 1872.

THOMAS FITZPATRICK, M.D., in the Chair.

The late Dr. Beatty.—Dr. LYONS, in a feeling speech, moved that the society should take this opportunity of testifying their deep regret at the death of Dr. Thomas Edward Beatty, and should convey to the family of the deceased an expression of sympathy in their bereavement.—Dr. WILLIAM MOORE seconded the motion, which was carried unanimously.

Dr. AQUILLA SMITH moved, and Mr. WILSON seconded the motion, that the secretary be requested to communicate the preceding resolution to the members of Dr. Beatty's family.

Small-pox Statistics.—The discussion on Dr. Lyon's paper "On the Statistics of Small-pox" was then commenced by Dr. HAYDEN. The speaker first dealt with the question of *mortality* from the disease, as stress had been laid by Dr. Lyons on its lowness in the present epidemic. However, on comparing the returns of the Hardwicke Hospital for the decenniad 1861-70 with those of the past year, Dr. Hayden found that, while the mortality for the former period was only about 11 per cent., it had been 19.5 per cent. in the latter period. The varying character of the receptivity of a morbid poison exhibited by a population was a feature of great interest. It was in large measure dependent on external conditions. Thus, in an epidemic, the poorer classes of a community were first severely visited, whereas the richer classes escaped until such time as the visitation was drawing towards its close. Dr. Hayden proceeded to give details of the small-pox statistics of the Mater Misericordiæ Hospital. The first case was that of a girl, named Eliza Delany, a laundress to the regiment of Coldstream Guards. She was admitted on the 3rd of February, 1871. Seven individuals took the disease directly from this patient, and in thirty-one other instances attacks of small-pox could be indirectly traced to contagion originating from her. From the date just mentioned to the 13th April, 1872, 429 small-pox cases were admitted to the Mater Misericordiæ Hospital. Among these 37 deaths occurred, giving a mortality of 17.01 per cent.; 320 of the patients had been vaccinated, and of this number thirty-five died, a mortality of 10.93 per cent. Three patients had previously had small-pox, and of them none died. Among seventy-one cases of *unprotection* thirty-nine deaths happened, giving a mortality of 54.93 per cent. As regards age, the mortality in *unvaccinated* infancy was much greater than that of any other period of life. Dr. Hayden would ask Dr. Lyons whether some of the cases mentioned by him as having appeared in the Whitworth Hospital had not been due to infection carried by students, etc., into the wards. Clothes were certainly often the medium through which the disease spread. In his experience the purpuric form of small-pox did not depend on the previous state of the patient's constitution. It appeared in the well-nourished, affluent, and healthy, as frequently as in the badly-fed, poor, and sickly. Death often resulted on the seventh day from asthenia. The mean day of death was the eleventh for males, the tenth and a half for females. A group of cases, eight in number, resembling measles, had come under notice. All the patients recovered. The type was like that of rubeola sine catarrho. In unfavourable cases, as a rule, either aborted pustules appeared, or pustulation was seen to recede. Among the complications and sequelæ, a hæmorrhagic or scorbutic diathesis took the first place. This was generally followed by boils and abscesses, when the patients survived. Eye-affections were not common or severe during the present epidemic. Only one case of loss of vision was observed. There had been two cases of keratitis. Pericarditis occurred in two instances. Dr. Hayden concluded that the period of danger to others extended but to three or four weeks. He considered that moderate purgation was of decided utility at an advanced stage of the disease.—Dr. JOHN HUGHES referred to apparent discrepancies in Dr. Lyons's paper as to the amount of danger in confluent cases. He had treated 120 small-pox patients in the Mater Misericordia Hospital, including fifty-nine discrete and fifty-six confluent cases. In the former class only one death occurred, from extreme purpuric complication. Of sixteen generally confluent cases twelve proved fatal; of twenty-six cases confluent on the face and extremities, but not on the trunk, six died; and of fourteen confluent on the face alone, with two semiconfluent, none died. Of 115 patients forty-six showed *perfect* vaccination marks. By this term Dr. Hughes implied marks circular in shape, fully indented, and pitted all over. Fifty-one patients were imperfectly vaccinated. Of these fifty-one, twenty-nine suffered from confluent small-pox, and twenty-two from discrete. Of forty-six perfectly vaccinated ten had the disease in a confluent, and thirty-six in a discrete, form. Sixteen unvaccinated and two doubtful cases were all confluent. Among the same patients, 115 in number, nineteen deaths occurred, a percentage mortality of about fifteen. Ten of the patients who died had been vaccinated, nine were unvaccinated. In eighteen the eruption was confluent.—Dr. GRIMSHAW regretted the discussion of the present epidemic at this time, for during the course of an outbreak of disease the rate of mortality and the type of the disease were constantly changing. At Cork Street Hospital, where the admission of small-pox cases had reached 650, only one case occurred amongst the attendants, of whom, however, several had previously suffered from the disease. Two nurses in the Fever Hospital, which is quite isolated from the variola wards, took small-pox, and the registrar of the institution, with his family, suffered from it. One patient after typhoid fever also contracted the disease. Dr. Grimshaw believed that the entity of contagion was satisfactorily demonstrated in the process of vaccination. It became difficult to trace the action of contagion in individual cases in advanced stages of an epidemic. However, in respect to the existing epidemic, it was a remarkable fact that twelve out of the first fifteen cases of small-pox in Dublin were directly traceable to contagion. Danger to the unaffected persisted until the scabs had all disappeared from the person of the sick. He doubted the existence of a characteristic vaccination mark, and he found that revaccination succeeded equally well with bad and good marks from the primary operation.—Dr. CAMERON referred to the case of a Swedish sailor alluded to in Dr. Lyons's paper. Though the vessel which carried this man to Dublin was more than fourteen days at sea, yet it may have touched at some intermediate port. Hence the case should not be brought forward as illustrative of the spontaneous origin of small-pox. In the question of receptivity such factors as depended on defective sanitary conditions were very important. From Dr. Lyons's paper it would appear that no fewer than 9.5 per cent. of the attendants, etc., in the Hardwicke Hospital contracted small-pox in the discharge of their duties. The influence of acclimatisation to the poison of the disease should be considered in connection with morbility among hospital attendants. In some years at least eighty-seven per cent. of persons

attacked by small-pox had been vaccinated.—Mr. DARBY described the origin of the epidemic in the neighbourhood of Bray, county Wicklow. That place had almost escaped and there was no spread of the disease from contagion.—Dr. W. MOORE read a letter from Dr. Boxwell, of Wexford, which proved in a most remarkable way the importation of the epidemic into that town, and its subsequent spread by contagion.—Dr. CHARLES F. MOORE quoted from official documents an account of the carrying of small-pox to Maynooth from the Swedish sailor in the Hardwicke Hospital. He also enumerated other instances of a similar kind, and illustrated his remarks by an allusion to accidental vaccinia.—Dr. AQUILLA SMITH showed a picture in an old Italian work on medicine, by Bartolini, bearing date 1656, which demonstrated very clearly the views respecting contagion held at that time. The print represented a medical man of the period dressed in an anti-contagion costume. Even supposing the Swedish sailor was a fortnight at sea, this did not preclude the possibility of his having contracted small-pox on shore before sailing, for he was some days ill at the time he landed in Dublin. In morbilliform eruptions, during variola, the great chronicity of the rash was very noticeable.—Mr. HENRY WILSON said that the causes of blindness in small-pox were, firstly, ulcerated keratitis during convalescence; and, secondly, iritis. The corneal inflammation was not due to the presence of pustulation, and treatment was of the greatest moment.—Dr. LYONS expressed his regret that during the discussion no notice had been taken of the first table given in his paper, from which it was shown that small-pox had never totally disappeared from Dublin of late years. It was, therefore, illogical to conclude that of late the disease had spread by contagion. He was not an anti-contagionist in the extreme sense, but he believed too much importance was attached to one factor in questions relating to epidemical disease. The official statement alluded to by Dr. Charles Moore had afterwards been found inaccurate.

CORRESPONDENCE.

BRANCH ORGANISATION.

SIR,—As an old member of the Association, I endorse most heartily the opinion of my friend, our active and zealous associate, Dr. Morris, that the Association should be cosmopolitan to the fullest possible extent. Centralisation within proper bounds is essential to good management; but there is a natural and irresistible tendency in all such bodies to gravitate to the centre, which calls for unremitting vigilance to counteract. The absence for some time of Dr. Morris from the General Council is probably an example of the detrimental effects of a remissness in this respect in the Midland Branch. I have in past times witnessed much evil from the same cause in this large Branch (Lancashire and Cheshire), and have always fought against it. Happily there is now a strong and decided feeling in the opposite direction. We are breaking new ground yearly; our meetings take in several large towns in different districts; and we select our Council, office-bearers, and representative members, on a thoroughly representative principle. In reference to more frequent meetings, ten years ago I proposed and succeeded in carrying a resolution to hold quarterly scientific meetings of this Branch, but a short experience proved it to be a failure. The difficulties arose from local circumstances, which need not discourage other Branches.

You ask for suggestions as to the methods best adapted to carry out the desired objects. The success of the Association, generally and locally, and the counterpoise to over-centralisation, depend mainly upon the zeal and interest of the members of the Branches. They must first secure a local secretary, whose heart is in his work, and who has the tact, energy, and discretion required for the efficient discharge of his important duties; and then they must not refuse the sacrifice of time and trouble to attend meetings of Council and Branches regularly and in sufficient numbers to support and assist him in carrying out his suggestions. Above all, personal considerations must be sternly and rigidly set aside whenever they oppose themselves to the true interests and prosperity of the Society.

To show what can be done by judicious management, let me remind you that this Branch has increased its numbers in two years by one-fourth; we have no arrears, and we expect to go on increasing. All this we owe to our late indefatigable local secretary, supported by a Council who appreciated his value and gave him their full co-operation and support. Let the Midland members rally round their active and zealous associate, Dr. Morris, and that Branch will soon be "to the fore" as a numerous and flourishing section of this great Association.

I am, etc.,
A. B. STEELE.

Liverpool, June 29th, 1872.

THE VOLUNTEER MEDICAL OFFICERS.

SIR,—Permit me to mention for the information of Volunteer medical officers, that Mr. Secretary Cardwell has requested me to draw up a written statement of the questions which they desire to bring before his notice.

I am, etc.,
JOHN MURRAY, M.D.,
Assistant-Surgeon London Scottish Rifle Volunteers, Honorary Secretary Volunteer Medical Association.

July 4th, 1872.

PUBLIC HEALTH BILL: MEDICAL OFFICERS.

SIR,—The alternative offered to Poor-law medical officers by Dr. Rumsey's letter is quite a gratuitous one: I mean that no such alternative is offered by the Bill itself. His first proposition expresses, in a tone of disparagement, what the Bill really offers to Poor-law medical officers; his second proposition expresses, in a tone of elevated confidence, what he himself would like the Bill to have offered. Dr. Rumsey would counsel Poor-law medical officers to withhold all support to the first proposition, and to adopt the policy enunciated by his second proposition; or, in other words, to take up a policy, not of support and gratitude for what is really offered, but a policy of agitation for something that is not offered, but which Dr. Rumsey thinks ought to have been offered, by the Bill.

As to "being constituted in town and country alike, deputy officers of health," the eleventh clause sufficiently shows that there was no such intention on the part of the authors of the Bill; but, on the contrary, that they expressly avoided, for the present, the crushing opposition to the Bill which would have followed its extension to towns. Agitation, then, for what has been expressly and avowedly left out of the Bill, would appear to most minds a fruitless waste of time. In the thirteenth clause we have the importance of the Poor-law Medical Service in sanitary work honourably recognised; and we have a real improvement in the status of all rural medical officers. Here, then, the Bill emphatically claims a policy, not of blind agitation, but of gratitude and support on the part of our Association. Lastly, I would merely remark, that my experience of Poor-law medical officers would lead me to expect that all duties arising from their appointment as sole medical officers of health in their respective districts, would be discharged in a fearless, upright, and honourable manner, and that they would stand in no need of the purifying influences of Dr. Rumsey's "principal officer of health," who, he most condescendingly tells us, "would be ready at all times (to support you and to relieve you from the disagreeable duty of initiating proceedings against nuisances created by your private patients.")

I am, etc.,
J. WICKHAM BARNES.

THE PUBLIC HEALTH BILL.

SIR,—The undersigned, feeling convinced that the provisions in the Public Health Bill now before Parliament, whereby it is proposed to permit the appointment of Union Medical Officers as Officers for Health for districts co-extensive with the Poor-law Unions, cannot but ensure the failure of the measure, beg your attention to the following reasons which have led them to this conviction.

1. The Union Medical Officer is in almost all cases engaged in professional practice, and lives by his practice. His private practice must claim the principal share of his attention, inasmuch as it produces the largest part of his income. Second only to this will always be the claim of his immediate duty as Union Medical Officer, in consequence of the necessarily urgent character of much of that duty. It can, therefore, be but the remnants of his time and energies which a man thus occupied will be able to devote to the duties of an Officer of Health.

2. While he is, from the nature of the case, dependent for his private practice upon the degree to which he can conciliate the goodwill of the ratepayers individually, his principal duty as Officer of Health must be to suppress unsanitary local conditions, which are, for the most part, maintained by individual ratepayers for their own profit. To make a person so situated an Officer of Health is, therefore, in fact, to pay him to become an informer against his own patients, and it will be manifestly his interest to do as little sanitary work as possible.

3. The undersigned, having had various opportunities of consulting Union Medical Officers on this subject, have found them very generally so sensible of the reality of the disqualifying circumstances just mentioned, that many of them express great distrust of the successful working of this portion of the Bill, and great personal unwillingness to undertake the office referred to. Hence it appears only too probable that the ablest and most efficient persons among the Union Medical Officers will very

generally decline to accept these appointments, and that they will consequently fall into the hands of the least capable and energetic among them, and that even these persons will find their professional interests best served by a judicious neglect of their official duties.

The undersigned desire to express their entire conviction that no sanitary superintendence will ever be efficient unless the Officers of Health be persons entirely independent of mere local interests. This can only be the case if the sanitary districts are made sufficiently large to supply a salary for the Officer of Health sufficient to render him independent of private professional practice. They, therefore, wish to urge upon you that the clause in the Public Health Bill (Sec. 6) which provides for the extent of the sanitary districts, should be altered in such a sense as to carry out these views; and further that words should be introduced into Sections 11 and 13, providing that the Officers of Health shall not be permitted to engage in professional practice. They wish further to submit that the saving effected by the diminution in the number of sanitary officers which these propositions involve, would nearly or quite suffice to cover the higher salaries of such efficient officers as they suggest should be appointed. They would also, in conclusion, express their strong conviction, founded upon special study and experience of sanitary administration, that the Bill, if carried as it stands, in regard to the clauses herein referred to, will inevitably entail a large expenditure of public money, and entirely fail of producing any considerable improvement in the sanitary condition of the country.

(Signed) Alfred Aspland, F.R.C.S., J.P. for Counties of Chester and Lancaster, etc.; W. Budd, M.D., F.R.S.; Robert Ceely, F.R.C.S.E., L.S.A., Surgeon to the Bucks Infirmary and Aylesbury Union; Gilbert W. Child, M.D.Oxon., F.R.C.P.; Thomas Evans, M.D., F.R.C.P.; St. Clair Ford, J.P. for Gloucestershire; Henry Letheby, M.B., Medical Officer of Health to the City of London; James E. McConnell, J.P. for Bucks; Arthur Ransome, M.D., M.A.Cantab.; H. W. Rumsey, M.D. (Hon.), T.C.D., F.R.C.S.(Exam.)Eng., late Member (Crown) of General Medical Council; A. P. Stewart, M.D., F.R.C.P.; William Strange, M.D., M.R.C.P., Senior Physician to the Worcester Infirmary; W. M. Tartt, J.P. for Gloucestershire (excepting par. 3); Disney Thorp, M.D.Cantab.; Buchanan Washbourn, M.D., F.R.C.P.; Edward T. Wilson, M.B.Oxon., F.R.C.P.; Lockhart Robertson, M.D. Cantab., F.R.C.P.

OBITUARY.

ROBERT ELLIOTT, F.R.C.S.Eng., Chichester.

THIS distinguished provincial surgeon died on June 20th, in his sixty-ninth year, at his residence in Chichester, where he had practised for upwards of forty years. Mr. Elliott received his professional education at Guy's Hospital, and was an especial favourite of Sir Astley Cooper, to whose museum he subsequently contributed many valuable preparations, especially of calculi, some of which are now in the fine collection of the College of Surgeons, to which institution he was also a contributor. He became in a 1829 Licentiate of the Society of Apothecaries, and a Member of the Royal College of Surgeons in 1840. In 1857, he was elected a Fellow of the College.

Mr. Elliott was for upwards of thirty years Surgeon to the Chichester Infirmary, where and in private practice he performed many important operations: in lithotomy especially he was a successful operator. He published in the BRITISH MEDICAL JOURNAL the result of two successful cases on the same patient, the third on the same subject being unsuccessful. Another case of second operation for stone on the same subject was successful; this was also published, with other cases, in this JOURNAL. The deceased gentleman held the appointment of Poor-law Medical Officer for thirty-five years, and about two years since obtained his well-deserved pension from the Board. Although engaged in an extensive practice, he found time to contribute several interesting papers to professional and other journals; and was a member of the British Archæological Society.

Mr. Elliott brought up his three sons to the profession; his eldest and youngest receiving their professional education at Guy's. The eldest is now an officer in her Majesty's Indian Army; the second, Mr. George H. Elliott, succeeds his father in practice; and the youngest is practising in Australia. He also leaves four daughters. The inhabitants of Chichester have to mourn the loss of an excellent citizen, of whom it may be truly said—

"Multis ille bonis flebilis occidit."

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, June 28th.

THE PUBLIC HEALTH BILL.—In answer to Mr. Rylands, Mr. Stansfeld said it certainly was the intention of the Government to proceed with the Bill. He had committed the Bill *pro formâ*, with the view of moving certain amendments and omitting certain clauses. However unwillingly, he had been obliged to come to the conclusion, considering the advanced period of the Session and the pressure of public business, that it had become necessary, in the interest of the Bill itself, to do what was sometimes called "throwing part of the cargo overboard." The Bill might be divided into three parts—the first part organising local sanitary authorities; the second, which was the body of the Bill, giving new powers to those authorities, and imposing new duties upon them; and the third part containing a number of miscellaneous clauses, some important, some merely conferring facilities for procedure upon the local authorities. The best course to take appeared to be, to rest satisfied for the present with the consolidation and concentration of the local authorities, and to withdraw the clauses with reference to nuisances, hospitals, rivers, and other matters, thus making it a Bill for constituting the new sanitary authorities and giving them some facilities.

DEARTH OF WATER IN BERMONDSEY.—Mr. Kay-Shuttleworth asked the President of the Board of Trade what information he had obtained as to the dearth of water in a large district of London—Bermondsey and Rotherhithe—supplied by one of the Metropolitan Water Companies, and what steps were being taken by the Board of Trade and by the Water Company to avert the dangers to health which would result from a continued deficiency in the water supply.—Mr. Chichester Fortescue that morning received a report from the Board of Trade Inspector, and it came to this, that the complaints of a deficiency in the water supply of the districts of Bermondsey and Rotherhithe were well founded, and that for several days there had been a serious want of water. The immediate cause of the deficiency was the choking up of the filtering beds by weeds, but the real cause was that there was not a sufficient storage of water in the company's works. Another cause which had contributed to the evil was the very defective state of the fittings of the houses in the district. The Water Company had stated that they were taking the best means of providing against the recurrence of the evil by executing, at a large cost, some very important works, and by constructing a large reservoir at Nunhead.

MEDICAL NEWS.

THE NEW VOLUNTEER MEDICAL REGULATIONS.

MEETING OF THE LIVERPOOL VOLUNTEER MEDICAL ASSOCIATION.

A MEETING of the Volunteer medical officers was held in Liverpool on Monday, July 1st, when the following resolutions were passed.

1. Moved by Dr. PARSONS, seconded by Dr. STEPHENS—"That we, as the Volunteer medical officers of Liverpool and the neighbourhood, hereby protest against the principle of payment as instituted by the recent War-Office regulations. We feel that the acceptance of payment for attendance on the staff renders our position no longer that of Volunteers."

2. Moved by Dr. SLACK, seconded by Dr. HILL—"That a letter be addressed to the Volunteer Medical Association of London, enclosing a copy of the above, and expressing our cordial sympathy with their opinions, and our wish to co-operate with them in any measures that they may point out."

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, June 27th, 1872.

Bull, William, Nenagh, Ireland
Dustan, Henry, Oaklands, Jersey
Eastes, Thomas, Folkestone, Kent
Joynes, Francis James, Chipping Norton, Oxfordshire

The following gentleman also on the same day passed his primary professional examination.

Mason, Richard, St. Thomas's Hospital

As Assistants in compounding and dispensing medicines.

Plummer, Arthur, Newbury, Berkshire
Goldsmith, John Jackson, Abingdon, Berkshire

MEDICAL VACANCIES.

THE following vacancies are announced:—

BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN—Resident Medical Officer and Secretary: £50 per annum, board, lodging, and washing.

BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and allowances.

CENTRAL CRIMINAL LUNATIC ASYLUM, Dundrum, co. Dublin—Superintendent and Resident Physician.

CORK—Medical Officer of Health.

DORSET COUNTY HOSPITAL, Dorchester—Honorary Physician.

DORSETSHIRE LUNATIC ASYLUMS, Forston and Charminster—Two Assistant Medical Officers: each £100 per annum, board and apartments.

GENERAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN, Manchester—Resident Medical Officer: £100 per annum, residence and board.

GLASGOW—Medical Officer of Health: £600 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Dental Surgeon.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street—House-Surgeon: £80 per annum, board and residence.

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BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

WILLIAMS.—On June 23rd, at Llansantffraid-Glan-Conway, the wife of *William Morgan Williams, Physician and Surgeon, of a son.

DEATHS.

CORBET, William, M.B., Resident Medical Officer of the Criminal Lunatic Asylum, Dundrum, near Dublin, aged 78, on June 15th.

RUMBALL, James Q., Esq., Surgeon, at Harpenden, Herts, aged 77, on June 4th.

SUFFIELD, Wm. H., M.D., at Letterfrack, county Galway, aged 57, on June 23rd.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Arthur Farre, London; Dr. G. M. Humphry, Cambridge; Dr. Mapother, Dublin; Dr. A. B. Steele, Liverpool; Dr. Joseph Bell, Edinburgh; Mr. T. H. Bartleet, Birmingham; Dr. Broadbent, London; Dr. Cobbold, London; Dr. G. H. Philipson, Newcastle-upon-Tyne; Mr. Hodgson, Brighton; Dr. J. Hughlings Jackson, London; Mr. J. Hornsey Casson, Ashbourne, Derby; Dr. Buchanan, Glasgow; Dr. Morell Mackenzie, London; Mr. T. Holmes, London; Dr. B. W. Foster, Birmingham; Dr. Fiddes, Aberdeen; M.D.; Dr. Macleod, Glasgow; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. Wanklyn, London; Dr. Maclagan, Dundee; A Member; Dr. Black, Newcastle-upon-Tyne; Dr. J. M. Fothergill, London; An Associate; Rev. B. Vallack, St. Budeaux; Dr. Lory Marsh, London: Dr. Leith Napier, Aberdeen; Dr. Bantock, London; Mr. Partridge, London; Dr. Rumsey, Cheltenham; Mr. Corrance, M.P., London; Mr. Brown, Dorchester; Dr. S. Haynes, Malvern; Mr. Thomas, Llanelly; Dr. Wolfe, Glasgow; Dr. A. Gamgee, Edinburgh; Dr. Coats, Glasgow; Dr. Forbes Winslow, London; Mr. Williams, Llansaintffraid; Mr. Lowndes, Liverpool; Mr. Holland, London; Mr. Spencer Wells, London; Dr. Payne Cotton, London; Dr. Tucker, Sligo; Mr. Vincent Jackson, Wolverhampton; Mr. W. H. Fitzpatrick, London; M.R.C.S.Eng.; Mr. F. J. Barclay, Liverpool: Dr. Fordyce Barker, New York; Dr. A. P. Stewart, London; Mr. D. Dalrymple, M.P. London; Dr. Kelburne King, Hull; The Secretary of King's College Hospital; Dr. Brunton, London; Dr. Rutherford, London; Mr. Lodge, St. Asaph; Our Manchester Correspondent; Our Liverpool Correspondent; etc.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY .....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

PAPERS IN HAND.

THE lectures and papers of Dr. Fraser, Dr. Priestley, Dr. Willoughby Wade, Dr Cobbold, Dr. Marcet, Dr. Braxton Hicks, Dr. Maclagan, and Mr. Hodgson, are in the printer's hands for immediate publication. To other correspondents, whose communications are also in hand for early publication, we must, for the moment, plead an *embarras de richesses*. We are not the less anxious to do justice to their communications, and we have to thank many correspondents for the studious brevity of the form into which they cast their observations, which greatly facilitates their publication, and adds to the value and variety of the unprecedented mass of scientific information which we are now enabled weekly to present to our readers.

DR. THURSFIELD might obtain some information on the subject of his letter, by writing to Dr. Vintras, Regent Street, London. We doubt, however, whether heifer-lymph is now procurable in London, or whether it is useful whenever procured.

BIBLIOPOLE.—The Library and Museum of the College of Surgeons will be closed as usual during September.

MEDICAL CLUB.

SIR,—At the extraordinary general meeting held at the Club on the 30th May last, it was unanimously resolved "to continue the Club on the proprietary principle". Captain Valpy (late of the 89th Regiment) having submitted a proposal to the meeting to become the future proprietor, negotiations have since been concluded with that gentleman; and, on the 1st instant, he undertook the responsibilities and liabilities of proprietor of the Medical Club.

Captain Valpy's experience in the Commissariat and Paymaster's Department of the Army for over nineteen years, and bis having been a member of the Club for several years, will afford him very great facilities for further developing and improving the management of it.

Captain Valpy proposes to continue the Club as a "Medical Club", and to place it upon a new and enlarged basis: a copy of the details of which, when completed, will be forwarded to each member. I am, etc.,

July 3rd, 1872. LORY MARSH (late Hon. Sec. and Treasurer).

T. M. S. requests us to state that the name of "Thomas Shaw Vance, described as a surgeon, age 40, of Albert Road, North Woolwich, charged before the magistrate at the Southwark Police Court with disgraceful conduct in the refreshment-rooms of the London Bridge Terminus, and fined £7 or three months," does not appear in the list of members of the College of Surgeons, or in the Medical Directories of Eugland, Ireland, or Scotland; nor of course, in the *Medical Register*.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, June 29th; The Northern Whig, June 28th; The Edinburgh Courant, June 24th; The Leek Times, June 29th; The Merthyr Express, June 29th; The Royal Cornwall Gazette, June 29th; etc.

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ORATION
ON
HARVEY'S "EXERCISES ON GENERATION".

*Delivered at the Royal College of Physicians, on June 26th.**

By ARTHUR FARRE, M.D.Cantab., F.R.S.,
Physician-Accoucheur to H.R.H. the Princess of Wales; formerly Professor of Midwifery in King's College; etc.

It had been a cherished view up to a comparatively recent date, that the number of Graafian follicles contained in each human ovarium, and representing so many ova, was ordinarily from twelve to twenty, and that, if these became exhausted by frequent abortion or child-bearing, the limit of human fecundity would be reached. But this notion, doubtless, arose from the circumstance that only the more developed follicles had been observed. It required the microscope to demonstrate the fact that, so far from the number being thus limited, the difficulty consists rather in estimating them, especially in young subjects, where a single section of an ovary serves to display a hundred or more ovicapsules and ova: and it matters little at how early a period of life we commence the investigation, for occasionally in the ovarium even of the fœtus some traces of commencing formation of ova may be found. At first, nothing is distinguishable in the mammalian ovary but an uniform mass of primary cells and cell-nuclei; then, when the follicle or ovisac is about to form, little round or ovoidal aggregations of primary cells may be observed, constituting groups that are distributed in considerable numbers throughout the ovary. Within each of these little groups is soon perceived the germinal vesicle. This we may regard as the essential portion of every ovum; and from this little nucleated germ-cell man, in common with the rest of the vertebrata, takes his origin.

By the gradual evolution and multiplication of granular cells and oil-globules, much greater in amount in some classes than in others, the yelk is formed, sometimes obscuring the germinal vesicle; while at the same time, surrounding each of these little groups of cells, is perceived a delicate transparent tunic, the ovisac in its first stage of formation; the yelk receiving its limitation by the addition of a fine vitelline membrane. In animals that produce and emit vast numbers of ova at one time, these become ripened simultaneously, and when the spawning season arrives they are expelled in quick succession, or in one or more masses; but when the number of the progeny is smaller, a corresponding number of ova becomes ripened in succession, and these are gradually found approaching the margin of the ovary or projecting above its surface.

The formation of the ovarian ovum being completed, the next most important step in the process of reproduction is about to take place—viz., its escape from the ovary. If now the ovum be examined, it will be found to present certain differences in its constitution, according to the class to which it belongs. In the mammalian ovum, the yelk or vitellus containing the element which is to supply the germinal portion with additional materials for growth and development during the interval which elapses between its detachment from the ovary and its arrival at the uterus, is comparatively small; for the passage is rapid, occupying generally no more than a few days, and the ovum, having once reached the uterus, draws its nutrition from this latter source. But in birds, for example, where the embryo is entirely dependent for its materials of growth upon what it carries with it from the ovary, together with such additional matter as the oviduct supplies, a very large portion of food-substance must necessarily be provided. And it is to this element of the ovum in birds and some reptiles that its great bulk as well as brilliant colouring are due. Hence the division in such cases into a smaller or germinal portion—the germ-yelk and a larger food-yelk, destined for the supply of materials for subsequent nutrition. And here we are reminded of that excellent definition of an ovum which Aristotle has given, and which appears applicable to it, more or less, in all stages; namely, that "an ovum is that from part of which an animal is engendered, and the remainder of which is food for the thing engendered".

* Concluded from page 4 of last number.

In thus reviewing these initial steps in the process of reproduction, we cannot fail to be struck by one leading circumstance common to them all—namely, the profusion in which the reproductive material, under the form of these separate fragments, each of which we term an ovum, is provided in every class. Only in those animals possessing soft and distensible bodies, can the whole or greater part of this material become ripened and brought to perfection; and even here, where the ripened ova amount sometimes to millions, the process must be gradual; for, after the oviposit has taken place, there may still be seen, within the ovisacs, the preparations for those which are to follow in the next breeding season. But as we ascend higher in the scale, and come to animals producing a smaller progeny at one time, or even to those that are commonly uniparient, the difference consists not so much in a proportionate diminution of the number of germs or ova originally formed as of those that ultimately come to perfection; for, in some of the Mammalia at least, it is probably calculating below the mark if we say that many hundred original germs are provided to meet the contingency of a single act of birth. Of these, therefore, the greater part can never be ripened at all, but must perish in the seat of their original formation; and, further, if those which are ripened and emitted do not become fertilised shortly after that event, these equally perish.

In order to trace out this matter further, we must now turn our attention in another direction, and inquire what provision has been made to meet this latter contingency. The essential part of every ovum appears to be the germinal vesicle; but, unless the contents of another elementary cell be brought into contact with, and possibly mingle its contents with, those of the ovum, and, as it is now supposed, of the germinal vesicle itself, no further important stage in the process of reproduction can be reached.

We have, therefore, to consider the nature of the process by which the ovum becomes fertilised. Until very lately, the efforts of all the observers who had closely examined the ovum, with a view to ascertain whether the spermatozoon actually gained entrance within the ovum, had been defeated. That they did so enter was the opinion of Leeuwenhoek, who also imagined that, having arrived there, they became by metamorphosis the future embryo; and this opinion was entertained, to a certain extent, by Prevost and Dumas. By Dr. Barry the nearest approximation was made to the actual discovery of the penetration of these bodies within the ovum; but, although he saw them frequently upon, and even within, the soft zona pellucida, by which the ovum is surrounded, he still was not able to trace them with any certainty further. So also was Mr. Newport baffled in all those first experiments, of which he gave an interesting account to the Royal Society in 1850. Not until these observations had been extended, was he able to announce that he had actually witnessed the passage of the spermatozoon through the membrana vitelli. The fact thus established has since been confirmed by Dr. Ransom in regard to fishes, where the passage of the spermatozoon takes place through a special pore or micropyle.

These observations, therefore, have for ever set at rest this question, so long debated, as regards the vertebrate ovum; and although, on account of the highly refracting nature of the material by which the spermatozoon becomes surrounded, immediately on reaching the interior of the ovum, it is generally lost to view, so that its conditions can no longer be traced, still they serve to show in what way the material, of whatever nature it may be, which the body of the spermatozoon contains, may be brought into direct contact with that which constitutes the essential part of the female product or ovum.

The most important changes immediately following fertilisation are these. Already in the ripe ova, previous to impregnation, and as a preparation for it, it is noticed that the germinal vesicle has disappeared. This disappearance has been accounted for upon the supposition that a process of cell-development takes place in its interior, and that, the cell-wall being thus ruptured or dissolved, the contents become equally dispersed through the yelk. Now, if this be the real explanation of the disappearance of the germinal vesicle, which all observers agree in stating is not the result of impregnation, but takes place prior to that event, then it goes far to discredit those views which have been sometimes entertained with regard to the immediate agency of the spermatozoa in effecting the fertilisation of the ovum—namely, that it is in the nature of a mere catalytic action; while they add force to the belief that the contents of the spermatozoon become equally diffused through the yelk, together with those of the germinal vesicle, and by their combination initiate those further changes in it which serve to announce that impregnation of the ovum has been already effected.

The phenomena which next ensue, when occurring in the Mammalia, are all observable in the Fallopian tube, the general if not the constant seat of impregnation throughout this class. The first distinct evidence that the power of the spermatozoon has been efficiently ex-

erted upon the ovum, is afforded by the occurrence of a small interspace between the yelk and its outer covering, the so-called zona pellucida, occasioned by the shrinking or contraction of the yelk within the latter, which interspace is filled by a transparent fluid, while one or two small granular bodies, the appearance of which about this time has given rise to much speculation regarding their use, are frequently observed between the yelk and the zona pellucida. As soon as these changes have taken place, the yelk, volvox-like, begins to rotate—the rotation being supposed to be effected by the aid of cilia clothing its surface. I am not aware that any explanation has yet been offered of the purpose of the rotation in this instance, and yet so commonly has it been observed that it doubtless has a meaning ; and this account of it offers itself to my mind. The rotation being the first important event that ensues, after the spermatozoon has gained entrance within the ovum, its occurrence would be coincident with the time at which the breaking up of the spermatozoon and the dispersion of its contents among those of the germinal vesicle is supposed to occur. Now, if the purpose be an equal distribution and admixture of these two throughout the yelk, then no means can be well imagined better suited for effecting this object than the rotatory movement of which I am now speaking. And now, following out the changes which the ovum further undergoes, consequent on impregnation, the "segmentation" of the yelk commences. This consists in a spontaneous cleavage of it—at first into two, then four, equal parts, each exhibiting a nucleus, and so on in a kind of geometrical progression, until it is broken up into a mass of finely divided nucleated particles, between which it is probable that the original sperm-force, or sperm-material, becomes equally divided. This process of complete disintegration of the yelk affects, apparently, the whole or greater portion of the mammalian ovum ; but in others, as in birds, a part only becomes so affected, the larger portion remaining for nutrition.

A few questions of the greatest interest may now be considered. We have now arrived at two ultimate facts: ultimate, at least, as far as our present knowledge is concerned, and so far as our present means of investigation have enabled us to go. And these are the sperm-cell and the germ-cell, as constituting the essential elements which by their combination give origin to the future being. And whatever may result from further investigation respecting the structure and offices of these two elementary organisms, they must apparently be regarded as the cardinal points around which should be gathered all the information that subsequent research may develope.

This, then, must appear to be the proper moment for considering some important particulars which seem to have a direct bearing upon this subject. But, in endeavouring to arrive at the truth, it is important that we should eliminate from the investigation of certain now well-ascertained facts all external sources of fallacy; such, for example, as appear to have no better foundation than that of popular prejudice or fancy. I am tempted, therefore, to say a word here regarding that supposed influence of the imagination, which, from time immemorial down almost to the present day, has been generally believed to be exercised by one or other parent, but chiefly by the mother, upon the development of the offspring. Nor, as far as I can judge, has this belief yet altogether died out. But "which of us by taking thought can add one cubit to his stature"? or how, supposing that such power existed, could it be exercised, let us say, in the first place, by the male, seeing that we now know how the spermatozoa are formed in developmental cells that go through a gradual process of ripening and completion, not apparently much under the dominion of the mind? Nor can we get more satisfaction out of the opposite case, and show how maternal influence can be supposed to operate. Is it while the ovum is encased in the Graafian follicle, surrounded by the little bed of granules in which it then lies? Or next, while passing down the Fallopian tube, when it may be compared to a rolling stone, having scarcely even contact with the structures of the mother? Or lastly, when, arrived in the uterus, it draws its supply of nutriment through the placenta? But the placenta has no nerves, and he would be a bold physiologist to declare that nervous impressions could be conveyed by means of the general current of the blood. Nor do we get more satisfaction when we come to examine the several classes of cases in which this unscientific "use of the imagination" is supposed to be operative. Emotion, as well as accident, may undoubtedly cause premature expulsion of the ovum, but that is not a true exercise of the imagination. The broken bones occasionally observed in the fœtus, and formerly connected with the witnessing of painful sights during pregnancy, are now known to be caused by spasmodic action of the uterus. The various malformations that depend upon arrest of development, erratic as these may appear, are obedient to certain laws, for even in deformity a certain order is preserved. And so, also, of the "marks", "moles", and other defects that are alleged as giving evidence of this remarkable power. None seem to be connected in any way with mental force, which, even if it could be so exercised, seems to be employed in the manner here represented chiefly to produce evil results. In whatever way we view the matter, it seems to elude our grasp. It is like the rainbow, which often appears so near, and yet, when we endeavour to approach it, baffles pursuit—a pretty particoloured play of light, as unsubstantial as the mist upon which it depends for its existence.

Passing on, therefore, from these speculations, I proceed to subjects of a more practical kind.

The natural law of parentage is sufficiently represented in the popular notion that "like begets like ;" that the child at its birth is only so far dissimilar from the parent as to need but a certain amount of growth and development to make the resemblance more or less perfect, at least as regards the general characteristics of the individual. And this seems to extend to special peculiarities, which may be handed down from one generation to another, and appear in the form of certain characteristic or other natural endowments ; or they may be exhibited in the shape of various diseases, defects, or malformations, which may have affected the parents possibly for several generations. But in these cases it does not follow that like *always* begets like—at least, not apparently. The malformations, defects, or special characteristics may die out, or the course of transmission may be interrupted. The disease or peculiarity may not appear again for one or more generations ; or it may be limited to certain lines of transmission, as through the males only, or through the females only, of the family ; and in these again, according to certain restrictions.

It is probably little known how much Harvey had thought upon this subject of hereditary transmission, and how very clearly and concisely he expresses his own views upon several matters which, under new names, are at this moment exciting the greatest attention. "In reference to the subject of family likeness," says Harvey, "we may be permitted to inquire as to the reason why the offspring should at one time bear a stronger resemblance to the father, at another to the mother, and at a third to progenitors, both maternal and paternal, further removed ; particularly in cases where at one bout, and at the same moment, several ova are fecundated. And this, too, is a remarkable fact, that virtues and vices, marks and moles, and even particular dispositions to disease are transmitted by parents to their offspring ; and that, while some inherit in this way, all do not. Among our poultry, some are courageous and pugnaciously inclined, and will sooner die than yield and flee from an adversary ; their descendants once or twice removed, however, unless they have come of equally well-bred parents, gradually lose this quality ; according to the adage, 'the brave are begotten by the brave.' In various other species of animals, and particularly in the human family, a certain nobility of race is observed ; numerous qualities, in fact, both of mind and body, are derived by hereditary descent. 'Every fourth birth,' says Pliny, 'the mark of the Dacian family is repeated on the arm.' Why may not the thoughts, opinions, and manners now prevalent, many years hence return again after an intermediate period of neglect?" This disposition to *atavism*, or the reverting to an ancestral type or pattern after it has been lost or kept in abeyance through one or more successive generations, of which Harvey gives so clear a statement, has of late received great attention ; and its study, more particularly in the hands of Dr. Prosper Lucas, ha brought to light many most interesting examples.

Mr. F. Galton has attempted a farther development of it, in a paper read before the Royal Society so recently, that no report has yet appeared of it in their *Proceedings*. As far as I can ascertain, however, the object of the author is the discussion of the question, whether it be impossible to define the connection between relatives in a way that should do justice to the *latent* elements, which every creature inherits and may bequeath, but which give no sign of their existence in its own person. This difficulty, he considers, may be avoided by tracing the intervals of descent from the origin of life in each generation, and not from one adult to another. He recognises three well-defined stages in each of these intervals. First, the ovum, in which all the elements are confounded and no structure exists ; then the embryo and the adult, in both of which they are separated into personal and latent. Then, by tracing out the process by which each stage in either of the lines was derived from its predecessor, he discovers the true relation of a man to either of his parents, and this he shows to have a twofold character—one part passing by the *latent*, the other by the *personal* line. The first of these Mr. Galton regards as the most important, though only collateral, because it descends through five steps to the parental *ovum*, and thence descends through three other steps to the parental *person*. The other—the personal line—though of minor importance, is nearer and quite direct, and it descends through three steps. As an example, he takes brothers and sisters, whose descent passes only through *three* parallel steps, though it is derived from *four* vari-

able sources, which are the latent and personal contributions of either parent.

Now, if there be any value in what has been already said of the special attributes of the sperm-cell and germ-cell, then, with reference to any qualities that may be transmitted from parent to offspring, so far as these can be conveyed by any material of communication, they can only be so transmitted from the male through the sperm-cell, and by parity of reason, though the case is here not so simple, from the female through the germ-cell.

And here we seem to be getting back to the views of Seneca, whose description, taken in a figurative sense, represents the matter in much the same light. "For," says Seneca, "in the semen is comprised the entire cause of the future man, and the unborn babe has written within it the law of a beard and a hoary head. For the whole body and the load of future years are already traced in delicate and obscure outlines in its constitution."

Further, with regard to the hereditary transmission of diseases and deformities: that some persons are more prone than others to suffer special forms of disease, which, upon investigation, may be ascertained to have affected one or other of their parents, and this possibly through several generations, is a circumstance now so well known and generally acknowledged, that it has come to form an important basis of calculation with insurance societies when estimating the probable duration of human life in given cases. But most writers upon this subject, which is commonly spoken of by the not very correct title of the "hereditary transmission of disease", since all that we can certainly affirm of it is that the tendency is transmitted, have hitherto taken little or no notice of its *sexual* limitation. Detached cases exemplifying this remarkable circumstance have been from time to time recorded, and the matter may have received a passing notice from a few authors. Moreover, it had been long previously known that a sexual limitation often characterised the prevalence of certain malformations when observed to occur in lineal descent, sometimes through many generations; but no one appears to have taken up the subject as one deserving of systematic inquiry regarding both diseases and malformations, until Dr. Prosper Lucas and Mr. Sedgwick brought together numerous cases, with a view to illustrate this peculiar limitation. Regarding diseases, the cases collected are chiefly illustrative of the mode in which a tendency to phthisis, asthma, gout, hæmorrhage, insanity, cutaneous and many other affections, are handed down from progenitors similarly affected, and are thus limited in their lines of transmission. But the inquiry, when extended to certain peculiarities or defects, such as the general colour of the skin, colour or form of the iris, defects in the organs of vision or hearing, colour-blindness, arrests of development, congenital deficiencies of fingers and toes, or the webbing of these, or the opposite condition, viz., supernumerary digits (polydactylism), affords results tending more or less in the same direction, as furnishing examples of a sexual limitation in atavic descent.

The general conclusions at which Mr. Sedgwick arrives, after a careful analysis of his cases, are, that sexual limitation in the transmission of disease is more common in the male than in the female; that such a limitation may affect either the development or the transmission of a given disease; and these two conditions are often antagonistic to each other, as in those cases where the *appearance* of the malformation or disease is strictly limited to the males, its *transmission* being quite as strictly limited to the female sex, occasioning the phenomenon of *double atavism*, as where neither sons nor daughters ever inherit their father's disease, but only the grandsons in the third and fifth generations, by transmission through the females of the second and fourth generations.

This part of the subject has been very fully discussed by Dr. Prosper Lucas, and also, under the title of prepotency in the transmission of character, by Mr. Darwin. But it becomes extremely complicated on account of this prepotency being found to run now more strongly in one sex than in the other, and again equally in both sexes; while further complications appear to arise on account of the secondary sexual characters. The greater part of those, however, who have taken up this subject, agree in this, that peculiarities *first* appearing in either sex, though not in any way necessarily or invariably connected with that sex, strongly tend to be inherited by the offspring of the same sex, but are often transmitted in a latent state through the opposite sex.

It would doubtless, therefore, very much aid our comprehension of this difficult subject of a sexual limitation of disease, if we could arrive at a more complete knowledge of the causes which primarily determine the division of sex into male and female, and that according to certain definite proportions; as well as of those conditions which in so remarkable a manner occasionally disturb that proportion.

In the English edition of Blumenbach's *Institutions of Physiology*, which appeared just fifty years ago, the following note by the translator will be found. "Sir Everard Home has published a singular hypothesis. He suggests that the sex is not determined at the first formation of the individual, but that the parts of generation are originally so situated, and of such a nature, that they are capable of becoming either male or female organs when the sex is subsequently fixed." Now this hypothesis, which then appeared so strange, and for which the data will be found in Sir Everard Home's paper in the eighty-ninth volume of *Philosophical Transactions*, has ceased to be an hypothesis, and has long passed into the region of ascertained facts.

Many observers have given their attention to this subject, but none so fully as Kobelt. According to Kobelt, there exists in the embryo a condition of absolute indistinction of sex in every individual. This depends upon a coexistence of all the elementary reproductive structures of each; so that, prior to the division of sex, each individual possesses the parts necessary to form either the male or the female, but yet without any true exhibition of bi-sexuality.

The nature of the first impulse towards a division of sex is entirely unknown, but the several elements out of which the fully formed organs are to be developed manifest a tendency to change in two opposite directions; in the one case suffering retrogression, in the other showing advance. The generative gland may at this time be converted into testis or ovary, and, through the duplex excretory duct, that of the Wolffian body for the male, and the duct of Müller for the female, the capability of conversion into either sex exists at this time in every individual. The development of one and the stationary condition or disappearance of the other of these ducts, together with the changes taking place in the generative gland itself, render now the beginning of the division of sex anatomically discoverable.

I have endeavoured to determine by observation, at what time this precise change occurs. In a human embryo of the fourth week, of which I have published a description, no trace of an ovary or generative gland was discoverable, but only slight indications of the Wolffian bodies. In another embryo, measuring 5 lines in length, the generative gland was only just discerned; while in another, measuring 8 lines, the distinctive characteristics of the ovary could be perceived. It may be said that in the human embryo the ovary cannot be discerned earlier than between the fifth and the seventh weeks, nor is it possible, previously to this, to distinguish the ovary from the testis.

Of the precise conditions which determine this division of sex, we are at this moment, as just stated, in perfect ignorance; although numerous most interesting facts have been collected regarding the circumstances of the begetting; such as the relative condition of the parents, regarded as the two factors; their relative ages; the *equality* of their potency in regard to the production of sex, or a *preponderance* on one or other side of a tendency to produce males or females (in some cases so remarkable as to take the matter entirely out of the category of so-called chance or accident); the tendency, again, to the prevalence of a single sex in quadruple or quintuple births, and the almost constant occurrence of the same sex in duplex monsters. These are matters which may ultimately lead to a better understanding of the whole question; while, at the same time, they serve to show how little is as yet known beyond the bare ascertainment of these and similar facts.

Before I conclude, I will refer to one other subject, to which I have occasionally adverted in the course of this address.

Again and again, passages occur in Harvey's work which lead to the conviction that he is in some sense a supporter of the doctrine of "equivocal" or "spontaneous" generation. And as, when noticing one of these, I stated that I would return to the subject, I feel myself pledged to say something more respecting it. But this must be very brief.

The notion that living things might arise spontaneously out of dead or putrefying matter, is undoubtedly among the oldest of all the doctrines relating to the several modes in which animated beings might be supposed to commence their existence. So consistent did this doctrine appear with the fact that scarcely is an animal dead before the carcase abounds with maggots and other living forms destined to devour it, but which nevertheless had no existence there before, that we cannot feel surprised if in those days, when the observant faculty of man was less keen than now, less sharpened by the constant practice of investigating facts, such a doctrine should meet with very general acceptance with regard to such cases as these.

It was not until eleven years after Harvey's death that the first distinct and systematic attack upon this doctrine of spontaneous generation was made by the distinguished Italian naturalist, a member of our own profession, Francesco Redi. The experiments which he instituted with a view of testing this question were of the simplest description, but they aimed directly at the root of this matter. And the arguments which he deduced from them were unanswerable. Moreover, simple as they were, they have formed the basis of almost every experiment which has been since made with a view to determine the same or similar questions

in analogous cases. Redi's experiments were intended to show that, whenever external agents, such as flies, were prevented from coming into direct contact with putrefying meat, by tying a piece of gauze over the vessel which contained it, such as would exclude the flies but not the air, no maggots were ever produced in the meat, although the ova which the flies had deposited externally were freely hatched in this situation.

But Redi's experiments sufficed to test this matter only in respect of such coarse examples as those just quoted. Their direct purpose was to show that, in those cases, the real mode of origin of the animals had escaped detection. They could not, however, fail to suggest to him the idea that, in all like cases, where living creatures seemed to arise out of dead matter, a similar cause was in operation, and the real explanation of their apparently spontaneous origin was to be found in the fact that their germs had been derived from some external source. In this form, the question seems to have slumbered for a period of more than eighty years, when, in the middle of the last century, it was again taken up by Needham, who, aided by the distinguished French naturalist Buffon, set to work to revive the ancient doctrine, though now under a new phase.

Buffon held the notion, in which, indeed, he has by no means stood alone, that all living creatures, whether animals or plants, were made up of separate organic molecules or living atoms, which are merely held together by some unknown force, in that particular form of association which serves to characterise the individual plant or animal; but that, on the occurrence of death, all these atoms are set free, and, while still retaining their vitality, become, when portions of the animal or the plant are infused in water, developed into so many infusorial animalcules.

Needham, falling in with these views, but seeing also that they were antagonistic to the now well-known observations of Redi, proceeded to put them to the test of a like experiment, varying it only according to the circumstances. By boiling the infusion, and afterwards, as he supposed, effectually excluding the air and continuing the heat, Needham concluded that he had destroyed all germs that might have previously existed in the solution, and at the same time prevented the entrance of any others that might be supposed to be floating in the air. The results of those experiments appeared directly to contradict the conclusions arrived at by Redi, and to resuscitate the old idea of spontaneous generation.

But they were not destined to remain in this condition. For, sixteen years later, Spallanzani, by a series of more carefully devised experiments, appeared to put Needham in the wrong, and to add further support to the views originally maintained by Redi. And now, again, another century has elapsed since these observations of Spallanzani; and, during this time, the question of the spontaneous origin of animals has been repeatedly revived and tested by every form of ingeniously-devised experiment.

The case of insects imprisoned in the galls that are found upon the oak, and other analogous examples, have long ago received a satisfactory explanation. The spermatozoa having now ceased to be regarded as distinct animalcules, are now classed with ciliated cells, of which they constitute undoubtedly the most important and interesting example. The presence of entozoa within the bodies of other animals was for a long time the stronghold of those who, not being able to discover them in other situations, saw no way out of the difficulty except by assigning to these also a spontaneous origin. But in time it was discovered that, while in most animals produced according to the ordinary form of sexual generation, the offspring soon comes to resemble the parents, there were still others in which the new individuals differ at first from the parents and also from each other, and that it is not until after certain intermediate or alternate forms have been passed through that the last of the series returns to the state of the first parents; so that the non-recognition of the larval form broke the chain of evidence regarding the origin of some of the more perplexing examples of the entozoa. And now the discussion is maintained only in respect of the infusoria. Regarding the origin of these, one side assumes that whenever in animal or vegetable infusions living creatures seem to arise spontaneously, their presence is due to pre-existing germs, which in some form already occupy the infusion, or the air having access to it. The other side considers that, in obedience to laws which are in the nature of ordinary chemical and physical laws, and not such as are commonly termed vital, new centres of life may arise even out of non-living matter, without the intervention of a pre-existing germ.

Now, if we compare these views with what Harvey asserts, the following, I think, will be the result. When Harvey is speaking of things arising spontaneously, equivocally, or automatically (for he employs all these terms), he is generally referring to insects and creatures of that class, which, as I have already shown, were commonly in those days supposed to have a spontaneous origin. Some, he says, are born of their own accord, concocted out of matter spontaneously. And in another place he expresses it thus: "In the same way are engendered both those creatures that are said to arise spontaneously, by chance or accident, and derive their first matter or take their origin from putrefaction, filth, excrement, dew, or the parts of plants and animals, as well as those that arise congenerately from the semen of animals; because this is common to all living creatures—viz., that they derive their origin either from semen or eggs, whether the semen have proceeded from others of the same kind, or have come by chance or something else." But he intends, I think, to draw a distinction; for in his twenty-eighth exercise, speaking of the impossibility of the egg being rendered fruitful without the concurrence of the male, he says: "But this view is opposed to the opinion of those who derive the origin of animals from the slime of the ground." And further, in another exercise he seems to hit the whole of the matter, for he has it thus: "But on these points we shall say more when we show that many animals, especially insects, arise and are propagated from elements and seeds so small as to be inconspicuous (like atoms flying in the air), scattered and dispersed here and there by the winds; and yet these animals are supposed to have arisen spontaneously or from decomposition, because their ova are nowhere to be found." And then he adds: "This idea may be not without use to that school of philosophy which teaches that all things are produced from nothing."

And now, having brought before you all that I think can be said respecting Harvey's doctrine on this particular subject, and having endeavoured to exhibit Harvey in such a light as to increase, if possible, the interest which we all feel in one who, by the force of his genius, raised himself to a foremost position among the physiologists of the world, I will bring this already too prolonged address to a conclusion with the following extract.

"Wherefore," says Harvey, "according to my opinion, *he* takes the right and pious view of the matter who derives all generation from the same eternal and omnipotent Deity, on whose nod the universe itself depends. Nor do I think that we are greatly to dispute about the name by which this first agent is to be called or worshipped; whether it be God, Nature, or the Soul of the universe—whatever the name employed—all still intend by it that which is the beginning and the end of all things; which exists from eternity and is almighty; which is author or creator, and, by means of changing generations, the preserver and perpetuator of the fleeting things of mortal life; which is omnipresent, not less in the single and several operations of natural things than in the infinite universe; which, by his deity or providence, his art and mind divine, engenders all things; whether they arise spontaneously without any adequate efficient, or are the work of male and female associated together, or of a single sex, or of other intermediate instruments, here more numerous, there fewer; whether they be definite, or are equivocally or accidentally produced: all natural bodies are both the work and the instruments of that Supreme Good, for he also makes use of the motions, or forces, or vital principles, of animals in some certain way, to the perfection of the universe and the procreation of the several kinds of animated beings."

ON THE TREATMENT OF INGROWING TOE-NAIL.

FORTY years since, when I was an assistant, a young farmer one day came to the surgery, and was operated upon for an ingrowing toe-nail. This was done by tearing the nail away. The poor fellow suffered so severely that I was induced to say, "I will never perform that operation." Of course, in many years' active practice, I have had many such cases under my care; and my invariable mode of proceeding has been to find the edge of the nail with a probe, and then remove the whole of the granulations and hypertrophied cellular tissue on both sides, if requisite. In no case have I been disappointed, or ever had to treat the patient for a return of this grievous complaint. I fully expected that this mode of treatment was general; but my attention has been recently drawn to the case of a fine young man rendered almost a cripple by having had both his great toe-nails torn out, leaving the overlapping skin to such an extent as to prevent healing, with the probability of return on the growing of a new nail. This was performed by a surgeon to one of the large metropolitan hospitals, where, I am informed, this mode of treatment is taught. In a clinical lecture by another hospital surgeon, reported a few weeks since in the JOURNAL, are the following remarks: "The common mistake made in this case was to blame the nail; but it was not the nail that was at fault, but the skin surrounding. This became thickened and ulcerated, and grew until the nail was overlapped." Now the mode of operating which I wish to impress is to remove the offending granulations, instead of the unscientific cruel operation of tearing out the nail. I am aware that other surgeons follow this mode of treatment; and I considered it general until my attention was recently drawn to the case above-mentioned.

Epsom, July 1st, 1872. GEORGE STILWELL.

LECTURES ON HUMAN MYOLOGY.

Delivered at the Royal College of Surgeons of England.

By G. M. HUMPHRY, M.D., F.R.S.,
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LECTURE II.—*June 19th*, 1872.—(*Concluded.*)

I PASS on now to speak of the subjacent muscular stratum, which may be called the "girdle-sheath" or the "deep ventro-appendicular sheath". It may be called the girdle-sheath, because it consists of muscular fibres passing from the girdle in each limb, ensheathing the joint of the limb with the girdle and ensheathing also the upper part of the limb. It may be called the deep ventro-appendicular sheath, because, forasmuch as the girdles are ossifications in the septa of the ventral part of the lateral muscles, they, together with the muscles passing to and from them, form parts of the system of that muscle.

The components of the girdle-sheath in each limb are segmented into a greater number of muscles than those of the overlying ventro-appendicular sheath. These muscles may be conveniently arranged into four groups or sectors—a dorsal, a palmar or a plantar, an anterior, and a posterior group. Of these, the palmar or the plantar, and the dorsal, underlie, and, as regards the stratification, correspond respectively with the palmar, or the plantar and the dorsal divisions of the superficial ventro-appendicular sheath.

The dorsal group is formed, in the one limb, by the infraspinatus and the teres minor, and, in the other, by the gluteus medius and minimus. These run, in each instance, to the part of the upper segment of the limb which is directed towards the dorsum of the girdle. This is different in the two limbs owing to the opposite direction in which the limbs are rotated upon their respective girdles, the dorsal surface of the upper limb being turned backwards, while that of the lower limb is turned forwards. Too much has, I think, been made of this circumstance of the insertion of the dorsal muscles of the scapula into the radial or pre-axial tubercle of the humerus, and of the dorsal muscles of the ilium, into the fibular or post-axial tubercle of the femur, as an argument against their comparison homologically. But a similar variation in the insertion of corresponding muscles in the two limbs of the same animal, or in the same limb in different animals, is so common (I need only refer to the biceps brachii, which passes, as it were indifferently, to the radius, the ulna, or both bones), that it should be no matter of surprise to find that the dorsal girdle-muscles are attached to that edge of the humerus or to that edge of the femur, in the upper or the lower limb, which, being directed dorsally, presents itself in the most favourable manner to them. We may learn from this disposition of parts the lesson which is confirmed by so many facts in anatomy, and by the disposition of the nerves most particularly, that special adaptation is attended with free modification of general developmental process, freer, perhaps, and deeper, than we have lately accustomed ourselves to think; and we may learn from the discussions which have taken place on this question, that, if we strain, as has been too much the tendency, at the gnats of homology, we shall find it necessary to swallow many camels. If we make, I mean, too much of the minor objections to certain homological comparisons, we shall find major difficulties lying across our path.

The gluteus medius offers a good illustration of the manner in which the length of fibres arising at different distances from the point of insertion is equalised. The upper and posterior corner of the ilium is further removed from the trochanter than the other parts of the ilium which give origin to this muscle; and, accordingly, a tendon runs up in this direction into the middle of the muscle, and receives, in a peniform manner, the fibres derived from this part of the pelvis.

The palmar group is formed by the coraco-brachial and subscapular muscles. I have elsewhere shown that the subscapularis may be regarded as an extension of the coraco-brachialis, beneath the coracoid, upon the under surface of the scapula. In Man, the two members of the group are inserted into the ulnar edge and ulnar tubercle of the humerus; and the coraco-brachials are small in accordance with the smallness of the coracoid. In animals in which this element of the girdle is abortive, the coraco-brachials are absent; and in the animals in which it is large and reaches to the sternum, they are of proportionate size and number, and are divisible into two series. Of these, one, derived chiefly from the precoracoid, passes in front of the biceps, upon the pre-axial or radial ridge and tubercle of the humerus; and the other extends along the post-axial or ulnar side of the humerus, and is perforated by the brachial artery and the median nerve. In Man, a thin sheet of the subscapular tendon passes over the biceps to the great or preaxial tubercle. It is to be regarded scarcely as a representation of the pre-axial division of the coraco-brachials of Ovipara, but merely as an extension of the tendon of insertion from one tubercle to the other.

In the hind limb, the corresponding or plantar group is much larger and more subdivided, in accordance with the greater size of the corresponding elements of the girdle—the os pubis and the os ischii—from which they spring. They more nearly resemble the coraco-brachials of Ovipara and Monotremes, and, like them, are inserted partly upon the pre-axial, and partly upon the post-axial side of the limb. Thus the pectineus and the adductors are inserted along the tibial edge of the linea aspera of the femur, which is the pre-axial line of the bone; and the obturators, with the gemelli and the quadratus, are inserted into the fibular edge of the linea aspera and the fibular trochanter, which constitute the post-axial line of the bone. I do not, however, wish to press this similarity to the establishment of any close homological correspondence; for the difference of disposition of the elements of the groups in the two limbs baffles the attempt to show any near parallelism between them. The internal obturator and the gemelli seem to be the nearest representatives of the subscapularis; and some of the other adductor elements appear to represent the coraco-brachialis. It will be remembered, however, with regard to the adductors, that, although some parts of them may extend upon the fibular side of the linea aspera, and though they are in great measure supplied by the obturator nerve, which is the nearest serial representative of the musculo-cutaneous nerve of the upper limb, yet no part of them passes upon the postaxial side of the flexor muscles, as does the coraco-brachial in Man; and the obturator nerve does not supply the flexor muscles of the leg as the musculo-cutaneous nerve does those of the forearm. Hence an exact comparison between either the muscles or the nerves is here out of the question; and we must be content with pointing out the general correspondence of the two groups.

The difficulty of comparing the muscles of this region in the two limbs is much increased by the disproportionate extent of the dorsal surface on the femur, and of the extensor cruris muscle arising from that surface, leaving the flexor or plantar surface to be represented only by the interval between the marginal lines of the linea aspera, including the popliteal space and the space between the two trochanters behind. This disposition, together with the forward curve of the femur and the projection of the tuber ischii, throws the flexors of the leg free from the thigh-bone, with the exception of the short or femoral part of the biceps, which contrives to insinuate itself into the narrow flexor interval between the edges of the linea aspera. Moreover, the muscles inserted into this surface readily pass (especially when, as is often the case in lower animals, the femoral part of the biceps is absent) from the one edge of the linea aspera, across the narrow flexor interval, to the other edge, so increasing the confusion and the difficulties of homological comparison. In the humerus, the ulnar marginal line maintains a nearly straight course from the ulnar condyle below, to the ulnar tubercle above, giving attachment to the subscapularis, latissimus dorsi, and teres major, and to the coraco-brachialis with the internal intermuscular septum. The radial marginal line of the humerus is distinct below, but ill-defined above the point at which it is crossed by the radial nerve; and neither the representative of this nerve nor the representatives of the deltoid or of the pectoralis, which occupy so much of the radial side of the humerus, have any connection with the femur.

An additional element of confusion is imported by the upper articular surface of the humerus presenting upon the post-axial side of the bone, while that of the femur is upon the pre-axial side. This difference is in accordance with the difference in the rotation of the two limbs; and it shows that the different direction of the corresponding surfaces of the two limbs does not depend, as has been supposed by some anatomists, upon a *twist in the shaft* of the humerus, but upon the fact that the *rotation* of the *whole* humerus upon the scapula is in an opposite direction to that of the femur upon the pelvis.

The anterior group is composed of the supraspinatus in the one limb, and of the iliacus in the other. The homology of these muscles has been pointed out by Mr. Mivart and Professor Flower; and I will not restate the arguments in support of that view. I have elsewhere given my reasons for thinking that they may be regarded as extensions respectively of the palmar and the plantar groups forwards, upon the anterior surfaces of the crests of the scapula and of the ilium; just as the subscapularis is an extension of the palmar group upon the inner surface of the scapula, and as the obturator internus is an extension of the plantar group upon the inner surface of the pelvis. The iliacus is accompanied by the psoas muscles, which are derivatives from the internal or trans-

versalis layer of the ventral part of the lateral muscle, specialised for the purpose of flexing the limb and also the lower part of the trunk upon the pelvis.

The three flattened, closely adjusted tendons which the obturator internus presents as it passes over the smooth surface of the ischium, have often attracted attention. They are the result of a division of the muscle within the pelvis into three flat fan-shaped portions. Of these, one, lying internal to the others (in a superficial plane when dissected from the inner side), arises from the inner surface of the angle formed by the horizontal and the descending portions of the os pubis. It is situated internally to the obturator vessels and nerve, and the arch of fascia which covers them, and therefore away from the obturator foramen. The tendon proceeding from this is the middle tendon of the three. The second division of the muscle, from which the lowest tendon proceeds, arises from the ossa pubis and ischii bounding the lower half of the obturator hole, and from the surface of the obturator ligament. The third division arises from the upper half of the obturator ligament, and from the ossa pubis and ilii above the obturator hole and beneath the brim of the pelvis. It extends upon the ilium nearly to the sacro-iliac synchondrosis. This tendon is the upper of the three. It occupies a groove commonly seen just below the spine of the ischium; and it sometimes presents a division into two for a short distance, giving the appearance of four tendons upon the internal surface of the muscle. The two last-mentioned divisions, which may be called respectively "pubischiatic" and "pubiliac", approach one another upon the obturator ligament beneath the first-mentioned, which may be called the "pubic" division. Having passed over the ischium, the tendons unite into one, the edges of which are joined above and below by the gemelli. If traced backwards from the trochanter, the tendon of the obturator gives off, first, in a penniform manner, the fibres of the gemelli; then, in like manner, those of the "pubiliac" and "pubischiatic" portions; and, lastly, in like manner, the fibres of the pubic portion.

The posterior group consists of the teres major in the fore limb, and of the pyriformis in the hind limb.

Thus it is seen that the deep ventro-appendicular muscles—the muscles passing from the girdles to the limbs—form sheaths over the shoulder and hip-joints, underlying and resembling the sheaths formed by the superficial ventro-appendicular muscles, though the latter take a wider range upon the trunk and upon the limbs.

It may be remarked, in passing, that the striking difference in the physical characters of the psoas and iliacus as compared with the muscles on the exterior of the girdles, the gluteus maximus and the deltoid more particularly, and which is caused by the layers of areolar tissue penetrating the latter and investing their bundles, appears to have no relation to the action of the muscles, but to the sheltered position of some as compared with others. It is an interesting illustration of the provision for, and the adaptation to, external contingencies, similar to that of the structure of the liver and kidneys on the one hand, and of the mammary gland on the other.

There remain to be considered the connections of the girdles with the middle, or internal oblique, stratum of the ventral division of the lateral muscle, constituting the "ventro-scapular"* and the "ventro-pelvic" muscles. The pelvic girdle retains its primitive position as an ossified intermuscular septum in the ventral part of the lateral muscle, and extends through the entire thickness of the muscle, all the strata of which are extensively attached to it, as already mentioned. The part beneath the crural arch is indeed the only region in which this is not the case.

The same may be said with regard to the shoulder-girdle in the Fish, where the coracoids and epicoracoids† meet in the middle line, and intercept the deeper strata of the ventral muscle on their way to the hyoid bone and the head. In most other vertebrates, however, the sternum intervenes between the girdles of opposite sides, and intercepts the middle parts of the ventral muscle. Where this is the case, and where the coracoid reaches the sternum, a portion of the ventral muscle is often continued on from the sternum or the ribs to the coracoid, forming the sterno- or the costo-coracoideus, which is a serial continuation of the intercostals. The only approach to a muscle answering to this in connection with the pelvis, and that in a very distant manner, is the ischio-coccygeus or coccygeus. When, as in Man, the coracoid is short, and the epicoracoid or clavicle takes its place as the medium of connection between the girdle and the sternum, the representative of the costo-coracoid muscle runs on to the clavicle and forms the subclavius. Forasmuch, however, as the clavicle is in a plane superficial to that of the coracoid, so is the subclavius in a plane superficial to that of the costo-coracoideus. Indeed it is nearly on a level with, and is in some animals blended with, the pectoralis minor; and it is now and then continued upon the surface of the supraspinatus. In some animals, the hyoidean muscles, which are also parts of the deep ventral strata, are likewise attached to the clavicle; and traces of this connection are shown in Man by the fascial band which attaches the tendinous intersection in the omo-hyoid to the clavicle.

Whichever of these (costo-coracoid or costo-clavicular) portions of the ventral muscle, connected with the girdle on the mesial side of the glenoid cavity, is present, it is separated by the vessels and nerves of the limb from the costo-scapular portion of the ventral muscle; *i. e.*, the portion which passes to the girdle on the lateral side of the glenoid cavity, and which is ordinarily named serratus magnus. This latter muscle spreads upon the chest in proportion as the scapula grows downwards over the ribs; and the prolongation both of the angle of the scapula and of the muscle in this direction have relation to the growth of the spine of the scapula forwards. The increased power which the overhanging spine or acromion gives to the deltoid in Man necessitates the leverage which the long inferior angle of the scapula affords in him to enable the serratus to combine effectually with the other muscles in fixing the scapula during the effort of raising the arm. The necessity thus arising for combining the serratus, and especially the lower part of it, in action with the deltoid (the importance of which is forced upon our attention in the cases in which from paralysis of the serratus this combination fails), is probably the reason for the muscle being supplied, even to its lowermost part, by a branch from the brachial plexus. Some such explanation is required for this departure from the usual rule, that a muscle is supplied by the nerves of the region which it covers.

It will not fail to be remarked that some of the fibres of the serratus are continuous with those of the external oblique, and that this indicates that the two muscles belong to the same stratum. It indicates, perhaps, rather that our divisions into strata and otherwise are, after all, to a considerable extent, artificial, and must not be too strongly insisted on. Though thus connected with the external oblique the position and general relations of the serratus are deep, and connect it rather with the deeper, or internal oblique, layer of the ventral muscle.

The serratus in many of the lower animals is divided into two or more parts; and in man the upper one or two digitations are often more or less separate from the remainder; and the upper one is supplied by a separate cervical nerve, while the second digitation and the rest of the muscle are supplied by the special serratus nerve, misnamed "external respiratory". In a specimen lately dissected the muscle was in two parts; an upper, with three digitations, of which two were derived from the second rib; and a lower with seven digitations. The upper portion was inserted beneath the upper angle of the scapula and into the upper half of the dorsal edge; and the lower portion was inserted into the under surface of the inferior angle. The length of the fibres increased from above downwards but not quite in regular sequence. Those of the upper portion were much shorter than those of the lower portion. The fibres of the first digitation measured 3.5 inches; of the second, 4; of the third, 4.5; of the fourth, 6; of the fifth, 7; of the sixth, 8; of the seventh, 8.4; of the eighth, 8; of the ninth, 7.6; of the tenth, 7.5. The fibres of the seventh digitation being the longest, and those of the first being the shortest, we may infer that the greatest range of movement of the scapula effected by this muscle is in the axis of the seventh digitation, and that the least range of movement is in the axis of its first digitation. The lower portion of the muscle is commonly a large thick mass of fibres converging in such a manner that their action is concentrated upon the lower angle of the scapula. They thus combine most effectually in fixing the scapula, and preventing its rotation when the deltoid contracts in the action of raising the arm.

The continuation of the costo-scapular, or serratus, portion of the ventral muscle, forwards upon the cervical transverse or costal processes, with a slight interval scarcely perceptible in many animals, constitutes the levator scapulæ. The serial homologue of this muscle, connected with the pelvis, is found in the quadratus lumborum.

The omohyoideus is an interesting reminder, and it is the only one usually met with in mammals, of the extensive connection which the middle layers of the ventral muscle, passing backwards from the hyoid, have with the shoulder-girdle, in the lowest vertebrates. The tendon which divides it into two parts is on a level with the inscription not unfrequently met with in the sterno-hyoid, and is apparently, like that inscription, a derivative from the intermuscular septum, which forms an element in the portion of the lateral muscle from which both these muscles are derived. Its elongation, conversion into tendinous tissue, and fascial connection with the clavicle, together with the bend or

* The word "scapular" is here meant to comprise the coracoid as well as the scapular part of the girdle.

† By "epicoracoids", I mean the bone or bones developed upon the surface of the coracoids, to which the term "interclavicle" has been applied by Parker, in his very valuable monograph on the *Structure and Development of the Shoulder-girdle and Sternum in the Vertebrata.*

genu made at the part, are analogous to the tendinous conversion and connection with the hyoid, which we are familiar with in the middle part of the digastricus of Man. The special purpose of the arrangement, in this instance, is probably to afford an additional provision against a retraction of the tissues, and the consequent pressure upon the subjacent venous trunks, during strong inspiratory and other muscular efforts.

The fixity of the pelvic basis of the lower limb as compared, or rather contrasted, with the mobility of the scapular basis of the upper limb, is attended with a corresponding modification in the muscles—the ventro-pelvic muscles—which connect it with the deeper strata of the ventral muscle. They take origin from it as the fixed point. I have mentioned that the quadratus lumborum is the nearest serial homologue to the levator scapulæ, and that the coccygeus presents some claim to be regarded in a like relation to the costo-coracoideus or to the subclavius. The ilio-caudalis in tailed animals is the representative in this region of the serratus magnus; and the vessels and nerves to the hind limb, in such animals, take their course between the ischio-caudalis (*alias* coccygeus) and the ilio-caudalis, just as those to the fore limb take their course between the costo-coracoid, or the subclavius, and the serratus.

CLINICAL LECTURE

ON THE

RELATION BETWEEN MENSTRUATION AND THE CHLOROSIS OF YOUNG WOMEN.

By WILLOUGHBY FRANCIS WADE, F.R.C.P.,
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GENTLEMEN,—The patient whom you saw last week, and the notes of whose case I have just read to you,* presents a fair average example of the disease which is called chlorosis, or, popularly, green sickness. Both these names are derived from the greenish hue which the skin of many of these persons presents. This is but slightly marked in our present case, and in many others which are still no doubt essentially of the same nature as chlorosis, the skin is simply pallid. This difference of coloration probably depends somewhat on climatic causes. We know that amongst Negroes the degree of blackness is not directly proportioned to the temperature, but is influenced by other causes, some of which are probably hygrometric. Now in Birmingham, which is bracing in its climate, we do not often see highly developed cases of chlorosis; but I well remember that, when I was a pupil at the Derby Infirmary, they used to be common enough. The coloration, when it exists, is due to deposit in the skin of pigment found floating free in the blood, which ought probably to be used, instead, in the formation of red corpuscles, the diminished proportion of which corpuscles is one of the most essential elements of chlorosis—a fact which has been analytically proved by Andral and others. Having brought the subject of melasmatic coloration before you lately, I need not now dwell on this part of the subject, further than to remind you that in every case anæmia *plus* melasma is always more serious and more intractable than simple anæmia. It is also well to remember that a complexion of this kind often leads patients, and sometimes practitioners, to imagine the existence of hepatic disorder where none exists.

As you knew last week that it was my intention to-day to lecture on this subject, you have no doubt taken my advice and read it up in your text-books. I shall not, therefore, weary you by a repetition of the usual phenomena of this complaint, but occupy the time in discussing some points which you will not have found there satisfactorily treated. These points are, the etiology of the disorder and its relation to menstruation. The fact that this disease is most common about the commencement of puberty, and for some years afterwards, long ago led to the supposition that there was some connexion between it and the menstrual function; and, inasmuch as in many of these young women this function is but irregularly performed, it has been supposed that chlorosis was caused by this irregularity. Others again, struck by the undoubted fact that in some of the worst cases there was no such irregularity, have concluded that the origin of the disease was wrapped in profound mystery. In one of the latest medical text-books (Niemeyer's) we find this passage: "In females between the ages of fourteen and twenty-four, chlorosis is one of the most common of disorders. It is very natural, then, to ascribe the disease to the effects of those processes which are going on in the bodies of young girls at the period of puberty; but we are still ignorant as to what physiological connexion exists between these two conditions." This ignorance I hope to dissipate.

About forty years ago, Dr. Marshall Hall published a medical work which is to my mind quite as sensational as any of the works of an at present very popular authoress. At that period it was the fashion to practise bleeding from the arm with the same recklessness and disregard of common sense as some persons now prescribe alcohol and tonics, and perhaps, on the whole, with not much more deleterious effects. Amongst other results produced by loss of blood, he noticed head-symptoms such as we see in chlorosis—photophobia, tinnitus aurium, headache, etc. But a much more curious circumstance was, that he discovered that another bleeding very often entirely cured these very symptoms which had been produced by the former one. This relief, however, was only temporary: after an interval, all the symptoms returned with increased intensity. This relapse, he found, strangely enough, might in its turn be cured by yet another venesection; and so on—bleeding, symptoms, bleeding, relief—for several successive repetitions. But after each bleeding the interval of relief was shorter; and, on each return of the symptoms, they were more intense, till at last bleeding failed to afford any relief, and the patient died—bled to death as surely as animals are bled to death by the butcher. Now you will have observed that in our patient, as I ascertained by minute inquiry from her and her mother, each menstrual flow produced just the same relief to her head-symptoms that venesection produced to those of the patients whose histories are given by Marshall Hall. This is not surprising, because this discharge contains red corpuscles in large quantities, altered to a certain extent, it is true, but still red corpuscles. Now it was shown by Andral that most of the symptoms, if not all, produced by hæmorrhage, depend upon the loss of the red corpuscles, and the consequent loss of their effects upon the system. This he proved by injecting red corpuscles into the veins of animals which had been bled, and by finding that their injection without that of any of the other constituents of the blood removed the symptoms which had been developed by the bleeding.

It is proved, then, that this girl, who is suffering from deficiency of the red corpuscles of the blood, and has certain unpleasant symptoms arising from that deficiency, is relieved by the menstrual discharge, just as she would be by a small bleeding; and, secondly, that in a little time the symptoms return, just as they would in a person suffering from loss of blood, who had been yet relieved by a small bleeding. I can assure you, from careful examination during the last twenty and more years of a very large number of cases, probably several hundreds, that what happens to this girl as a consequence of menstruation invariably happens in girls who are suffering from chlorosis; but you will not be able to corroborate this statement by casual, off-hand, or careless examination.

Here, then, we get a clue to the real relation between menstruation and chlorosis. If it be true, as above stated, that menstruation acts as a bleeding would do upon the symptoms of anæmic persons, may it not act as a bleeding would, and produce that anæmia in the first instance? It not only may do so, but it does do so; and this not when it is apparently excessive, as in disease called menorrhagia, but even often when it is moderate in amount, or really, judged by ordinary standards, scanty. It is very strange that so able an observer as Marshall Hall should not have discovered this. In a very excellent book *On the Constitutional Diseases of Females*, he writes: "There is, indeed, a remarkable similarity between the effects of loss of blood and the state of bloodlessness which obtains in chlorosis. The general symptoms; the tendency to affections of the head resembling arachnitis, and to affections of the heart resembling organic affections of this organ; the condition of the general surface, and of the capillary and larger circulations; the proneness to œdema and serous effusions generally, are, indeed, identical in both these conditions." There are, however, many circumstances that have thrown observers off the scent.

In the first place, a belief, or rather prejudice, exists, that chlorosis is very common in girls who have never menstruated. Now, it is not true that it is much commoner in such girls than it is in boys. It very rarely occurs without obvious and sufficient cause in such girls. Some years ago, I examined the records of forty-six cases of my own with reference to this point. Of these, seven had never menstruated; but two of the seven had suffered from repeated attacks of epistaxis, the cause of which could not be determined. One, as well-marked a case of chlorosis as I ever saw, was a well-developed girl aged 16, who had always enjoyed good health till, falling accidentally, she struck her nose, and had epistaxis to the amount of ten or twelve ounces. Gastric irritation and some of the cerebral symptoms of hæmorrhagic reaction followed, and she fell into a chlorotic condition, which, when I saw her, had lasted for two months. The fourth case was that of a girl who had been nearly drowned some time before, and had never been well afterwards. This is no uncom-

* I do not consider it needful to burden the space of the JOURNAL by the details of an ordinary case of chlorosis, and therefore omit them.

mon sequela of semi-drowning. I remember very well a boy in whom chlorosis was developed in just the same way. Some of you, indeed, have lately seen a little patient of mine who was revived by the energetic and skilful exertions of Mr. Rickards (the resident pathologist) a short time ago, and who remained afterwards, and still (June 1872) remains, in an enfeebled semifatuous condition, from which I think it is quite possible he may never completely emerge. In the fifth case, chlorosis had followed protracted chorea. In the sixth, the patient had all her life been feeble and delicate. In the seventh, there was no ascertainable cause.

We see, then, that chlorosis is by no means common in girls before menstruation; probably no commoner than in boys, except in so far as their more tender and delicate organisation may fully explain.

The first three cases in the preceding list are highly instructive. In two, successive small bleedings had produced the chlorotic condition. Does not this precisely bear out my views? If several successive small bleedings from the nose can produce it, why are we not entitled, when we see it follow several successive small discharges of blood from the uterus, to assume that these also have produced it? The third case, also, is of great importance. Here, a well-developed girl, aged 16, was brought into the chlorotic condition by a single hæmorrhage from the nose. I have frequently seen chlorosis follow a single menstrual discharge, and one which was considered to be a moderate one. But upon this point, a few remarks. There is only one way of really ascertaining whether any hæmorrhage is a large one or not; that is, by the effect upon the patient. Any hæmorrhage which produces certain symptoms, and is not soon followed by replacement of the blood lost, is a large one; whereas a hæmorrhage which produces no inconvenient results is a small one. This is the only safe way for you as practitioners to view this question. We often see a man, red-faced, plethoric, full-blooded, who tells us he loses, every day or so, a considerable quantity of blood from piles—a much larger quantity, for example, than most of us would like to, or could safely lose. It sometimes seems so large that we are disposed to say "it must be injurious", although we can see no evidence that it is. Ultimately, indeed, even in such a case, it may become so; but till you have distinct evidence that it is becoming so, be very cautious how you attempt to stay it, except by diminishing the quantity of ingesta, or by purgatives. On the other hand, if a patient come to you pallid, and with other symptoms of anæmia, and you find that he is in the habit of losing what, judging by any other test than his anæmia, you would consider a small and trivial quantity of blood, more especially if you can discover no other disease to account for his condition, lose no time in adopting the most efficient means of suppressing this small hæmorrhage.

Now, all this has a very direct relation to our present proper subject. We meet with women who all their lives have most copious monthly discharges, and seem certainly none the worse, but rather better for them. We meet, on the other hand, with very many girls who, after a moderate primary menstruation, exhibit symptoms of anæmia; and these increase after each successive menstruation, though these may be, and often are, smaller in amount. The period of relief also becomes shorter.

These remarks, you see, are intended to meet the objection that chlorosis cannot be the consequence of menstruation, because the menstruation which has preceded it, and which I take to be the cause of it, has been small in quantity.

In some cases, however, menstruation is established, and proceeds in an orderly and regular manner for some, even it may be for many, months; and very rarely, but still sometimes, without any apparent excess of menstruation or other obvious cause, symptoms of chlorosis show themselves. Well, it is not difficult to understand that, if the system have been just able to reproduce in the intervals the blood lost at each successive period, any slight disorder which at all impaired the nutritive powers should destroy the balance which had been previously only just maintained between loss and repair.

A much more common clinical history given to us is that, at a certain menstrual epoch coincident with the commencement of the chlorosis, the girl had caught cold, that the flow had been suppressed, and that this was the cause of her condition. Now, I will not deny that it does sometimes happen that the menses may be suddenly suppressed in this way. I have seen a few—but very few—such cases; and the symptoms produced by the suppression are very serious. But I have not seen that anæmia was one of them. On the other hand, I have minutely investigated great numbers of these alleged cases, and have invariably found that a diminution of the flow was the only symptom that had been observed; in a large number of them—indeed, the greater proportion—there was no other evidence, either direct or indirect, to show that the restricted discharge had resulted from any exposure to cold or wet, or from any catching of cold. The statement which is made to us, as if it were the statement of a fact, is merely the statement of an opinion. The menses have been scanty; and the girl, or more frequently her mother, knowing no other explanation, *supposes* that she *must have* caught cold. The constancy with which this statement can be exposed by searching cross-examination is really quite ludicrous.

These cases, some of them, come under the category which I previously described. But in a much larger number the real explanation is exactly opposite to the supposed one, and in complete accordance with the theory which I have been explaining to you. The true clinical history is this. The menstruation immediately preceding the first scanty one has, from some accidental cause—dancing, riding, travelling, or some over-exertion or unusual excitement—been excessive; that is, as compared with the patient's usual habit. The scantiness of the succeeding period is what is called "an effort of nature" to diminish the ill effects of a renewed hæmorrhage upon a system which had not completely recovered from a previous one. And I may here remark that, as a rule, the worst cases of chlorosis are those in which the energy of the reproductive organs is not to be suppressed by the incapacity of the system at large to support the tax thrown upon it; in those cases, in short, in which the menses, in spite of the bloodlesness of the body, continue to reappear month by month. That the blood-making organs should at first fail, but subsequently be able to respond to the unusual tax upon them which is caused by a first menstruation, is quite in harmony with the physiological laws governing other organs. If we suddenly call upon a muscle for unwonted exertion, the muscle either fails to respond, or afterwards suffers. But the same muscle may, by a sufficiently gradual exercise, be well able to expend not only that, but a much greater amount of force, without inconvenience at the time, or unpleasant consequences afterwards.

I will mention here, what ought perhaps to have been mentioned earlier, one reason why the profession have supposed chlorosis to precede menstruation more frequently than it really does. Many mothers, when asked whether their daughters "have ever been regular"—which is the usual way of putting the question—will answer "No;" meaning thereby that the function has never been regularly established. You must, if you desire the truth upon this point, put the question in a more precise manner, and ask whether there has ever been any menstrual discharge whatever. You will then, if you insist upon a precise answer, get the precise truth. It is very important, in examining patients, to let them tell their own tale, but it is equally important to cross-examine them upon their statement. They are so much in the habit, and especially so in these cases, of mixing up fact and opinion, that you will not in any other way arrive at the truth. The random way in which many ill-educated persons—and these are to be found in all classes of society—answer even vital questions, is often little short of astounding. It is worth mentioning that even in very many women who are not at all chlorotic, the menstrual flow produces just the same effect as any other small bleeding would do—viz., a feeling of lightness and elasticity.

I have now laid before you with sufficient fulness my reasons for thinking that the following propositions are just.

1. Chlorosis occurring in young women who have menstruated at all is commonly the result of the loss of blood by the menstrual discharge.

2. When amenorrhœa occurs in these persons, it is a consequence and not a cause of this anæmia.

3. Both primary and subsequent menstruations produce on the system the same effects that would be produced by any other hæmorrhage of equal amount.

These views are not only interesting to the abstract physiologist or pathologist, but they have a very distinctly practical bearing.

I can give you no better advice upon the general principles of treatment than you will find in the text-books generally. The patients generally soon recover with rest, good diet, and steel. Where, as sometimes you may find, that steel alone will not cure, you may combine with it some preparation of manganese; or, what is often better, substitute arsenic. Constipation is a very common result of hæmorrhage; it was so in the third case of epistaxis before mentioned; it is not, therefore, a matter of any surprise that it should be, as it is, common in chlorosis. Here it seems to depend in a great measure upon torpor of the colon. On this account aloes is often a useful purgative, and so is strychnia. If you should find, which you probably will not, that the former drug increases the menstrual flow, you will substitute one that does not. This observation is not superfluous, since we find that so judicious an authority as Dr. Wood says: "If amenorrhœa exists, aloes is the appropriate laxative," meaning thereby to endorse the view that aloes excites the ovario-uterine system. You will scarcely be disposed to follow the advice which Dr. Aitken gives on the authority of Vogel. "Where a high degree of serous plethora exists, and produces violent excitement of the vascular system, palpitation of the heart, and congestion of the head, venesection may be practised. It not only acts

as a sedative, but aids the radical cure of the disease, inasmuch as it causes the subsequently administered ferruginous preparations to be borne more easily. Both general and local blood-lettings may be used; but the blood must be taken in small quantities, a couple of ounces at a time being quite sufficient."

In such a case, you should diminish or omit the iron for a time and use morphia or bromide of potassium, with chloral, or valerian, or stimulants in small quantities. Instead of seeking to increase the quantity of the menstrual discharge, you will rather aim at diminishing it; particularly in cases where it keeps up in quantity whilst the patient is becoming more and more chlorotic. This diminution we may effect by keeping the patient in bed or on a couch for a couple of days before menstruation begins, and also whilst it is in progress; giving, at the same time, some bromide of potassium till the period is half over, and then using extract of ergot. Digitalis in some cases checks the flow, and this may be used instead of ergot when this drug seems to have no effect.

REMARKS ON A CASE OF BRIGHT'S DISEASE,

ATTENDED WITH CARDIAC THROMBOSIS AND HÆMORRHAGIC INFARCTIONS OF THE SPLEEN, LEFT KIDNEY, AND LUNGS.*

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If I were asked to enumerate those diseases which are of most interest to the pathologist and clinical physician, I should certainly include Bright's disease in that category; for every fresh case that comes under our notice offers us some new lesson—shall I say some new problem for solution?

The following case has proved a very instructive one to myself; and my object in bringing it before my professional brethren is to ascertain from them whether the explanation I propound of the causes and sequence of the complications which arose towards the termination of the case meets with their acquiescence.

I will read the notes which have been preserved of the case.

William Layton, aged 43, stonemason, living at Cambridge, was admitted into Addenbrooke's Hospital, under my care, April 16, 1872. He was a well-built man, his cheeks were a little dusky, and the capillaries on them were enlarged. He had been intemperate. On admission, he was unable to lie down in bed; the respiration was wheezing, rapid, and laborious. He at times perspired a great deal.

The following was elicited from him with regard to his previous history. Six years ago he had an attack of acute rheumatism; four years after that he had another; one year ago, he had a third attack; and last Christmas he was ill with the same disease for the fourth time. Usually his ankles, shoulders, arms, and back, were painful. He was thirsty during each attack, but says he never laid in bed more than half a day at once. At times his breath had been short for the last six years—*i.e.*, ever since he had the first attack of rheumatism. Since Christmas he had been an out-patient of the hospital. His feet were swelled, and his breath was short. He had pain in his back, shoulders, and arms. About two months ago he was much better, but five weeks ago his breathing and the swelling of the legs became as bad as ever, but the only pains he had were flying pains about his back.

On the night of his admission, he complained of pain on the right side over the lowest rib. His legs were swollen, pitting considerably on pressure. Temperature 98.2; respirations 52; pulse 96, in the minute.

Physical Signs.—On the left side in front there were prolonged expiration and medium-sized crepitation. Percussion was clear down to the upper border of the fourth rib. Behind at the left base there was largish crepitation; percussion was good. At the right base, posteriorly, there was rather finer crepitation, but no dulness on percussion. The heart's action was extremely irregular, but not very quick. No bruit could be heard, but a slight friction-sound was audible over the apex.

The urine was acid; its specific gravity 1033; and it was loaded with buff-coloured lithates. It was very scanty, and contained a large quantity of albumen, becoming almost solid with heat and nitric acid. It contained granular casts. He was ordered a slice of meat and bread for diet, with three ounces of gin; and the following draught to be taken four times a day.

℞ Potassæ nitratis gr. xv; spts. ætheris nitrosi ʒss; tinct. scillæ mxx; decoct. scoparii ad ʒiss. M.

April 18.—The sputa for the first time were in parts uniformly dull red, like the sputa of pulmonary apoplexy. In other places the sputa were streaked with blood and tenacious. The patient passed very little urine.

April 19.—Sanguineous sputa still continued. The left eyelid drooped.

April 21.—Numerous granular casts were found in the urine—one with about ten fat-globules on it. The sputa still contained blood. The pulse was very feeble, that in the right wrist being the stronger of the two radial pulses. The hands were purple and cold. The pupils were equal. I ordered him to be cupped to the extent of five ounces; but the House-Physician could only obtain three-and-a-half ounces; the blood was dark and very coagulable, and would not flow freely.

April 23.—He passed a better night. His breathing was easier. No sanguineous sputa were expectorated to-day. He had wandered a little at times during the last four days. Two ounces of blood were removed by cupping over the chest behind. The percussion-note was equal on the two sides. There was crepitation on expiration, especially on the left side; the crepitation being larger at both bases. Respiration was shallow. The cardiac sounds were scarcely audible. There appeared to be no increase of cardiac dulness.

April 22.—He still wandered at times, and was very sleepy. There was no expectoration.

April 23.—He was still very drowsy. He had wetted his bed. A few gangrenous spots were visible on the back of the right hand. On the evening of this day an attempt was made to examine the eyes with the ophthalmoscope, but the patient became violently delirious.

On the evening of the 25th his hands were warmer. His mind still wandered, but he was quiet in other respects. He died in a comatose state at 9 A.M. on April 26th.

Post Mortem Examination, April 27th, twenty-five hours and a half after death.—There was a considerable amount of yellow serum in the right pleural cavity. The left pleura was adherent in front and at the base. The amount of fluid in the pericardium was normal. On the front of the heart, near the apex, there was a patch of shaggy lymph, about three-fourths of an inch in diameter. The heart was enlarged, and there was a superficial deposit of fat. The muscular tissue was softer than natural. The wall of the left ventricle was much thickened, and the cavity enlarged. The free edge of the mitral valve was a little thickened. The left auricular appendage contained an *ante mortem* clot, which was breaking down in the centre into a granular *débris*. The right ventricle contained a large *ante mortem* clot, which extended through the right auricular-ventricular opening into the right auricle. There was little, if any, hypertrophy of the right side of the heart. The right kidney was congested and slightly enlarged; the left was also in the same condition. In the left kidney, small hæmorrhagic infarctions were seen, both on the surface and on making a section. The capsule of the left kidney was adherent, and the surface rather finely granular. Granular casts were squeezed out of a cut portion. There were no hæmorrhagic infarctions in the right kidney. In the middle and lower lobes of the right lung there were patches of circumscribed pulmonary apoplexy. In the lower lobe of the left lung there was diffused apoplexy. In the spleen, there was a yellowish-white wedge-shaped fibrinous mass, the result of an infarction. It appeared to be of some standing. The liver was nutmeggy.

Remarks.—There can be little doubt but that the starting point of the mischief in this case was rheumatism; and it is highly probable that the patient increased his tendency to this disease by his intemperate habits. Rheumatism and beer-drinking in excess are acknowledged to be two most important factors in the genesis of Bright's disease; and, in my opinion, they laid the foundation of kidney-disease in my patient. Of what duration the renal affection was, I am unable to say, as the patient was not under my care previously to his admission as in-patient.

You are all doubtless aware that it has been shown by Dr. George Johnson that the muscular coat of the small arteries throughout the body becomes hypertrophied in cases of chronic Bright's disease, and that this hypertrophy is due to these blood-vessels contracting so as to resist the flow of impure blood, or, in other words, of blood charged with urea, and deficient in its normal constituents, to the tissues, it being one of the functions of the small arteries to regulate the amount of blood supplied to an organ or tissue. In consequence of these blood-vessels impeding the onward flow of the blood, the left ventricle of the heart has to act with increased energy. We have then the small arteries opposing the onward flow of the blood, and the left ventricle of the heart endeavouring to overcome this obstacle, and, as a result of the increased work thrown upon the latter, it becomes hypertrophied.

What happens next? It is not difficult to see that, as a result of what I have just described, the blood-current must become slower;

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* Read before the Cambridgeshire and Huntingdonshire and East Anglian Branches, at Ely, on June 28th, 1872.

and two conditions most favourable for the formation of clots in the heart are present; viz., a rough surface, furnished by the trabecular work of that organ, and retardation of the blood-current. Of all parts of the heart, the appendages of the auricles are the most frequent seats of thrombi, owing to the blood being with great difficulty completely expelled from them; and in the notes of the necropsy of the case, it is stated that the left auricular appendage contained an *ante mortem* clot, which must have been of some age, as it had undergone softening in the centre. In consequence of the thrombus in the left auricle breaking down into minute puriform particles, the latter became mixed with the blood which flowed into the left ventricle, and were sent during its systole into the systemic circulation. When these particles passed into vessels which were too minute to allow them to escape, they more or less completely plugged those vessels, and in this manner it is extremely probable that the splenic and renal infarctions were produced, as also the gangrenous spots on the back of the right hand. The peculiar wedge-shape of the splenic infarct, with the apex of the wedge towards the centre of the viscus, was due to the mode of distribution of the vessels, and its yellowish-white appearance to the colouring matter of the blood having been withdrawn from it, or to the decomposition of the hæmatine, and to the fibrine having undergone fatty degeneration.

The kidneys were larger than those generally met with in granular degeneration of these organs; but whether this condition, and the large quantity of albumen which the urine contained during life, were partly produced by the renal infarctions, I am unable to say.

I have now endeavoured to account for the hypertrophy of the left ventricle, the *ante mortem* coagula in the heart, and the hæmorrhagic infarctions of the spleen and kidney. I now proceed to consider the mode in which the pulmonary apoplexy was produced.

It has been shown by Virchow and others that, in all cases of pulmonary apoplexy, whether secondary to valvular disease of the heart or not, the first step in the genesis of the morbid change is embolism of a minute branch or branches of the pulmonary artery. Virchow has proved this experimentally, by introducing particles of fibrine, muscle, and elder-pith into the jugular veins of dogs, and examining the lungs after death, when he found that these foreign bodies had blocked up branches of the pulmonary artery, and produced, among other results, hæmorrhagic infarctions beyond the points obstructed. You will remember that, on *post mortem* examination, *ante mortem* coagula were stated to have been found both in the right auricle and ventricle; in fact, the thrombus from the auricle extended through the auriculo-ventricular opening into the ventricle. Well, it is my opinion that minute portions of these clots were washed into the pulmonary circulation, just as the granular matter found its way into the systemic circulation from the left side of the heart; and I would here remark that the circulation through the right side of the heart was sufficiently vigorous for the blood to be sent to the minutest ramifications of the pulmonary artery. When, therefore, minute portions of these clots arrived at pulmonary arterioles too minute to allow them an exit, they produced embolism and subsequent extravasation of blood.

The mode in which the hæmorrhage is produced subsequently to the plugging of the vessel is variously interpreted; but the theory of Ludwig, founded on the "influence which the contraction of an artery has upon its capillaries", appears to me to be by far the most feasible explanation. I will quote his words from the American translation of the seventh edition of Niemeyer's *Text Book of Practical Medicine*, vol. i, p. 156: "Tension within the artery below the point of constriction is diminished, since a liquid flowing through a narrow tube loses more of its impetus than in flowing through a wide one. But we must not infer from this that, when an artery is constricted, the contents of its capillaries are lessened, and that the parts which they traverse grow paler. The sluggishness of the stream thus produced in the capillaries rather has the *effect of allowing the heavy blood-corpuscles to collect and become crowded together;* now, as two or more blood-corpuscles, if brought into contact, are apt to become permanently adherent, the blood itself can form a plug capable of closing the capillaries. Such an occurrence, which converts the capillaries into blind appendices to the artery, must cause an increase in its internal pressure." "Let us add," says Niemeyer, "that, in consequence of the pressure, which, after the stoppage, is as severe in the capillaries with their delicate walls, as in their afferent vessels, a rupture of the distended walls and an escape of blood ensue..... The utmost that can be advanced against the accuracy of this explanation is, that the artery leading to an infarction not only is narrowed, but entirely closed. Such an objection, however, is untenable. The infarction of an embolus, which we find usually takes place at the bifurcation of an arteriole, very rarely produces absolute closure of it at first, but merely causes in it more or less obstruction. Afterwards when the infarction has become established—an event requiring but little time—fibrine is deposited upon the embolus, and closure of the vessel becomes complete."

There is only one other point on which I will say a few words, and that is connected with the treatment of the case. A day or two after the patient was admitted, and when I was going round the wards with my pupils, I found the man's face of a purplish hue and bathed with perspiration; he was gasping for breath, and the pulse at the wrist could scarcely be felt. His extremities were cold. He was also expectorating bloody sputa. The heart's sounds were scarcely audible. What was I to do under these circumstances? One thing was quite certain; viz., that the man would die unless I could speedily relieve him. It occurred to me that the immediate cause of his distress was a surcharging of the right cavities of the heart, producing a state approaching to paralysis of that organ, and that it was just possible that cupping might relieve him. On the other hand, I had to contend with this difficulty; viz., that if I cupped him I should increase the coagulating power of the blood, and thereby the tendency to the formation of clots. I, however, asked the House-Physician to cup him, and the result was most satisfactory, for, after the operation, he was able to lie down in bed, and breathed more easily. The patient expressed himself as feeling decidedly relieved. He lived four days longer.

THE SPECIFICITY OF ACUTE DISEASES.*

By W. AINSLIE HOLLIS, M.D.,
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MORPHOLOGY and physiology are so intimately connected together in all organic beings, that it is doubtful (as Mr. H. Spencer has shown) whether any functional change can take place in an organism without a corresponding alteration of its structure; and modern science would lead us to assume that, whenever we find a change in the vital operations of an organ, there is, or has been, a corresponding change in its textures, whether this be apparent or not. Starting with such a doctrine, it is easy to perceive how the various phenomena accompanying the loss of health have been divided and subdivided according to the method of their serial development, and how the present system of classification of diseases has arisen. It appears to me, however, that there now reigns a large amount of confusion on the subject of the differentiation of diseases, from our knowledge being based rather upon hypotheses than on facts. What I mean by this statement, I now hope to explain by reference to the so-called specific diseases. Such diseases are supposed to originate in the system by the introduction of a "material principle, the product of a specific morbid process" (*Traité de la Contagion*, par Dr. Anglada, Paris, 1853, t. ii, p. 12), and many clever and able writers have upheld this doctrine. The latest investigations of Chauveau, Sanderson, Bastian, and others have failed to show that there exist any specific elements in the product of such lesions which differ in form and external characters from analogous elements met with in simple inflammatory lesions. Therefore, if there be a difference in the two (to quote M. Chauveau's words) "it must be in their intimate qualities and active properties." Our only means of investigating such "intimate qualities and active properties" is to observe the results of the introduction of such specific agents into the animal economy, and to see whether there be an agreement between the phenomena thus produced; and, if so, whether it be only general or differing with different agents. Such investigations can only be obtained by actual experiment; and, as we are mostly debarred from making such on the human subject, and experiments on the lower animals are open to many great objections, it will probably be a long time before this difficulty is solved. There is, however, one source of information open to us on this subject; and that is the process of vaccination. If it can be shown that on the introduction of vaccine into the human frame a progressive series of phenomena arises, definite and similar in all cases, and yet that this series invariably differs from all others induced by other agents, we shall have a strong argument in favour of the specificity of diseases in general. If, on the other hand, no changes take place after vaccination, which differ from such as may be induced by inoculating the system with another organic poison, then the hypothesis of specificity (as far as vaccination is concerned) is not yet proven. Before we consider the process of vaccination, however, it may be as well to review the subject of inflammatory skin-diseases generally, and to ascertain in what way, if in any, the typical vaccine vesicle differs from all other skin-eruptions. In tracing the course of hyperæmic or inflammatory skin-affections, we cannot

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* Read before the Abernethian Society.

well overlook their general resemblance in one signal respect—namely, in the sequence of the phenomena accompanying their tissue-changes. Let us take, for instance, as an example, the pathological effects of a common burn on the cuticle. The first objective symptoms are redness and slight swelling of the integuments; in other words, an erythema is produced. These symptoms are of short duration, the epidermis is detached, and the inflammation ceases. This sequence of events is similar whatever be the cause of the erythema. If, however, the action of the heated substance be more violent, or the tissues be left to its influence for a prolonged period, a secondary group of phenomena begins. The epidermal layers of the integument are raised from the deeper portions by the intervention of a layer of serum. A bulla or vesicle is formed. This effusion of lymph (as it is called) is due to the transudation through the capillary walls of the liquid and (to some extent) corpuscular elements of the blood. As, in the first instance, it would be almost impossible to determine from the symptomatology of the erythema what had induced it, so, in the second case, were one ignorant of the cause, there would be nothing in the appearance of the bulla, nor in the manner of its local formation, to justify a guess at its etiology. A physician, however, would be in a position to assert that the bulla, if rapidly produced, had been preceded by a local hyperæmia of the skin, and he might further safely affirm that such a bulla had never contained pus; in so doing, he would (unconsciously, perhaps) admit that there was a definite sequence in such pathological tissue-changes.

If we pass on to the pustular form of eruption, we shall find that there are many reasons for believing this to be due to the reaction of the tissues after a still more prolonged or severe irritation than that necessary to induce the vesicular stage. The ordinary vesicular skin-eruption named eczema may be produced equally by the action of external irritants (Neligan's *Cutaneous Diseases*, Eczema) as by the so-called idiopathic causes. If this eruption be preceded and accompanied by an excessive hyperæmia, the vesicles become charged with a turbid greenish-yellow fluid (in other words, pus), and the sero-purulent eczema impetiginodes is the result. As the vesicular eczema may under certain conditions be transformed into an affection closely allied to, if not identical with, the pustular impetigo, we find other vesicular eruptions (*e.g.*, those of herpes, variola, varicella, etc.) pass under favourable circumstances into the pustular form. If the pustules be long in maturating and be situated on the hair-follicles, their apices become umbilicated (Hebra, *Skin-Diseases*, n. s. s., vol. i, p. 237), as is frequently seen in variola.

If we now consider the form of the typical vaccine-eruption, we shall perceive that it is characterised by the maturation of an umbilicated vesicle on a reddish base about the eighth day after the puncture; but in its appearance, and in the sequence of the pathological phenomena observable during its formation, there is nothing dissimilar to what may arise during the formation of any other vesicle. It is, therefore, clearly necessary for us to search elsewhere for the essential points of distinction between this and all other eruptions. The next necessary step in our investigations will be observations on the intimate constitution of these and other vesicles. M. Chauveau, Drs. Sanderson, Hallier, and Bastian have patiently and fully investigated the microscopical appearances of inflammatory products; and although they differ in the details of their work, I think we may now accept this much as proven—namely, that in specific inflammations we find no elements which differ in form, shape, or physical constitution from these found in ordinary inflammatory affections. Of course, it may be possible hereafter, by the aid of still minuter investigations or of hitherto undiscovered reagents, to discriminate between specific and simple inflammatory elements; but at present this is not the case, and I do not think we are more justified in forestalling this branch of knowledge by wild speculations than we are with regard to any other science. We thus find that, in its progressive formation and in its intimate constitution, there is no one character which we can assign to the vaccine vesicle as peculiarly its own. In what way, then, does this vesicle differ from all other vesicles? We are told that it is in its results—that it prevents the evolution of a certain specific virus, viz., that of small-pox, in the bodies of those who have felt its influence. In order that we may test the truth of such supposed results, let us consider the aspects of the disease it is considered to forfend. We have seen that in the present state of science we are unable to isolate the virus of vaccinia; it is, therefore, needless to expect to be able to do so in the case of small-pox.

The experience of Chauveau and Sanderson on the subject tend (as far as I can ascertain) only to prove that, in the case of lymph carefully diluted by the addition of a layer of water to its upper surface, the weak and watery superficial layers, although containing a certain amount of albumen and salts, are almost innocuous as regards inoculating powers; whereas the deeper and less diluted layers possess in a greater or less degree the active properties of the original fluid lymph, results which might *à priori* have been expected. We must, then, content ourselves with the consideration of the phenomena attendant on a typical case of small-pox; as such, however, are ordinarily described in all text-books upon medicine, and are thus necessarily well known to the members of the Society, I shall not waste the time of the meeting by describing them. I may, however, mention that the actual time of incubation of the disease, upon which so much stress is frequently laid, is exceedingly difficult in practice to estimate. The period at which the eruption appears, its characters, and the stage in the local tissue-changes at which defervescence takes place, are all subject to great variations: these are facts which any medical man may ascertain for himself during the prevalence of the present epidemic. We thus find, owing to the variability of the symptoms attendant on small-pox, a disease which the vaccine vesicle is considered to prevent, that even in its results the properties of such a vesicle are doubtful. Admitting that the inoculation of vaccine checks the operation of another morbid poison on the animal economy, it is at all events admissible to inquire what the poison is that it so checks. As yet, however, we must content ourselves with watching the phenomena of successive tissue-changes in such cases, and with accepting the doctrine of their origin by means of a morbid poison, without asking a question as to its truth.

The next subject which I wish to consider is, what the definite sequence of events observable (as I before stated) in these and similar local eruptions implies. In the simple erythema we see certain changes occurring in the nutrition of a part, a certain excess of the natural waste of tissue (as usually shown by a slight desquamation) coincident with an excess of the reparative material introduced by the local hyperæmia. In the second (or serous exudation) stage, we find a corresponding greater loss of tissue (the elevated cuticle) associated with an increased supply of the reparative plasma, viz., the contents of the bulla. Finally, in the third and last stage, a still greater loss of tissue necessitates the most violent efforts on the part of the surrounding tissues and blood-vessels at repair, and pus is formed. The rapid formation of plasmic elements in the last case appears at first sight to defeat its own object, if that is, as I interpret it to be, the repair of the lost tissues. We must, however, remember the prime necessity that exists in all such structural changes to remove effete or waste material prior to any attempt at repair. If, owing to the large amount of such dead matter at one time, the neighbouring structures be unable to remove it by the ordinary processes attending the natural waste of tissues, a rapid solution of continuity between the dead and living tissues becomes necessary, and this is possibly best done by the abundant evolution of plasmic elements possessing slight, if any, cohesive properties. When the violent reaction attendant on the removal of such effete material has in some degree subsided, the plasmic elements more slowly formed become adherent as granulations, and eventually, as lowly organised connective tissue, replace the structures lost by the slough. This, then, is my interpretation of the processes accompanying acute inflammatory lesions of the integument. There are certain phenomena which occasionally present themselves at one or the other of the above stages of skin-eruption, and they must therefore be looked upon as accidents depending upon peculiar conditions of the surrounding tissues. Such, for instance, are the *hæmorrhagiæ cutaneæ* of Hebra and Neligan, and to some extent, possibly, the *ulcerationes* of the former writer. During any of the three previously noticed stages of cutaneous eruption, a rupture in the hyperæmic vessels may arise, and an extravasation of blood takes place into the surrounding tissues. Such an event in the hyperæmic stage will induce petechiæ, vibices, or ecchymoses; less frequently it is seen in the later inflammatory stages as in the pustules of variola nigra. The acute general erythema observed in the early stages of some of the so-called malignant fevers is usually accompanied by such extravasations. The cessation of simple hyperæmia is usually marked by the loss of the outer layers of the epidermis (as before noticed) in the form of a bran-like scurf, a mealy powder, or scales. In pityriasis, lichen, psoriasis, and lepra, the principal local objective symptoms consist of recurrent patches of hyperæmia, followed by a partial resolution and the discharge of the superincumbent epidermal scales. Here, again, we only see an exaggerated activity of the natural functions of the cutis leading to the constant renewal of the epidermis.

I shall not have time to pursue this part of the subject more fully to-night; but I trust that I have shown the Society sufficient facts to establish the truth of my proposition, viz.: that, as regards the integument, an excessive waste of material will have a tendency to induce in an organism a correspondingly vigorous attempt at repair.

It will be necessary now to pass to the inflammation of the more deeply seated tissues. If the erythematous affection produced by a burn, as before noticed, extend inwards to the cutis and subcutaneous tissue, it is called an erysipelas. The objective symptoms—the redness,

heat, and swelling—are intensified. The rapid exudation of serum into the affected parts may produce both bullæ superficially, and that deeper seated infiltration of the tissues characterised by "pitting upon pressure." When the inflammatory affection is violent, the same sequence of events occurs as in the superficial diseases of the skin; the evolution of plasmic elements is in excess of that necessary to supply the ordinary waste of the parts—in other words, suppuration is established. In the resolution of acute inflammation, if the process have not arrived at the evolution of the semi-solid pus-corpuscles, and the tissues return (as far as one may judge) to their condition prior to the attack, we may suppose the reparative material, although in excess of what is natural, is in a form that can be readily reabsorbed by the blood, and excreted from the body, if necessary, by an increased activity of certain special organs. The interdependence of tissues and organs throughout the body makes it probable (although we have no means of ascertaining this) that every pathological tissue-change, however trifling, exerts an influence on the system at large. During the violent reactionary process of phlegmonous erysipelas, the whole body becomes, according to Virchow, more highly charged with fibrine and plasmic elements than it does in health. Knowing what trivial extraneous circumstances may induce inflammation of the skin, it is not a matter of surprise that under these conditions secondary deposits of pus should occasionally takes place in different parts of the body. If we examine the viscera of a person who has died of pyæmia, we shall probably find them the seat of two distinct lesions—localised patches of hyperæmia, and localised deposits of pus and tissue-*débris*. If we refer to the sequence of phenomena observable in inflammation of the cuticle, we are forced, I think, to conclude that a similar sequence occurs in both cases. It so happens that pyæmia is usually ushered in by rigors, headache, quickened pulse, hurried respirations, furred tongue, loss of appetite, great thirst, and so forth—symptoms "which," to quote Mr. Savory's words, "are collectively expressed by the common term fever," and it is not surprising that this disease should sometimes have been confounded with the so-called exanthems. The difficulty of diagnosis is still further increased by the frequency with which those fallacious "landmarks", skin-eruptions, are seen in this disease.* It thus happens that we find it sometimes simulates typhus,† at others typhoid fever,‡ glanders, and small-pox;§ and it is only on the appearance of the metastatic abscesses that the diagnosis can be confirmed. If, in case of the non-specific disease pyæmia, we probably find similar causes produce such dissimilar effects as these data show, are we to assume that every definite series of phenomena attendant on an acute specific disease is necessarily induced by the action of a peculiar poison? Would it not be quite as consistent with our present knowledge, if not more so, to ascribe these deviations in detail to the known interdependence of the organs and tissues of the body, their anatomical arrangements and peculiarities; and the possibility that, when any change of the nutritive balance in a part takes place, this change may press with more or less severity on other parts, according to the situation of the prime lesion, its importance, and its correlations?

I have thus far, gentlemen, attempted to show you that to my mind the doctrine of the specificity of acute diseases requires a thorough revision before it will bear that full investigation which science demands us to make, ere we admit an hypothesis (such as this) as an article of professional faith. Before concluding, however, permit me to say a few words on the action of those material poisons and drugs with which we are all acquainted. It is easy to perceive that the hypothesis of zymotic diseases has been strengthened by the known action of poisonous drugs upon the animal economy. Substances which can be seen and handled when introduced into a living being, give rise to a series of tolerably definite phenomena differing with the nature of the drug. I say advisedly "tolerably definite phenomena"; for I think most gentlemen will admit with me that, in cases of poisoning with the same drug, great variations are occasionally observable in the symptoms induced. It must be remembered that, besides the quality of the poison, the quantity given and the mode of administration have each definite effects on the results produced. A drug which stimulates, if it be taken in small quantities, will narcotise in excessive doses, or induce great nervous exhaustion if the time be prolonged over which its influence on the system is felt. The quality, or rather chemical constitution, of two poisons may greatly differ in their nature, and yet they may be productive of similar effects on the system. But these effects are not really comparable with the phenomena attendant on acute specific disease, unless we can actually demonstrate the "material poison" which has induced the latter. It is not necessary, as we can at all times ascertain for ourselves, to seek the cause of such organic changes in gross materialism; the external forces of nature, heat, cold, electricity, and so forth, or such internal forces as originate in man's own nature, from simple privation of food and drink, are sufficient to induce quite as great changes in our bodies as any we have been considering; and why may they not possibly play their part in these?

* See the Difficulty of Discriminating between Varicella and Pemphigus (Gee, *St. Bartholomew's Hospital Reports*, v, p. 122).

† Murchison, *Continued Fevers*, p. 190 (1862); Savory, Statistics of Pyæmia (*St. Bartholomew's Hospital Reports*, iii, p. 80); Surgical Lectures of Abernethy. quoted by H. Lee (*Lectures on Practical Pathology*, i, p. 5).

‡ H. Bennett, *Principles and Practice of Physic* (third edition), p. 894; and a case in BRITISH MEDICAL JOURNAL, recorded by Mr. Nunn, May 20th, 1870.

§ Wilks, *Guy's Hospital Reports*, vii, p. 153.

THERAPEUTIC MEMORANDA.

USES OF HYDROCHLORATE OF AMMONIA.

IN Dr. Murchison's lecture (No. 10) upon dropsy, under the head of "Diuretics," he remarks that these remedies "have no effect upon portal dropsy." In the list of diuretic remedies, however, Dr. Murchison omits any mention of the hydrochlorate of ammonia. Now, whether it be by its direct action as a diuretic, or by its immediate action as a cholagogue, I have for many years found the hydrochlorate of ammonia one of the most efficient of our remedies in cases of portal dropsy, prescribed in scruple or half-drachm doses, given, tolerably diluted, every six or eight hours. The recent accounts of the success attending the employment of the hydrochlorate of ammonia in hepatic affections in India will, I trust, lead to its more extensive use in this country; as yet it has scarcely received the attention it deserves, partly, perhaps, on account of the great drawback, its unpleasant taste.

SPENCER THOMSON, M.D.

Ashton, Torquay, June 1872.

CLINICAL MEMORANDA.

TEMPORARY HEMIPLEGIA AND APHASIA.

L. M., aged 29, in the eighth month of her third pregnancy, wife of a labourer, after a week of unusually hard work at washing, had been sewing almost all day, when, in the afternoon, she suddenly experienced a numbness in the right hand. She rose to call her husband, but fell into a chair, and then found her head was giddy, and that the right foot and the whole of the right side were numb and felt cold. The right side of the face was drawn down. There was not any unconsciousness; she understood everything said, but could not speak for fifteen minutes, at the end of which she spoke as well as before. Her hand was useless for an hour, and her foot dragged during the remainder of the day. She had never before had a fit of any kind. During the last two years she had occasionally found an apparent thick mist, coming on suddenly and quickly becoming total darkness, before both eyes, the right especially. In this obscurity, she had seen vibratory and momentary curved lines, showing the colours of the rainbow; these "darted backwards just like shooting stars", until they disappeared. These attacks had lasted about a quarter of an hour; in one of them, a year ago, she appeared to see bright sunshine with varied hues, when the sun was not shining. The perversions of vision had been usually succeeded, sometimes preceded, by lancinating headaches, principally confined to the left temple, and never accompanied by sickness; occasionally there had been no headache before, with, or after. The cardiac sounds were normal. The eyes had not been examined ophthalmoscopically; the pupils acted well, and were of equal size. The patient had not noticed any relation between the attacks and menstruation; they usually followed hard work, and began by dimness all over the field of vision. There was not any œdema.

The patient was quite well from the evening after the seizure until labour came on at the full time, on April 7th. I then first saw her, and found that pains had commenced sixteen hours previously. Four hours later, a living male child was born; the patient had a very good convalescence. Since the birth of the child she has had several feelings of numbness and coldness of the right hand and foot, with giddiness, sometimes lasting some hours; her speech has not been again affected, and she has not found any deafness nor disturbance of vision.

Her mother became epileptic, in consequence of sudden fright on her brother being drowned, six years before the patient's birth; the epilepsy used to be very frequent, and still recurs. The father has never had any illness. An elder and a younger sister (both dead), and three brothers (all now living), all born after the mother became epileptic, have been free from any affection of their nervous systems. The youngest child, a sister aged 19, has had epileptic fits since childhood.

June 28th, 1872. STANLEY HAYNES, M.D., Malvern.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. THOMAS'S HOSPITAL.

Dr. Murchison's Clinic, Monday, July 1st, 1872.

The interest and value to the ordinary student of cases in a medical ward are mainly dependent upon the teacher, and upon the time and trouble devoted by him to their study and exposition. How frequently one is met with the answer that there is "nothing much in the ward"; that "there are no interesting cases in at present", and such like expressions. There are perhaps occasionally seasons of dearth; but our own experience has led us to observe that "good cases", by, we presume, some unaccountable law not fully recognised, never fail to come in large and unfailing numbers under the notice and into the wards of the few clinical teachers of the London metropolitan schools. Every case of disease is interesting and instructive, provided the physician or surgeon take the trouble and possess the knowledge and genius to make it so. We have never failed to find a practical application of these remarks in attending the visit of Dr. Murchison. Indeed, so far as clinical material is concerned, there is at present almost an *embarras de richesses* in his wards.

Embolic Heniplegia, with Choreic Movements.—In some cases of chorea, embolism of certain cerebral vessels has been observed after death. The interest of the present case was accordingly enhanced, as the appearance of chorea bears on the pathology of the affection. The patient was a boy aged 8, who had passed through an attack of acute rheumatism, with mitral valvular disease, and who, six months afterwards, became the subject of incomplete and apparently embolic hemiplegia of the left side, for which he had been admitted one month previously. It was observed at the time of admission into the hospital, that choreic twitchings, especially on the paralysed side, were present. These, however, had now left, and the boy had almost entirely regained the use of the left side.

Well marked and prolonged General Symptoms of Phthisis before the appearance of Cough and Local Signs.—The patient, a man 39 years of age, had been for three months the subject of night-sweats, rigors, emaciation, and symptoms of hectic fever and other signs of phthisis, without any of the physical signs of the chest denoting the existence of the disease, and without any cough. These, however, at length developed themselves in a well marked manner while under observation. Such cases, Dr. Murchison observed, are occasionally met with.

Dropsy (chiefly Hepatic) relieved by the external and internal application of Digitalis.—The value of digitalis as an external application has been long recognised, although acted upon in a very limited degree. In the present case, the patient, a boy aged 11, had been an invalid for twelve months. His illness commenced with an attack of acute rheumatism, which left him with a double mitral murmur. He was admitted into the hospital in November, when his legs were found to be œdematous, and his urine albuminous. The œdema diminished under acupuncture and other treatment, and the albumen, after a recurrence, entirely left; at the same time, evidences of ascites supervened, which Dr. Murchison believed to result from a fibroid condition of the liver, which had also in the meantime increased in size, consequent on the long continued cardiac congestion. Paracentesis abdominis was had recourse to for temporary relief after the abdomen had been greatly distended. The fluid again began to accumulate. The patient was treated by tincture of digitalis and iron internally, but without any effect on the ascites. Digitalis was, however, in addition applied externally, in the form of infusion made four times the pharmacopœial strength, to the loins and abdomen, and with marked effect, the flow of urine increasing, and the ascites diminishing considerably.

Empyema: Rupture into Bronchus: Convalescence.—The subject of the affection was a man aged about 40, the history of whose illness was that of an urgent attack of pleuritis in the right side, which was followed for eight weeks by the pain of distension and subsequently the sudden expectoration of an enormous quantity of pus. He was admitted into the hospital four months after this occurrence, when it was found that the measurement of the affected side was less by an inch and a half than the healthy one, and that some symptoms of fluid still remained in the right pleural cavity. Dr. Murchison pointed out that, in this case, the general indication in the treatment had been to improve the general health of the patient. This had been followed out, and now, after a residence in the hospital of about six weeks, there were evidences of increasing recovery of the lung, and the patient had gained in weight.

Violent Diarrhœa and Vomiting from eating Pork.—In this case, the symptoms, which were rather violent, were clearly traceable to the patient's dining on pork. Dr. Murchison pointed out that cases were not unusual in which an article of diet which proved harmless over and over again, would produce in the same person severe gastric symptoms. Such was the case with the present patient.

Obscure Attack of General Dropsy, with Œdema of the Lungs.—The patient, a wretched looking and dwarfed boy, aged 11, was suddenly seized, ten days before admission, with general dropsy, ascites, œdema of both lungs, and cough. No cardiac or renal mischief was discovered; and, although the liver was slightly enlarged, still there was not sufficient mischief in that organ to account for the dropsy. The spleen was large, but there was no increase of temperature. Dr. Murchison, in the absence of any apparent organic disease, was inclined to believe that the condition of the patient was due to some morbid condition of the blood. He was improving on iron.

Syphilitic and Amyloid Disease of the Liver.—The subject of the disease was a man rather intemperate, aged 45, who, when admitted, presented symptoms of ascites, enlargement of the liver, extensive cicatrices of the tongue, and cicatrices of previous ulcers on the legs; the spleen was also much enlarged, but the urine contained no albumen. The ascites diminished under treatment, and the liver was then found to be enlarged. He was now being treated by nitromuriatic acid and gentian.

Good Effects of Aconite in Acute Pneumonia.—Amongst other cases of interest which came under our observation in the male wards, was that of a boy aged 15, who was admitted with acute pleuropneumonia of the right side and herpes labialis, and considerable increase of temperature. On the administration of eight-minim doses of tincture of aconite, with liquor ammoniæ acetatis every four hours, the temperature at once came down, and the disease did not increase.

A case of spinal meningitis, recovering under treatment by belladonna and iodide of potassium; one of granular kidney in a painter, with hypertrophy of the left ventricle and chronic changes in the retina; and a case of double pneumonia, with extension of the inflammatory process to the pericardium, also presented some points of clinical interest.

[*To be continued.*]

ST. BARTHOLOMEW'S HOSPITAL.

Operations, Saturday, July 6th.

Excision of Breast.—This was an ordinary case of scirrhus under the care of Mr. Thomas Smith, who excised the whole of the tumour. The only point worthy of notice was the use made of the carbolised catgut ligatures, cut close, in restraining hæmorrhage. Mr. Smith hoped in this case to get union by first intention throughout the most of the wound, and a very speedy cure.

Necrosis of the Left Lower Jaw and Right Tibia.—This man came into the hospital stating that he had met with an accident to his right leg; but its appearance, and the simultaneous necrosis of the jaw-bone, led Mr. Smith to think that the accident was a metaphorical and not a violent one—that the man was suffering severely from the tertiary effects of syphilis. Mr. Smith made a free incision under the jaw in the line of a cicatrix there, and gouged out several pieces of necrosed bone. He then tied a strip of oiled lint through this hole and the mouth. He also gouged out some necrosed bone from the tibia, finding the rose-headed drill very useful.

Burn, removing all the Toes of one Foot.—This was an interesting case of a girl of nineteen or twenty years of age, whose foot had been burned six months ago. The toes were now quite gone; having been burned or gradually sloughed off, and the half of the foot quite denuded of integument. The wound seemed to make no progress, but rather to grow worse—no healthy granulation forming any substitute for skin. The ends of the metatarsal bones protruded from what seemed to be a sloughy mass. Mr. Smith first thought of performing Chopart's operation; but ultimately found that he had enough flap after removing the metatarsal bones and sawing through the cuneiform bone. This he accordingly accomplished, tying the bleeding vessels with catgut ligature, cut short.

TREATMENT OF ULCERS.*

EDINBURGH ROYAL INFIRMARY.

Mr. JOSEPH BELL regards rest and graduated pressure by careful bandaging as the chief indication of treatment for all ulcers of the limbs. In cases of callous ulcers, he always begins by blistering the surrounding thick hard edges. In varicose ulcers, black wash, and in eczematous ones, weak alkaline lotions are chiefly used. In fœtid ulcers, he first thoroughly destroys the fœtor by careful soaking in cloths soaked in a strong solution of carbolic acid and water (1 to 40), then rubs the surface with a strong solution of chloride of zinc (forty grains to the ounce), and then dresses the sore antiseptically with carbolised gauze or sulphurous acid lotion. Mr. Bell approves of skin-grafting in every case of extensive ulcer, when once a healthy condition of the granulations has been obtained. He has not found that ulcers aided in healing in this way are at all more liable to recur than after gradual cicatrisation from the edges.

ABERDEEN ROYAL INFIRMARY.

Dr. FIDDES endeavours to get the ulcers he has to treat into as healthy a state as possible, chiefly by means of rest and support to the limb. When an ulcer assumes a healthy granulating appearance, he employs skin-grafting and skin-dust, as it is called; and when either of them "catches", the sore is dressed daily with a piece of lint soaked in red lotion—one grain of sulphate of zinc to an ounce of water and a few drops of the compound tincture of lavender, covered with oil-skin and a bandage. He has found the cicatrix following the employment of either skin-grafting or skin-dust to be more durable and lasting—not so apt to break as a cicatrix healed up in the old way.

GLASGOW ROYAL INFIRMARY.

Dr. G. BUCHANAN says that the general treatment of ulcers is a subject too extensive to call for special remark. He employs rest in the recumbent posture, and moderately good diet, especially vegetables, in the case of women and others who largely substitute tea, bread, and ham, or cured fish, for more wholesome food; and, locally, support by bandaging, and stimulating, soothing, or astringent lotions, as the case demands.

Skin-grafting has been used in the treatment of large ulcers in his wards, and generally with success. To insure a favourable result, it is necessary that the surface of the ulcer be covered with clean granulation, not yielding a copious discharge. The plan which he adopts is as follows. When the graft is to be taken from the skin of a live member, he always takes it from the person who has the ulcer; he does not consider it proper to solicit permission to take it from any one else. The skin is pinched up with a pair of dissecting forceps, and with curved scissors a piece half an inch long and about one-eighth of an inch broad is cut off to the depth of the true skin. This is cut into three or four pieces, and they are at once placed on the ulcer, the granulation having been previously shaped to make the surface raw but not bleeding. A strip of adhesive plaster is made to press the grafts and retain them in their place. The whole ulcer is then dressed antiseptically with a cover of protective oiled silk, over which is applied a bandage of carbolised gauze overlapping the silk by two or three inches, and at least eight folds thick. Under this dressing the grafts may be allowed to lie without the putrefaction of the discharge even six or eight days; at the end of which time it is common to find some if not all of the grafts adhering. Some keep in view till cicatrisation begins to spread out from them; others disappear, except that a pale spot indicates where they were; but in most instances the change is perceptible from the place where the graft was placed.

Dr. Buchanan has tried, without success, to engraft epidermic scales scraped from the arm of a healthy person, but has discontinued the attempts.

The most important advance which has been made in skin-grafting is the employment of pieces of skin from recently *amputated limbs*. This he has practised with extraordinary success. The number of primary amputations in the Glasgow Royal Infirmary is so great that there is never want of opportunity of getting fresh healthy skin, without having recourse to taking it from the living body. As soon as an arm or leg has been removed, for injury, the house-surgeon or dresser carries it to the ward where the case requiring grafting is. He then carefully dissects from the palm of the hand near the wrist, or the sole of the foot near the instep, where the skin is very vascular and the epidermis not too thick and hard, as many pieces as are necessary to do all the grafting required at that time. In taking grafts from a recently amputated member, much larger pieces are used than when taken from the living body—pieces about a quarter and even half an inch square having often been grafted with success. Dr. Buchanan considers that this aspect of skin-grafting has a far more important bearing on conservative surgery than on the treatment of ulcers. He has been enabled to save limbs which formerly he should certainly have amputated, where the destruction to the integument was so extensive as to preclude all possibility of cicatrisation, unless by the assistance afforded by skin-grafting. To specify examples would exceed the limits of this communication; but in a future number of the JOURNAL we hope to give some clinical reports of cases now and recently under Dr. Buchanan's treatment.

Dr. DEWAR has found the treatment of ulcers by skin-grafting to be very successful. To insure success, he first brings the ulcer into a healthy condition (which is absolutely necessary), with healthy granulations and signs of healing commencing round its edges. The grafts which he uses are from the size of a barleycorn to that of a split pea. Those taken from a recently amputated limb or other part he has found to do equally well with when taken from the living subject. Dr. Dewar has found this form of treatment of great benefit in extensive raw surfaces from burns implicating the flexures of joints, and when the cicatrix is apt to be followed by contraction.

* Continued from page 670 of number for June 22nd.

SAMARITAN HOSPITAL.

OPERATIONS, WEDNESDAY, JUNE 26TH.

Ovariotomy.—Mr. Spencer Wells performed this operation on a woman about 40 years of age, in the ordinary way. The disease was multilocular, and very large, but mostly fluid, and had apparently and rapidly been growing for the last eighteen months. She first observed enlargement two years and a half ago, but found herself pregnant. She was safely delivered of a boy, but found the abdomen enlarging again. For several months past, she had been in a very variable state of health—now well and able to move about, at other times in great pain and quite prostrate. Mr. Wells was particularly careful to tie a number of small omental arteries that had been cut in the operation; and stated that the importance of this could not be overestimated, as he had put back the omentum with but little apparent hæmorrhage or none, and had afterwards seen profuse bleeding and death as the result.

Amputation of the Os Uteri.—Dr. Routh performed this operation on a young woman, in whom the os was much elongated and protruding an inch or more beyond the labia. There was singularly little hæmorrhage; and Dr. Routh remarked that in such conditions the uterus ceases to be the highly vascular organ which it always is in health. The mucous membrane was stitched with wire to its opposing surfaces; and, when the uterus had been well pushed up, the vagina was stuffed with wool.

HULL GENERAL INFIRMARY.

PERICHONDRITIS LARYNGEA.

(Under the care of Dr. G. F. ELLIOTT.)

A CASE of this affection terminating in ossification and subsequent discharge of portions of the thyroid cartilage, was described by Dr. Fyffe, of Netley Hospital, in the JOURNAL of March 22nd. The following case was under Dr. Elliott's care at the time; and as examples of this affection are uncommon, and a favourable termination is unusual, the report may be of interest. A fisherman, aged 26, of a robust frame, and without any history of syphilis or other constitutional disease, was admitted into the Hull Infirmary on the 20th of February last. Ten weeks before admission, and shortly after the cessation of what seemed to be a transient cold, he noticed a difficulty in swallowing, and also that respiration was somewhat obstructed, especially on making any exertion. These symptoms having existed for about a month, he next perceived that his neck was harder and larger than natural, and this continued gradually to increase. On his admission, the most noticeable feature was the great increase in the antero-posterior diameter of the neck; the swelling was evidently situated in the thyroid cartilage; it was hard, painless on pressure, and presented no indication of suppuration. He was ordered an iodide of potassium mixture, and the local application of iodide of ammonium ointment. On the 28th of February, he was suddenly seized with complete obstruction to respiration. Mr. Plaxton, the House-Surgeon, having been immediately summoned, with great promptitude opened the trachea, and respiration (all attempts at which had ceased) was happily restored by intermittent pressure on the thorax. The necessary incision gave vent to a quantity of somewhat glairy-looking pus. From this time, the man's improvement was uninterrupted, the swelling of the neck gradually subsided, and the thickened

thyroid cartilage became nearly reduced to its natural dimensions. The tube was removed on the 7th of May, rather more than two months after its insertion; the opening rapidly closed, and on the 11th of May he was discharged well.

The last edition of Niemeyer's *Text-book of Practical Medicine*, vol. i, contains a chapter on perichondritis laryngea. With regard to the pathology of it, he says that an exudation takes place between the thyroid cartilage and its perichondrium, causing necrosis of the former, and this is followed by its piecemeal discharge. Altogether, he speaks of the issue of such cases in a very hopeless way, saying that patients usually die from exhaustion and suppuration, and that all measures, tracheotomy included, are merely palliative.

The case related seems to have terminated in a much more simple way than those seen by Niemeyer, or than the one reported by Dr. Fyffe; and it does not appear that any subsequent mischief is to be apprehended, as all distress was removed, and the parts restored nearly to their normal condition, before the patient's discharge.

BRISTOL GENERAL HOSPITAL.

SUPPURATION OF HYDROCELE SAC, FOLLOWING SIMPLE TAPPING.

(Under the care of Mr. DOBSON.)

IN connexion with the paper on Hydrocele by Mr. Bradley, and Mr. Hulke's case of suppurating hydrocele reported in the JOURNAL of June 1st, the following case may be interesting.

A "goods" railway-porter, aged 52, an out-patient under the care of Mr. Dobson, had suffered from hydrocele for several years. He had been repeatedly tapped—the last time on May 14th, when Mr. Dobson drew off between eight and ten ounces of a darkish serous fluid. There was nothing unusual about the tapping, except that the fluid was darker than it ordinarily is; it contained no blood. He went to work immediately after the operation. Next day he came with the scrotum considerably ecchymosed, œdematous, and swollen. He would not come into the hospital; so he was ordered to rest in bed, to support the scrotum by a pillow, and to foment it. In about a week, the ecchymosis and œdema had subsided, leaving a heavy firm tumour, somewhat pyriform in shape, and not translucent. There was a peculiar nodular swelling in front, like an enlarged testicle; it appeared superficial, as compared with the main bulk of the tumour. He had dragging pains in his loins, and complained that his scrotum felt heavier than before. As he did not improve, he was persuaded to come into the hospital; and, on May 20th, Mr. Dobson punctured the swelling with an ordinary trocar, and drew off about two ounces of bloody serum, which apparently came from the tunica vaginalis. The tumour presented many of the symptoms of a vaginal hæmatocele. On the day after this tapping, the patient had experienced no relief; the swelling of the scrotum was rather greater. He had vomited, and was feverish. On May 23rd, three days after the last tapping, his pulse was 120, and temperature 103. The whole of the affected (left) side of the scrotum was exquisitely tender. An endeavour to make out the position of the testicle failed. The patient was operated on at once. Chloroform was administered, and the front nodular swelling punctured. This proved to be a large clot of dark blood between the skin and tunica vaginalis, and quite outside the sac of the latter. After turning this out, the tunica vaginalis seemed hard and tense. Mr. Dobson punctured this, and afterwards incised the tunica vaginalis from top to bottom of the scrotum, letting out between four and five ounces of semi-purulent flaky fluid, containing no sign of blood. The tunica vaginalis was inflamed and thickened, with numerous white papillary elevations on its surface. The testicle was firmly adherent to the tunica vaginalis; it was situated at the posterior and inferior part of the scrotum; and, as it appeared healthy, it was not removed.

June 2nd. The patient is now satisfactorily convalescing.

The peculiarities of the case are, the subcutaneous blood-clot outside the vaginal tunic; the suppuration of the hydrocele-sac, notwithstanding the absence of blood in the sac; and the perfectly undecomposed state of the subcutaneous clot. This clot was due either to the puncture of a vein during the operation, or to the rupture of a vein immediately after operation, in consequence of the patient being exposed to severe strains whilst lifting heavy goods. The front nodular swelling induced Mr. Dobson at first to believe that he had to deal with an abnormally situated testicle, as related by Mr. Curling. The sequel proved the contrary. Altogether, the case is somewhat unusual, and is an instance that the simple operation of tapping, which we are in the habit of treating lightly in our out-patient departments, is not absolutely free from danger.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 13TH, 1872.

A HILL RESIDENCE FOR EUROPEAN TROOPS IN INDIA.

THE importance of a hill station for European troops in India has been strongly and frequently urged by Indian medical officers, and the subject has received the earnest attention of both the Indian and the Home Governments. Communications bearing on the subject from time to time come into our hands, and frequently afford much interesting and valuable information. The perusal of a somewhat sensational pamphlet on *Further Evidence in favour of a Hill Residence for European Troops*, by Staff Assistant-Surgeon William Curran, brings the subject again before us. The author does not certainly offer much that is new; on the contrary, a short residence of six months at Kussowlee has enabled him to somewhat spoil a good cause by injudicious advocacy. The question must be discussed temperately on trustworthy data, and on the results of long experience of Indian sickness.

In 1829, the sanitary depôt at Landour was established, and has been in full operation since that date. Much valuable information on the influence of the hill climate on the diseases of the European troops in India must be contained in the records of this depôt. A return, showing the result of every case that had been sent to the depôt up to that date, was made in 1844, giving the diseases under their different heads. But it should be noted that in no question are the statistics of numbers liable to greater fallacy, than in disease as it appears in medical returns. The individual cases may be slight or severe, recent or of long standing, simple or complicated with other diseases. A healthy season and a sound constitution, or an unhealthy season and a debilitated constitution, or former attacks of the same disease, will influence the result of the treatment. To render the returns infallible, the disease should be entered under the same heading by each different medical officer; and, what is more important, though the point is generally overlooked by statistical authorities, the professional ability of the different surgeons must be equal, to enable sound inferences to be drawn from the statistical result of the treatment of disease in different localities. Fallacies on these points vitiate the inferences drawn by sanitary writers when they treat of epidemic diseases. Defects from these causes are prominently marked in the few statistical tables given in this pamphlet. For instance, the healthiness of the station of Meerut should not be inferred from the exceptional epidemic year of 1867, and from one individual regiment located there, viz., the Buffs, in which the expenditure of brandy was upwards of four bottles for each case of cholera, and the mortality ninety-six per cent.

The season of periodical rains which exists in all European hill stations is comparatively unhealthy; and relapses of fever and bowel-complaints, rheumatism and affections of the liver and kidneys, are common at that time; and pulmonary attacks are not uncommon in the spring. Cases of ague, fever, dysentery, and liver, do not originate at the hill stations, though they occasionally appear while the troops are located there, from the men going down into the valleys in the hot and rainy seasons hunting butterflies. Epidemic attacks of cholera have not been frequent at the hill stations; but there have been several severe attacks at Subathoo, and less severe at Simla and Murree, and occasional cases at all the hill stations. The usual practice has been

to send the men to the convalescent depôts in the hills for about seven months during the hot weather and rains, and much disappointment has been expressed that many of the most severe cases are not completely cured, because similar cases when sent to England have completely recovered; but then the residence in the cold climate of Europe has extended over one or two years, whilst it was only for a short period, and that the most unhealthy, that the climate of the hills was tried. Those cases that were retained for a second season, generally recovered a florid state of health by the end of the cold weather. There are many extensive organic diseases which cannot be cured in any climate; and no treatment or climate will remove disease induced by intemperance, if the habit be continued. The custom of relieving the regimental hospitals of cases of this latter description was and is much complained of, as leading to an unfavourable estimate of the benefit of the change to the hills. The facility of transport from the hill stations to distant parts of the plains, by means of the railway, renders their occupation by a portion of the European troops less objectionable than formerly in a military point of view; but this argument applies in a great measure to the advisability of these reserve troops being located in England so long as England commands the sea. While England holds India, there must be British troops located in the plains; and it is therefore essential that the best sanitary arrangements should be made there for the preservation of their health, with supplementary resources for the recovery of the sick and the strengthening of the weak in the hills.

There has been an outcry against one of the most valuable improvements in the housing of the troops which has recently been adopted in India—viz., raising the beds twenty feet above the level of the ground by barracks of two storeys. The great objections to these buildings, as at present constructed, are their great expense, and the great heat of the rooms during the hot winds in the upper provinces. Both objections are well founded; but both might have been obviated, and may still be mitigated in the existing buildings, and avoided in future. The great expense has originated from not utilising the lower storey. Practically speaking, the lower stories are more comfortable and not less healthy than the upper during the cold and hot seasons. It is only during and after the rains that disease is sown by sleeping in them, which undermines the constitution during the whole year, and often during the whole lifetime. The lower storey may be considered healthy from the 1st November to the 1st July, excepting in the delta of the Ganges and in the presidency towns of Madras and Bombay. If the beds of those who occupied these lower rooms could be raised for the intervening four months, every objection in a sanitary point of view would be obviated. Let us suppose one-third of the men occupying the lower storey; if their beds could be removed to the inner verandah of the upper storey, they would escape the danger of miasm, and the men would be located in as large a space as they occupied frequently in former days; and there can be little doubt that at that elevation there would be less danger of defective ventilation. This mode of accommodation for one-third of the men would reduce the present expenditure upon the buildings by one-third. Again, if the quarters of the married men belonging to each company were located in the lower storey of the barracks, they would not be less healthy than at present, and this is the point under consideration. This would obviate the necessity of separate buildings, and thus reduce the expense about one-sixth. Orderly, guard, store, and mess rooms, and canteens, would fill up the remainder of the lower storeys. All these used to require separate buildings, each of which had a foundation plinth and roof, in addition to the wall provided in the building of two storeys. The saving on these would be considerable, and would cover the increased expense of the higher portion of the wall.

The excessive heat of the new buildings during the hot winds is mainly attributable to their defective construction. The barracks which they have superseded were built within a few yards of them. They were healthy during the hot winds, and made tolerably comfortable. They were hot, doubtless, with a wind blowing at a temperature of 120 deg. Fahr., and in the direct rays of the sun 150 deg. Fahr. This must be expected; but they had a thick thatched roof and a double verandah, with "tatties", or in the hospitals "thermantidoses". The double storied barracks now constructed have thin tiled roofs and a single pucha-roofed verandah without tatties. As such a structure would be intolerably hot, if built on the ground at these stations, it is not likely to be cooler when raised twenty feet. But this is the manner in which the principle of raising the sleeping places of the men during the rainy season was carried out and condemned. Some modifications were proposed in 1870, and may have been carried out, but such were the original structures.

THE REMOVAL OF OSSEOUS TISSUE.

ROBIN has described under the name of *myéloplaxes*, and Virchow and other German histologists under the name of giant or colossal cells (*Riesenzellen*), certain multinucleated masses situated on the external part of the marrow of bone. These bodies have been subjected to careful research by Kölliker; the results of whose investigations, as communicated recently to the Würzburg Physico-Medical Society, point to an intimate connection between the presence of these bodies and the process of resorption of bone.

Kölliker finds that, during resorption in healthy bones and teeth, the surface where this process is taking place presents fine lacunæ (commonly termed Howship's lacunæ); and that these lacunæ contain giant cells. Generally there is one cell in a lacuna, which it closely fits; sometimes a single cell fills two lacunæ; and in other cases there are several cells in a large lacuna. Considering these cells to be important agents in the removal of osseous or dental tissue, he designates them "osteoclasts" (or "osteophages").

Lacunæ containing osteoclasts have been found by Kölliker both in the interior and on the exterior of bones. Internally, they exist in ossifying cartilage, just beyond the bone, where ultimately cancelli are formed, as in the bodies of the vertebræ and the ends of the long bones. They also are present on the walls of the larger medullary cavities in process of development; as in the diploe of the cranial bones, in the medullary canals of long bones; and the development of the frontal, sphenoidal, and other sinuses of the head and face, is intimately connected with their presence in these parts. On the external parts of bones, they exist in the following situations: the dental grooves of the embryonic jaws; many parts of the bones limiting the cranial cavity, both at the base and at the sides and summit; on the walls of the vertebral canal and on the arches and bodies of the vertebræ; on the walls of the orbit and of the nasal fossæ; on the coronoid and condyloid processes of the lower jaw, and on the zygomatic process of the upper jaw; in the situations of the foramina and canals by which many of the bones are perforated, such as the foramen ovale, the foramen opticum, etc.; and on certain parts of the bones of the trunk and extremities, especially in the neighbourhood of the articular ends of the bones; as well as on the surface of the temporary teeth, where they are abundantly developed while these are undergoing absorption.

Having described the situations where these osteoclasts are found, Kölliker proceeds to comment on their signification. Hitherto, he says, the normal resorption of bone has been attributed either to the chemical action of the fluids or of the medulla, or to some not very well defined minute process. Thus Virchow supposes the osseous substance to pass into simple marrow-cells; Bredichin and Rindfleisch regard the "myéloplaxes" or osteoclasts as bone-cells set free by removal of the earthy matter; and Billroth believes that, in cases of disease, the bone is removed by the pressure of granulation-cells. Kölliker's experiments have led him to the conclusion that the resorption of osseous and dental tissue does not consist in a mere transformation of its cellular and other elements, but in a removal of them; and that the multinucleated cells or osteoclasts are in no way formed from pre-existent osseous or dental tissue. The proofs in support of this view are the following. 1. A bone or tooth, at the parts where it is studded with

osteoclasts, shows no sign of transformation of its cells, such as enlargement, multiplication of nuclei, etc.; and it is extremely common to find, on the walls of the lacunæ which contain the osteoclasts, partial erosions in the tissue, which in other respects presents no change. 2. The osteoclasts can always be readily separated from the osseous tissue; there is no intimate connexion or gradual transition between them. 3. After the absorption of the bone, small splinters not unfrequently remain; these contain no cells, and cannot be transformed into cells. 4. The occurrence of osteoclasts on the surface of the ivory of the milk-teeth shows that no elements of the dental tissue that is undergoing absorption can enter into their formation. 5. A most striking fact is the presence of osteoclasts on the surface of ivory pegs that have been driven into bone. Billroth has found that these pegs become eroded; and Kölliker has found them to present on their surface not only lacunæ, but also osteoclasts.

The osteoclasts, then, do not arise from pre-existent osseous or dental tissue; and Kölliker believes that they belong to the same category as the osteoblasts, which perform an important part in the formation of bones. His reasons are as follows. First, transitional forms are observed. Secondly, most of the osseous surfaces, which at the time when absorption takes place are covered with osteoclasts, originally present osteoblasts; and the gradual intrusion of the former among the latter can be noticed by direct observation. Thirdly, osseous surfaces that have been undergoing absorption may again take on growth; and then there is a re-formation of osteoblastic cells, partly through the splitting up of the multinucleated osteoclasts. This is observed in the jaws. Before and at the commencement of the formation of the teeth, the lower jaw shows osteoblasts in the situation of the future dental groove. After this, when the dental sacs and teeth are being formed, the bony substance is removed, and a large furrow is formed in the jaw. Lastly, when the eruption of the teeth takes place, there is again a formation of bone at their roots, leading to the development of the alveoli.

As to the manner in which the osteoclasts are concerned in the removal of bone, Kölliker has not arrived at a definite conclusion; but he considers the following points worthy of note.

1. The removal does not consist in an absorption of the earthy matter as in osteomalacia; it seems rather, that both the organic and the inorganic material are removed simultaneously.

2. The removal of the hard tissue is not preceded by crumbling, but takes place gradually, leaving the bone with well defined and smooth edges and surfaces.

3. The surface of bones undergoing absorption, where osteoclasts are present, have not an acid reaction.

4. Two experiments, made in order to ascertain whether the osteoclasts yielded any slightly acid or alkaline material having a solvent action on the bones, were attended with negative results.

5. In many cases, the osteoclasts present clusters of fine short hairs or filaments on the side in contact with the bone.

Kölliker believes that it may be fairly assumed that the same surfaces of bone are at one time the seat of active growth and at another of removal; and he believes that the process of removal is connected with increased pressure from the adjoining soft tissues and organs. This is to be noticed in the changes which the jaw undergoes during the development of the teeth. He suggests that the pressure of the growing dental sacs produces irritation in the osteoblastic layer, in consequence of which its elements become changed into osteoclasts, and assume new functions. When the pressure is removed, the former conditions return, and the cells resume their formative property.

The researches on which Kölliker's conclusions are founded were made on the embryos of sheep and cattle, and on calves of the first year, as well as on human embryos and on children. The osteoclasts of the teeth were studied in cats and pigs. He has not yet thoroughly investigated the process of absorption of bone in other animals; but he has ascertained that lacunæ and osteoclasts are present in birds and fishes. His researches have not included the pathological absorption of bone; but, from the numerous observations made by Rindfleisch, Lewschin, Bredichin, Nassileff, and Soborow, he believes that in many cases the conditions attending both pathological and healthy renewal of bone are the same.

THE candidates for the assistant-physicianship at St. Mary's Hospital are Dr. Berkart, Dr. Black, Dr. Ralfe, and Dr. Shepherd.

DR. GEORGE WEBSTER of Dulwich, long well known as one of the most active of medical reformers, and Dr. Alfred Carpenter of Croydon, have been appointed magistrates for the county of Surrey.

OPPRESSIVE as the heat has been in Europe during the past week, it has been still more severely felt in America. The deaths in New York have, within that period, been more than three times the average number.

THE sixteenth annual meeting of Hungarian naturalists and physicians will take place at Mehadia, in September next. The enrolment of names will commence on the 13th; and the business of the meeting will terminate on the 21st.

SOME of the gentlemen who signed the letter on the Public Health Bill, printed at pp. 13 and 14 of the last number of the BRITISH MEDICAL JOURNAL, desire to say that they by no means intend their remarks to apply to the employment of the Poor-law medical staff as deputy or assistant health-officers, with proper remuneration. The objection is only to their employment as sole or principal medical officers of health.

THE CAMP AT WIMBLEDON.

THE hospital arrangements at Wimbledon are the same as on former occasions. Assistant-Surgeon Temple of the Royal Artillery is in charge of the army hospital-tent; while Dr. Mayo, of the Inns of Court, represents the Volunteers, and has care of the hospital set apart for their use. We are glad to be able to state that the health of the Camp at Wimbledon has been good. There has been very little diarrhœa, and only one slight case of injury from lead-splash.

ROYAL COLLEGE OF SURGEONS.

AT a meeting of the Council of the College on the 11th instant, Mr. Henry Hancock, Surgeon to the Charing Cross Hospital, was elected President, in the vacancy caused by the retirement of Mr. George Busk, F.R.S.; and Messrs. T. B. Curling and F. Le Gros Clark were elected Vice-Presidents. Mr. Holt, of the Westminster Hospital, the recently elected Councillor, took his seat. Messrs. Erasmus Wilson, T. Holmes, and W. H. Flower, were re-elected Professors of Dermatology, Surgery, and Comparative Anatomy, respectively; and Dr. Humphry, Lecturer on Anatomy and Physiology. The report from the Court of Examiners on candidates passed and rejected at the primary and pass examinations for the diploma of membership during the collegiate year 1871-72, in continuation of the return presented a few weeks since, was submitted to the Council. It was mentioned that, during the past year, 349 gentlemen had been admitted members of the College, against 291 last year, thus showing an increase of 58.

FELLOWS IN THE ARMY AND NAVY.

WE desire to call the attention of the authorities to the claims of medical officers of the public services, who have taken the honours of the fellowship of the Royal Colleges of Physicians and of Surgeons in the three kingdoms, to have the appropriate initials appended to their names in the *Army and Navy Lists*. These are all respectively high honours, and are as honourable diplomas as some of the purely medical and university degrees. Some time ago, such letters were allowed to appear after the names of possessors of these qualifications, but latterly have been omitted. It would, we know, be agreeable to more than one possessor of them that they should be used; and they have a claim to the privilege.

THE CHOLERA.

AUTHENTIC numerical returns of the progress of cholera in Russia lie before us. They show that most imminent danger may be anticipated. In the government of Ekaterinoslaw there had been, on June 12th, in the town of Ekaterinoslaw, 316 cases, with 195 recoveries and 109 deaths. In the government of Kiew there had been, in the town of Kiew, on June 21st, 2105 cases, with 714 recoveries and 1001 deaths; and in Oumane, on June 10th, 196 cases, with 74 recoveries and 43 deaths. In Odessa, on June 23rd, there had been 173 cases, with 60 deaths; and in Kherson there had been, on June 21st, 301 cases, with 70 recoveries and 60 deaths. In Kamenets (Podolia) on June 10th, there had been 319 cases with 46 deaths. Cholera has also broken out in Moscow.

APPROPRIATE TEXTS FOR PECULIAR PEOPLE.

THE eccentricities of the "Peculiar People" have attracted a great deal of attention from German, French, and American writers. M. Dechambre quotes a number of texts which the "Peculiar People" have overlooked, and which formally record biblical approval of medical intervention for the relief of disease. Passing over the twenty-third chapter of Ecclesiasticus, which bids us "Honour the physician", and the passage between Naaman and Elijah, he invokes the more ancient and direct evidence of Moses himself and the ancient text of Exodus: If men "strive together and one smite another with a stone or with his fist and he die not but keepeth his bed: if he rise again and walk abroad upon his staff, then shall he that smote him be quit: only he shall pay for his loss of time and *shall cause him to be thoroughly healed.*" Here is the whole code of modern jurisprudence—incapacity for work, medical attendance, damages, interest and expenses of the illness. *Nil sub sole novum.*

VICTIMS OF SCIENCE.

SCIENTIFIC chemists form a very small class; and eminent, or promising scientific chemists, an exceedingly small class; and yet, if we go back a few years, the instances of violent death are very numerous. Going back thirty years, we find that in 1842, Mr. Hennell, chemist to the Apothecaries' Society, who, in conjunction with Faraday, was the first to produce alcohol from olefiant gas, met with his death by the explosion of fulminate of mercury or of silver. In 1855, a chemist of great promise, Mr. Mansfield, was burnt to death owing to an accident in the distillation of hydrocarbons; and in 1872, Mr. Chapman's sad death, which we recorded last week. Two lamentable instances of suicide are on the record—that of Mr. Witt a few years ago, and of Dr. Matthiessen in 1870. In each of these five examples the victim was a distinguished chemist, or a chemist of much promise; and all belonged to this country. The list comprises names of lesser note; as, for instance, Dr. Odling's two assistants, who were poisoned at St. Bartholomew's Hospital with mercury-ethyl and aluminium-ethyl; also a chemist who was destroyed by the breaking of a carboy of nitric acid in Sheffield, and an assistant to a London chemist who poisoned himself a few months ago. At this rate, the young English chemist is quite as likely to come to a violent end as the soldier engaged in warfare of average destructiveness. Nothing parallel to this state of things is to be observed in France or Germany; and the conclusion can hardly be resisted that the chemists of England are more reckless than those of other countries. It is instructive to observe how the peculiar circumstances under which English chemists are placed are calculated to develope a tendency of this description. Nowhere but in England is there so complete a divorce between success in a scientific point of view and in a worldly point of view. Nowhere does merit avail so little and favour so much in the obtaining of a chemical chair; and, as a necessary consequence, there is in England a degree of contempt for those who are officially the representatives of English chemistry which is most striking, and has often been the subject of comment.

DUGONG OIL.

ATTENTION has been recalled, by the contents of the Queensland Annexe at the International Exhibition, to the medical uses of the dugong oil. They have been declared by more than one medical practitioner, following Dr. Holt of Brisbane, to possess all the nutritive qualities of cod-liver oil, and to be equally useful in all the forms of tuberculous and wasting diseases which are benefited by the administration of cod-oil: it is alleged to possess an actually agreeable flavour, to be pleasant as an article of food, and to be acceptable to those whose stomachs reject cod-oil. At a recent dinner in the Annexe, the pastry was made with dugong oil, and pronounced excellent. This should make it a valuable medicine, and one which might with advantage be introduced into practical use by prescribing physicians in this country.

MEDICAL NIGHT-WATCHES AT BERLIN.

A COMMISSION for the care of the wounded in war still exists in Berlin, and has recently called into life a novel institution, that of sanitary night-watches. In order to save medical men from being disturbed at night and to provide medical assistance to the public at the same time, localities are engaged where physicians stay and a patient may be temporarily accommodated. It is intended to have ten metropolitan night-stations, two of which are opened already. Six medical men belong to each, and two of them take their turn conjointly with a barber-surgeon (*Heildiener*). Instruments, simple remedies, and ambulances are kept at hand; and a red cross, illuminated at night, indicates the places to the public.

SANITARY IMPROVEMENTS IN MANCHESTER.

OUR Manchester correspondent writes:—The Manchester and Salford death-rate has fallen considerably of late, the mortality of the latter town only amounting to 18 per 1,000 the week before last. This is probably due to telluric influences and an absence of lethal epidemics, rather than to any important sanitary improvements which have taken place of late. There is, however, a work of vast importance and great cost which has recently been commenced in Salford, in the shape of an intercepting sewer, designed to prevent a recurrence of those calamitous occurrences which have happened during periods of floods and heavy rains up to the present time. Hitherto, whenever there has been a freshet in the Irwell, the drains communicating with the foul river have been backed and blocked up by the very stream which they were intended to feed. The work now proceeding will put a stop to any such a catastrophe for the future, and may be expected to materially increase the salubrity of Salford. The contract for the first portion of the work amounts to £12,000; but this only represents a fractional part of the sum which the Corporation is prepared to expend upon the undertaking. The Manchester Corporation will also shortly be engaged in what may be looked upon as a notable sanitary improvement—viz., widening the narrow and crowded thoroughfare of Deansgate. This alteration cannot fail to do much good beyond liberating the traffic of Deansgate itself; it will open up and improve Deansgate for upwards of a mile. In the tortuous and gloomy streets of this locality, human beings are huddled together like sheep in a pen; and the vice and disease which are their only heritage they deal around with too liberal a hand.

DIRECTIONS FOR BATHING.

THE Royal Humane Society has issued the following instructions. Avoid bathing within two hours after a meal; when exhausted by fatigue or from any other cause; when the body is cooling after perspiration; and altogether in the open air if, after having been a short time in the water, there is a sense of chilliness with numbness of the hands and feet. Bathe when the body is warm, provided no time is lost in getting into the water. Avoid chilling the body by sitting or standing undressed on the banks or in boats after having been in the water. Avoid remaining too long in the water—leave the water immediately there is the slightest feeling of chilliness. The vigorous and

strong may bathe early in the morning on an empty stomach. The young, and those who are weak, had better bathe two or three hours after a meal—the best time for such is from two to three hours after breakfast. Those who are subject to attacks of giddiness or faintness, and those who suffer from palpitation and other sense of discomfort at the heart, should not bathe without first consulting their medical adviser.

CLIMATOLOGY OF ENGLISH BATHING-PLACES.

Dr. Beneke of Marberg, who has been publishing in the *Berliner Klinische Wochenschrift* some remarks on the English bathing-places, says that at Brighton he expected to gain some information about its climatic condition, temperature, and rates of disease and death. To his astonishment, however, he found that little or no information on these points was to be obtained; and he remarks that his English colleagues have done less in this matter than the practitioners of the German, Dutch, and Belgian health-resorts. There are, he says, some meteorological observations; but Dr. Ormerod told him "they were not to be depended on." Climatology and balneology, he says, are in a state of greater stagnation in England than almost any other department of medical science. The principal source of information on English climates is Sir James Clark's work, published in 1846.

OPERATION DAY.

We made an effort, a couple of years ago, to obtain from house-surgeons at the various metropolitan hospitals a list of expected operations during the ensuing week, and reserved space in our columns for the publication of the returns. Many of these gentlemen forwarded, as far as possible, the desired information, which proved of much service to visitors and students in London. Latterly, however, the usual returns have been rarely sent. A correspondent visiting one of our metropolitan hospitals, was fortunate in seeing a long series of capital operations performed. Struck with the importance of the occasion, he writes to us this week:

It seems a pity that opportunities like this of seeing comparatively modern and uncommon operations cannot be more publicly advertised. A country surgeon, spending a short time in London, may waste a good deal of his time in going the round of the hospitals, and yet miss what he most wishes to see. At some few hospitals, there is no list posted, and no means of learning, even on the operating day, what is going to be done.

Our own anxiety does not extend so much to provincial surgeons, because we believe they are not, as a rule, in the habit of spending their holidays in operating theatres, and do little more than pay a visit to their old school. But foreigners and students, many of whom devote some attention to operating theatres and their attractions, would be thankful to have information on the subject. To assist this desirable object, we shall be glad to furnish house-surgeons with printed forms, to be filled in and sent to the office of the Journal by two o'clock any Thursday afternoon; and shall hope to have the support of the house-surgeons in making the returns as complete as possible. So much for surgical operations. Why stop short with them? The amount of clinical material in London is unequalled in any city. Our hospitals are constantly teeming with rare and highly instructive medical and surgical cases, the study of one of which would be at least of equal importance to an ordinary capital operation, by whomsoever performed and whatever the result. It rarely happens, indeed, that cases of the greatest obscurity and interest are not to be found in one or other of the London hospitals; but these are made known amongst outsiders only to the casual visitor. At this moment, a case may be seen, under the care of Dr. West and Mr. Thomas Smith, at the Hospital for Sick Children, Great Ormond Street, which presents combined mental and physical characters which have, we believe, not been hitherto described; the mental symptoms pointing to obtuseness of intellect and absence of speech; while the fingers, toes, and scalp, are the seat of peculiar cyst-like or nævoid enlargements, the gums are enormously hypertrophied, and the skin exhibits molluscous-looking growths. The two younger sisters of this child show similar but less developed symptoms. Such rare and interesting cases as these pass through our hospitals only partially utilised for clinical purposes. Our Hospital Reports fulfil, in some measure, the duty of drawing attention to these cases; but, had we the more active support of members of hospital staffs in drawing attention to the existence of interesting clinical cases while under treatment, by a short note forwarded to us, we undertake to say that no less advantage would be gained than by encouraging attendance in the operating theatre.

LIABILITY FOR INFECTION.

In the Second Court at Westminster, in sittings at Nisi Prius, before Mr. Justice Quain and a special jury this week, was tried the case of Best *v.* Stapp. This action raised a very important question of liability for taking persons suffering from infectious diseases about, so as to endanger the health of others. Mr. Powell, Q.C., and Mr. G. Shaw were for the plaintiff; Mr. Field, Q.C., and Mr. Lumley Smith for the defendant. The plaintiff is a lodging-house keeper at Eastbourne. The defendant is a gentleman residing near London. The action was brought to recover damages for the losses the plaintiff has sustained by the death of his children and illness of his wife, and from being prevented from letting his lodgings, in consequence of the defendant having brought his family into the plaintiff's house when they were suffering from scarlet fever. The evidence for the plaintiff was given by his wife, Mrs. Best, who said that in August 1870, arrangements were made by the defendant's wife to take rooms in her (Mrs. Best's) house, and ultimately on September 1st, Mrs. Stapp, the defendant's wife, came with her family, governess, and nurse. The plaintiff had four children living in his house; Mrs. Stapp brought five with her. Mrs. Best was engaged when they came and did not see them, but she was told that Mrs. Stapp's little boy was ill from a cold, and he was put in bed. In a few days Mrs. Best spoke to Mrs. Stapp, in consequence of it having been suggested to her by her other lodgers that something more than cold was the matter with the children, but she was assured by Mrs. Stapp that this was not so. Mrs. Best also advised a doctor being called, but this was declined. On September 10th, a doctor was called in to attend Mrs. Stapp's daughter, who also was taken ill, and she was found to be suffering from scarlet fever. The doctor told Mrs. Best, this, but up to this time she had not known or heard anything about scarlet fever having been the illness from which Mrs. Stapp's family was suffering. On September 12th, Mrs. Best's child was taken ill. Shortly after that one of Mrs. Stapp's children died, and on the 29th Mrs. Best's child died. On October 1st, another of Mrs. Stapp's children died, and on the 16th another of Mrs. Best's. After the death of her first child, Mrs. Stapp went to London and never returned. Her family were not allowed to leave for some time by the officer of health, as they were not in a fit state to travel. The plaintiff's wife said that nothing at all was told to her previously to Mrs. Stapp coming to her house about the children suffering from scarlet fever, and evidence was given that Mrs. Stapp had endeavoured to conceal the fact from Mrs. Best, and also that they were absolutely affected with it when they went down to Eastbourne, and that Mrs. Stapp knew it. At the conclusion of the plaintiff's case, Mr. Field, on behalf of the defendant, submitted that there was no evidence against the defendant personally, and that the wife was not the agent of her husband to make the alleged false representations. Mr. Justice Quain ruled that, if the wife knew of the children being ill from scarlet fever at the time she took them to the plaintiff's house, there would be a verdict for the plaintiff, as the wife must be taken to be the agent of her husband, the defendant. The evidence for the defence was, that one of the children had suffered from scarlet fever, but had recovered, and that the doctor told Mrs. Stapp that they might be removed, as they were out of danger. Mrs. Stapp also denied having concealed the fact of the children having the fever from Mrs. Best, and contradicted generally the plaintiff's evidence. The defendant, Mr. Stapp, was examined, and admitted that he knew of his children having had the scarlet fever prior to their going to Eastbourne. He also said that he understood the doctor had

given his consent to the removal of the children. The jury ultimately returned a verdict for the plaintiff—damages, £120, with leave to move on both sides.

SANITARY EXPENDITURE.

THE following estimate of our expenditure on towns improvements and sanitary works is from the same source as our summary of Poor-law expenditure last week.

Metropolitan Local Management.		
Sewage and drainage works ...	£96,574	
Main drainage and other works by the Metropolitan Board	390,305	
Salaries and poundage—say one-half ...	44,170	
Law expenses and other payments—say one-half	55,893—	£586,942
Municipal Borough Accounts.		
Public works and repairs	£917,205	
Salaries and pensions—say one-third ...	49,396	
Other expenses—say one-third ...	202,808—	£1,169,409
Towns Improvement Acts.		
New works, maintenance of roads, streets, etc.	£742,724	
Lighting, sewerage, and drainage ...	139,566	
Rents, rates, taxes, and other payments	222,527	
Salaries and establishment charges ...	101,517—	£1,206,334
Local Boards of Health		
Public works	£2,086,780	
Private works	108,103	
General expenses	316,998—	£2,511,881
Poor-law Guardians.		
Cost of public vaccination		£63,573
Burial Boards.		
Laying out new and maintaining old grounds	£22,464	
Incumbents and ministers ...	14,999	
Salaries and wages	41,425	
Other expenses	24,779—	£103,667
Coal and Wine Duties.		
Thames Embankment and City streets ...		£198,197
Total		£5,840,003

The accounts which we have here to deal with are rendered to the central office by upwards of 2,000 local bodies—41 metropolitan vestries and districts, about 220 borough towns, 109 Town Improvement Commissions, 656 Local Boards of Health, and 329 Burial Boards. In addition to these, there are 648 Poor-law Unions, through whose agency public vaccination is effected. Using the figures broadly, the current demands of the year upon the metropolitan local management bodies were met by £600,000; the municipal boroughs, not acting as Town Improvement Commissioners, nor as Local Boards of Health, had to defray double the last amount, say £1,200,000; the Town Improvement Commissions expended as much as the boroughs—viz., £1,200,000. The Local Boards of Health exceeded the aggregate disbursements of the boroughs and the Town Improvement Commissions together. These Boards spent upwards of £2,500,000, of which £2,086,000 are ascribed to public works. The charges of Burial Boards amounted to £100,000, while the revenue raised by the City of London and applied to metropolitan improvements may be stated at £200,000. Public vaccination entailed an outlay of £64,000.

THE MANCHESTER ROYAL INFIRMARY.

OUR Manchester correspondent writes:—The death of Mr. Beever, Senior Surgeon to the Manchester Infirmary, does not leave a vacancy in the Infirmary staff, as the rule has been suspended for four months which renders it compulsory on the governors to announce a vacancy on the death or resignation of any of the staff. In the meantime, they are preparing their scheme, bringing in what they demand shall be looked upon as a Reform Bill. The scheme must, of course, be judged upon its merits when it is made public. In the meantime, *quieta non movere* is a proper maxim for the public to adopt. One thing is certain: they will, if possible, alter the present mode of election, which is admittedly bad. But, while it is admitted that the present plan is very faulty, it must be confessed that there is some danger of a change being made for the worse. The object should be to appoint a committee sufficiently intelligent (*i. e.*, *au courant* with qualifications and testimonials) to be able to gauge the comparative merits of rival candidates, sufficiently single-minded to disarm any suspicion of professional prejudice or jealousy, and sufficiently large to avoid all possibility of cliqueism. This does not appear, on the face of it, an impossible task to accomplish; and it is quite certain that nothing less than such an electoral board will satisfy the general body of trustees, with whom the ultimate approval and decision lie, and who, in accepting the scheme, will be disfranchised, so performing a sort of "happy despatch" for themselves.

THE HOSPITAL FOR SICK CHILDREN.

IN the presence of a large assemblage of the friends of the institution, the Princess of Wales, accompanied by the Prince of Wales, performed the ceremony of laying the first stone of the new buildings of the Hospital for Sick Children, Great Ormond Street, on Thursday afternoon. We have previously given in some detail the proposed arrangements of the new building. Necessity has imposed on the Committee the task of rebuilding. Care has been taken, however, that this shall not interrupt the work of the hospital even for a day; for the reconstruction will be carried out in separate portions, as means are afforded to defray its cost. The largest, costliest, and most necessary part is that now about to be commenced. This portion will contain the much needed new arrangements for out-patients, the dispensary accommodation for one hundred and nine in-patients, the kitchen, and the more important offices of the whole building. The contract for the new building is £35,890, towards which the Commitee have £24,000 in hand. Twelve thousand pounds have to be provided, and the Committee confidently appeal for aid.

TOPSY TURVY.

Apropos of the Bill to protect children from being trained as acrobats, some curious physiological statements have been made in the House of Lords. The Earl of Shaftesbury, in support of the Bill, said a stop ought to be put to the dangerous performances carried on up and down the country. The training of children, he says, is a disgusting and cruel practice, and often has astonishing effects. He remembered a boy in one of his ragged schools who was so affected by the training that he had to be allowed certain intervals from his lessons, so that he might run into a corner and stand on his head several minutes; and, more surprising still, the boy's head seemed quite turned.

THE SOUTH WALES BRANCH.

THE subject of Mr. T. J. Dyke's address to the Monmouthshire and South Wales Branch of the Association on Wednesday, July 17th, at their meeting at Merthyr Tydfil, will be the plan of Downward Intermittent Filtration of Sewage, suggested by Dr. Frankland, and put into practice by Mr. Bailey Denton in the meadows below Merthyr. The Royal Agricultural Society meets at Cardiff this July—from the 15th to the 19th. On Thursday, the 18th, Mr. Bailey Denton will explain to the Committee and visitors, on the filtering areas, the *rationale* and details of his scheme. It will afford a very favourable opportunity for our members to visit this locality and inspect this most successful operation of filtration of sewage.

ARMY MEDICAL REGULATIONS.

IN the House of Commons, on Tuesday, Mr. Torrens asked the Secretary of State for War whether, notwithstanding the assurance given in this house by his predecessor, the member for Droitwich, it was intended to give retrospective effect to the medical regulations for the army issued in 1866 and 1867, so as to deprive medical officers who had volunteered under the regulations of 1859 for service on the West Coast of Africa of the pay and promotion guaranteed to them by those regulations as the inducement to volunteer for that unhealthy and disagreeable service. Mr. Cardwell said that he had been informed by the Director-General of the Army Medical Department that there had been

no change of practice in dealing with the African medical officers since 1859. The system has always been to allow each year on the Coast to count as two years towards the five years required as a qualification for the rank of surgeon and towards retirement, but not towards increase of pay or the rank of surgeon-major.

ACCIDENTS AT RAILWAY STATIONS.

Two accidents—one causing death—have occurred within the last few days to railway servants at the metropolitan stations. On Monday of last week, William Pryor, aged 20, a carriage-cleaner, slipped between the footboard and the platform while cleaning carriages; and, having been taken to the Royal Free Hospital, was found to have fracture of one arm and compound fracture of one leg. Both limbs were amputated, but he sank and died from the shock of the injury. On Friday last, a man named William Aubrey, aged 21, also in the employment of the Great Northern Railway Company, met with an accident while engaged in shunting a train. He got his right foot into the points, and it was badly crushed. His left foot was severely lacerated from the instep to between the toes. Mr. Soutter was in attendance immediately afterwards, and bound up both his feet, preparatory to his removal to the Royal Free Hospital, where he was taken immediately, and his right foot amputated. The patient is doing well.

UNHEALTHY REVACCINATION.

L'Imparziale states, on the authority of the *Gazetta della Spezia*, that recently seventeen persons were admitted into hospital, after revaccination, with large phlegmonous swellings of the arms at the points where the operation had been performed. In one man, a sailor, sloughing took place, and was followed by death. The cases occurred in persons who were all revaccinated on the same day; and none of those operated on on other days were affected. The occurrence is attributed to bad lymph—taken probably from a diseased cow. *L'Imparziale* remarks that further information is required, before any definite conclusion can be arrived at as to the cause of the unfortunate event and the measures which should be taken to prevent its recurrence.

KING'S COLLEGE COMMEMORATION-DAY.

FRIDAY, July 5th, was a busy day at King's College, the foundation of the College being celebrated in all pomp for the third time. The intimate connexion between the institution and the Established Church of England, brought several of the bishops to aid Principal Barry and the professors in carrying out the programme of the day. That part of it devoted to hospitality was well patronised. An admirable luncheon was served to about one hundred and fifty ladies and gentlemen, the medical department being represented by Dr. George Johnson, Mr. Partridge, Mr. John Wood, Dr. Bentley, Dr. Guy, and Dr. Ferrier. The Principal made an admirable speech to the toast "Floreat Collegium". The prizes were afterwards distributed to the successful competitors by the Bishop of Gloucester. The report of the condition of the medical department was most satisfactory.

A CATALOGUE OF HOSPITAL DEFECTS.

THE *Correio Medico de Lisboa*, in concluding a series of articles on the St. Joseph's Hospital in Lisbon, sums up the shortcomings of the institution in the following terms. The hospital is badly situated and badly constructed; more than eight hundred patients are crowded in the four stories of which it consists. There is no ventilation. There are no means of warming, not even in winter, where the temperature in the wards falls to 37 or 38 deg. Fahr. The light of the sun does not enter the wards. There are no latrines. There are no wards for venereal diseases. There are no wards or sections of the building for separating cases of severe operation. There are no quarters for the reception of delirious patients. When a patient suffering from fever becomes delirious, a strait waistcoat is put on him, and he is left to rave day and night, to the discomfort of the patients in the same and in the adjoining wards. There are no wards for the isolation of patients suffering from contagious diseases. The only two diseases which are recognised in the hospital as contagious are small-pox and itch. There are no convalescent wards. There is no provision for personal cleanliness. Thus, as regards hygiene, there is a total absence of all the necessary conditions. Further, the medical organisation is defective. There are no resident medical officers, nor any substitute for them. The system of nursing is faulty. There is neither quiet nor silence in the wards. There is a want of perfect confidence in the medical staff. The cleaning of the wards and the transport of food are carried out in an inconvenient and unsatisfactory manner. In fine, in all its internal arrangements the hospital is a century behind the present age. We learn that our contemporary, in consequence of his outspeakings regarding the faults of the great civil hospital in Lisbon, received some time ago a censure from the Government. The truth of his statements, however, appears to be now virtually admitted; inasmuch as the Portuguese Government has lately issued an order for the formation of a commission to find a site and to present plans for a new hospital.

POISONOUS WALL-COVERINGS AND DIPHTHERIA.

THE writer of the following remarks is the same gentleman who has already on several occasions communicated to the JOURNAL his opinion on the poisonous character of wall-papers.

It has been (he now says) recently stated that, in consequence of the late severe outbreak of diphtheria at Melbourne, Victoria, in places remarkable for salubrity of climate, and where sanitary laws are carried out with a scrupulous regard to the health of the community, a Royal Commission, composed of medical men, has been appointed to investigate the cause of such illness. It may therefore not be inopportune to suggest to the Royal Commissioners the advisability of deviating so far from the beaten track of sanitary research as to examine the nature of the wall-coverings in those houses where this terrible disease has been at work; for it should be generally known that a very fruitful cause of severe attacks of throat-disease closely resembling diphtheria, if not the disease itself, exists in the presence of arsenic in wall-coverings, whether in paper, oil-paint, or distemper wash. Wall-papers containing this deadly poison are largely exported from this country for use in our colonies, and also in India, where the effects of climate are so trying to health that every preventable cause of disease ought to be all the more carefully avoided. A friend not long returned from India informs me that green papers are now frequently used in the Indian bungalows at the hills, the occupants being totally unaware of the danger; consequently, persons who are sent to the hills for health, often inhale this poison unawares, and then wonder why the mountain air has done so little for them. It should be distinctly understood, and cannot be too often repeated, that, as a general rule, every paper having a speck of green in the pattern contains arsenic, and will sooner or later prove injurious. But, unfortunately, the danger is not confined to green only. This deadly and volatile poison is used in papers of all colours, so that there is no safety now-a-days from being poisoned against one's will, except by having every paper in your house analysed by a reliable analytical chemist. Papers which have blue in the pattern appear to be extremely hurtful; if not arsenical, they frequently contain other poisons, such as blue verditer (carbonate of copper), or Prussian blue, both of which pigments have very injurious effects, the dust given off from the papers mingling with the atmosphere, and thus being imperceptibly inhaled with every breath. It should also be observed that arsenic is largely used in oil-paints, which are consequently exceedingly dangerous, owing to the escape of the poison in a gaseous form, a fact apparently unrecognised by the chemists and physicians of Great Britain and Ireland, though well known to their brethren in Germany.

Many years of personal experience and observation as to the effects of arsenical wall-papers have fully convinced me that exceedingly severe affections of the throat and also of the lungs are due to this cause; and I trust this warning may meet the eye of some of the physicians at Melbourne who are interested in investigating the cause of the mysterious outbreak of diphtheria alluded to, which may perhaps be but the prelude to other types of disease—in "localities known to be salubrious." If those who have the charge of the public health would make it a rule to have the wall-papers carefully analysed in every instance where disease refuses to yield to medical treatment, or where the symptoms are of an anomalous and perplexing character, we should soon have the public press teeming with cases of arsenical poisoning, for this poison is to be found on the walls of the majority of dwellings of all classes—in

the abodes of the rich and poor alike. Public feeling on the subject needs to be aroused; and it is to be hoped that public indignation will ere long be loudly expressed at such misapplication of sanitary science, which, while fully recognising the dangers of sewer-gas and impure water, can leave altogether unnoticed this universal poisoning of the atmosphere of human habitations.

When the subject is thoroughly investigated, it will be found that arsenic on the walls is just as much a deadly foe as sewer-gas; and so long as our walls are loaded with a poison which is both deadly and volatile, it cannot surely be said with truth concerning any locality either in the United Kingdom or our colonies, that "sanitary laws are carried out with scrupulous regard to the health of the community." For details of cases where diphtheria and other diseases resulted from occupying rooms with arsenic on the walls, I would refer to the *Green of the Period* (Routledge), which contains very important statements by Professor Hofmann, Dr. Letheby, Dr. Orton, and other physicians, concerning cases of poisoning from this cause. Further details have also been given in two articles which appeared in the columns of the BRITISH MEDICAL JOURNAL some months since.

ALDINI PRIZE ON ELECTRICITY.

THE Academy of Sciences in Bologna has announced that a prize of 1200 *lire* (£48) will be awarded to the author of the best scientific experimental essay on galvanism or dynamic electricity. Essays intended for the competition must be sent in between July 1st, 1872, and June 30th, 1874, and must be written in Italian, Latin, or French. They may be either written or printed; but, in the latter case, must not have been published previously to the two years above mentioned. Each essay is to bear a motto, and to be accompanied with an envelope stating the name of the author. They must be addressed to the Perpetual Secretary of the Academy of Sciences of the Bologna Institution.

SCOTLAND.

SMALL-POX IN EDINBURGH.

SMALL-POX has so far disappeared in Edinburgh, that arrangements have been made whereby the fever patients in the Canongate Hospital may be removed to the Royal Infirmary, and the small-pox patients removed as soon as possible from the hospital at Launston to the Canongate.—Small-pox has almost disappeared from Aberdeen.

THE CHAIR OF FORENSIC MEDICINE IN THE GLASGOW UNIVERSITY.

THE manner in which the Crown has of late years dispensed its patronage in the University chairs of Scotland leads us confidently to expect that the best candidate will succeed Dr. Rainy in the Glasgow chair of medical jurisprudence. In a country where facilities for scientific research are not very prodigally supplied, it is highly important that the best use should be made of those opportunities placed within our reach. The vacant chair at Glasgow—attached to which are large laboratories, and means afforded for utilising them for the advancement of science—is one of the few prizes of the kind in the country. We think that in the present case, without disparaging the claims of the other candidates, there can be no doubt that the high class and numerous scientific labours of Dr. Gamgee entitle his candidature to the most favourable consideration. Dr. Gamgee's work points to the highest attainments, not only on his own subject, but in other branches of medical science. As a practical teacher and lecturer, he can fairly claim long experience and most excellent success.

IRELAND.

CONVALESCENT HOSPITAL FOR BELFAST.

AN influential meeting has been held in Belfast, to devise means for the erection and support of a convalescent hospital. The ground for it, consisting of over fourteen acres of the Throne Lands, free of rent, has been generously presented to the General Hospital. It is intended not only for patients who have been in the General Hospital, but for those who are recovering from sickness and have not been in any hospital. All patients will have to pass the committee or staff of the General Hospital before admission into the convalescent home. The site is admirably adapted for the purpose, commanding a beautiful view of Belfast Lough, and protected by a belting of plantation. The benevolent donor is Mr. Samuel Martin of Killybragh; the only stipulation being the very proper one, that suitable buildings shall be erected in a reasonable time. At a meeting lately held, the sum of more than £3,000 was contributed; and Sir W. G. Johnson stated, on behalf of Lady Johnson, that she would have great pleasure in giving £500 towards the erection of the institution.

THE HUNTERIAN MUSEUM.

IN his annual report to the Council of the Royal College of Surgeons, Professor Flower, the Conservator, states that the additions to the Pathological Collection for the past year has been eighty-eight in number, as compared with sixty-two during the previous year, and that the microscopical characters of all recent specimens sent to the College and thought worthy of preservation have been carefully described and delineated by Mr. Goodhart, the Pathological assistant, who, by the great zeal with which he has performed the duties entrusted to him, appears fully to deserve the eulogium of the Conservator.

In the Osteological Collection, although but little has been expended in the purchase of specimens, the additions are of considerable importance. Among them, especially deserving of notice is a skeleton of an extremely rare whale, the *Berardius Arnuxii*, from New Zealand, belonging to the family of Xiphioids. The species was first known from a skull received at the Paris Museum in 1846, having been obtained by Captain Bérard, of the French Navy, from an animal stranded in Akarva Harbour, New Zealand. This remained the unique example of the species in any European museum until the arrival of the present complete skeleton, prepared from an animal thirty feet in length, which ran aground on the beach near New Brighton, Canterbury settlement, on the 16th December, 1868, and which fortunately came into the possession of Dr. Julius Haast, F.R.S., the Curator of the museum at Christchurch. Dr. Haast offered it to the museum in exchange for an equivalent in value to be expended in specimens for the Christchurch Museum. Mr. Erasmus Wilson, F.R.S., a member of the Council, most liberally presented it to the College.

The series illustrating the structural peculiarities of human races has received two very valuable additions in skeletons of both sexes of the extinct aboriginals of Tasmania, presented by Mr. Morton Allport of Hobart Town. Both have been articulated. The male is in exceedingly good preservation; the female, unfortunately, is less complete, but still presents many interesting features.

The liberality with which the Smithsonian Institution of Washington is conducted has been shown by various important additions to the museum, reported in previous years, and more especially on the present occasion, by a large series of skulls and skeletons of North American mammals, several of which were new to the collection. In return, the Council of the College sent a set of casts of the interior of crania of various races of men and animals, and some other duplicate objects. The skeleton of a fine adult male Porbeagle shark, about eight feet long, taken near Rye last November, is a very important addition to the osteological series, as the difficulties which have usually attended the attempts made to preserve the osseous system of cartilaginous fish have been so great that the structure of this interesting group has hitherto been very imperfectly represented in anatomical museums. These difficulties have, however, in the present instance, been in such great measure overcome by the skill and patience and great experience of the articulator, Mr. James Flower, as to have afforded a very instructive specimen to students, and to give hopes of the possibility of exhibiting the osteology of other species of the group as opportunities occur.

To the Dermatological Collection Mr. Erasmus Wilson has again been a valuable contributor, having added twenty-five beautifully executed models of eczema, ecthyma, struma, and lupus ichthyosis, hypertrophy of the nose, etc. Mons. Voillemier, Surgeon to the Hôtel Dieu, Paris, has presented two models representing elephantiasis of the scrotum, with its cure by operation. Sir William Fergusson has considerably augmented the pathological series. Mr. Kiernan has presented the whole of his collection. The Zoological Society and the Smithsonian Institution have as usual been liberal benefactors. The names of Professor Peters of Berlin, Professor Gervais of Paris, Julius Haast, etc., again appear as donors to the museum.

ST. ANDREW'S MEDICAL GRADUATES' ASSOCIATION.

THE sixth anniversary session of this Association was held at Willis's Rooms on Saturday, July 6th. The report of the Council stated that the Association numbers 463 members, 25 associates, and 45 honorary members. The Council expressed a deep sense of the loss which has been sustained in the death of Dr. G. E. Day, and sincere sympathy with his widow; they took the opportunity of thanking Sir Thomas Watson, Sir James Paget, Dr. O. H. Bell, Mr. Erichsen, Dr. Matthews Duncan, and Dr. Sieveking, for consenting to give their valuable services, in conjunction with a Committee of the Council, in raising the "Mrs. Day Fund," which already amounts to £630, with good promise of further increase.

The following were elected officers of the Association for 1873:—*President:* C. A. Lockhart Robertson, M.D. *Vice-Presidents:* W. Cholmeley, M.D.; A. Wynn Williams, M.D.; G. W. Balfour, M.D. (Edinburgh); J. A. Lush, M.D., M.P. (Salisbury); T. Ballard, M.D.; L. W. Sedgwick, M.D. *President of Council:* B. W. Richardson, M.D., F.R.S. *Council:* T. O. Dudfield, M.D.; S. Day-Goss, M.D.; W. F. Cleveland, M.D.; G. Buchanan, M.D. (Glasgow); J. T. Griffith, M.D.; A. Wiltshire, M.D.; G. Ross, M.D.; C. Royston, M.D.; W. Brewer, M.D., M.P.; J. Lockhart Clarke, M.D.; Wharton P. Hood, M.D.; J. Murray Lindsay, M.D. (Mickleover, Derby); R. H. Semple, M.D.; T. B. Christie, M.D. (Ealing); J. Bower Harrison, M.D. (Manchester); S. Hill, M.D.; E. Humby, M.D.; J. T. N. Lipscomb, M.D. (St. Alban's); J. D. Macdonald, M.D., F.R.S. (Netley); H. Moon, M.D. (Brighton); R. Norris, M.D. (Birmingham); R. B. Painter, M.D.; E. J. Waring, M.D.; W. F. Coles, M.D. (Croydon); G. Cordwent, M.D. (Taunton); E. Crisp, M.D.; H. Davis, M.D. (Putney); R. Hassall, M.D. (Richmond); C. Holman, M.D. (Reigate); S. Lawrence, M.D. (Montrose); E. T. Watkins, M.D.; W. Rhys Williams, M.D. *Treasurer:* J. H. Paul, M.D. *Secretary:* W. B. Woodman, M.D. *Editor of "Transactions":* Leonard W. Sedgwick, M.D.

The President, Deputy Inspector-General Gordon, C.B., delivered an interesting address on "The Army Surgeon, his work and works." In commencing his address, he said—"My first duty is most gratefully to acknowledge the high distinction the members of the St. Andrew's Medical Graduates' Association have been pleased to confer upon me, in selecting me as the medium through whom they desire to manifest their goodwill towards their professional brethren in the army, for in this light only can I look upon the circumstance to which I owe the honour of now addressing you." He then proceeded to describe the duties of an army surgeon, shewing that the success or failure of a military expedition often hinged on the health of the men; and, further, that with the largely increased armies of the present day, not only is the increased liability to camp-diseases, also that, in proportion to the prevalence of these diseases, is the injury and hardship inflicted on the soldier-yielding part of the population and on the purses of the ratepayers. He drew attention then to the influence of the army on the condition of the civil population. "Our recruits are selected lives, and being so, withdraw so much of the health standard; leaving, in the persons of those rejected, the more or less diseased. The greater the number of soldiers thrown back upon civil life affected with disease, the greater the burthen they become to society; the greater the expense, by reason of protracted sickness, and often crime, into which they fall; and also the greater the injury to public health through the diseased children they propagate. Hence it is that the influence and vocation of the military surgeon, although chiefly exerted in the army, are by no means limited thereto, but pervade civil life to an extent greater, no doubt, than is at first recognised." Proceeding to details of the army surgeon's duties in peace and in war, he spoke of the "vexed division of the military services into combatant and non-combatant. In one sense, and that a very important one, who was so entitled to rank among the former as the medical officer, whose whole career is passed in combatting enemies of humanity, whether physical and open as the arrow, the shot, the shell, in the day of battle, or hidden and mysterious as the epidemic, the exhausting sickness, the pestilence that walketh in darkness? No wonder that such enemies thin our ranks and maim the survivors, in health, if not in limb; accordingly, statistics of campaigns shew that death is then busiest among the medical officers, among whom a larger proportion perish than among their regimental brethren, including the casualties of battle." He then described the improvements in the soldier's life due to the influence of the army surgeon: the improved sleeping accommodation, the increased facilities for preserving personal cleanliness, and the improvement in the character of the food. Many of the principles of military hygiene—such as those relating to barrack and hospital construction, the proper size of rooms, and appropriate sites for these buildings, put forth in modern times by sanitary reformers, were to be found in the works of old army writers, such as Pringle, Monro, Jackson, Bell, and Ballingall.

"Some diseases have, it may be said, been abolished in the army, through the exertions of military medical men. Typhus fever, for example, which, even so lately as the days of the Peninsular war, was literally *the* army disease, is now next to unknown; dysentery of a severe type is never now met with except in the tropics: and scurvy is all but unknown, except under very unusual circumstances. So also with small-pox: the care with which vaccination and re-vaccination are performed, and other hygienic measures adopted, has brought cases of this disease to their minimum among the troops. The efficiency with which protective measures are employed have rendered such a thing as a general epidemic of infectious disease—scarlatina, for instance—unknown; and although, unhappily, means have not yet been discovered to similarly exclude cholera, when that dire malady sweeps over a military station as it does in India, nevertheless, by removing the troops away from the locality to a more healthy district, a great deal has been achieved to diminish its ravages. This measure, adopted first with regard to the yellow fever in the West Indies, was practised in India so long ago as 1825; and yet, to judge from recent printed statements, the measure would seem as but of yesterday. In both cases its authors were army surgeons. Many other sanitary improvements of the greatest importance to the soldier have been introduced by army medical officers; many more would have been so had their recommendations been fully acted upon. Yet, what is by no means encouraging, is the fact, that in comparatively few cases are the names of their actual originators mentioned in connection with them. You hear that such and such improvements were introduced by Lord This or Lord That; but who ever hears a word about the pertinacity with which the necessity for them had been urged by Doctor So-and-so?"

The President next passed in review the Franco-German war in its medical aspect; and concluded his address with the following summary of opinion.

"In regard to the very important subject of hospital diseases, the experience of the late war, and inquiries arising out of it, in France, in England, and elsewhere, have done more to give us a clear insight into their etiology and pathology than we have hitherto possessed, and thus the better enable us not only to treat them when they occur, but to guard against their occurrence among the wounded. M. Demarquay, in Paris, has in a manner made this investigation his own.

"Finally, I would briefly enumerate, as they were written at the time, a few of the other lessons to be gathered from the great drama recently enacted; confining myself to that portion of it with which I was more immediately connected—namely, the siege of Paris. These lessons are the following. In all arrangements having reference to war, the requirements of the wounded demand pre-eminent attention. The necessity and importance, in a public point of view, of the highest professional skill, the best attendance and attendants that are available, have been demonstrated. The importance, also, in a public point of view, of the services of surgeons, made itself apparent during the siege, and was then frankly acknowledged by the authorities, civil and military. It was well known that a considerable amount of the mortality in hospitals was the result of administrative power being in the hands of non-medical persons: and demonstrated that those conditions required to be altered on future occasions, that all the needs and necessities of sick and wounded men should be controlled and ministered to by professional men. The superiority of huts and tents over permanent buildings as hospitals, gives rise to the question whether, in the event of its being possible on future similar occasions to use these alone, this ought not to be done. The want of properly trained *brancardiers* for the removal of wounded men having been the cause of much suffering to the latter, it is incumbent to have for the future specially instructed men for this purpose, as well as for attendance on them in hospital. It is, moreover, essential for the comfort of the wounded. that the carriages used for their transport from the field of battle to the hospitals should be of the lightest description compatible with strength; their springs of the best material, elastic, and in all respects well finished; and that the conveyances be well horsed, so that injured soldiers may be conveyed as rapidly and with as much ease as possible to the hospitals provided for them."

Dr. Richardson, F.R.S., proposed, and Dr. Lyon Playfair, M.P., seconded, a vote of thanks to Dr. Gordon for his excellent and instructive address.

In the evening, the members and their friends dined at Willis's Rooms; the President in the chair. Admiral Sir E. Belcher, K.C.B., Sir A. Armstrong, K.C.B., Dr. Lyon Playfair, M.P., and Dr. Halley, were among those present. A genial chairman and a good dinner combined to secure a very pleasant evening.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION: FORTIETH ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in Birmingham, on the 6th, 7th, 8th, and 9th days of August next.

President—JOHN WHIPPLE, Esq., F.R.C.S., Consulting-Surgeon to the South Devon and East Cornwall Hospital.

President-elect—ALFRED BAKER, Esq., F.R.C.S., Senior Surgeon to the General Hospital, Birmingham.

An *Address in Medicine* will be delivered by SAMUEL WILKS, M.D., F.R.S., Physician to and Lecturer on Medicine in Guy's Hospital.

An *Address in Surgery* will be delivered by OLIVER PEMBERTON, Esq., Surgeon to the General Hospital, and Professor of Surgery in Queen's College, Birmingham.

The business of the Annual Meeting will be conducted in *five* Sections, viz.:—

SECTION A. MEDICINE.—*President:* Dr. Bell Fletcher, Birmingham. *Vice-Presidents:* Dr. J. W. Ogle, London; Dr. Wade, Birmingham. *Secretaries:* Dr. Sutton, 9, Finsbury Square, London; Dr. Johnston, 9, Easy Row, Birmingham.

SECTION B. SURGERY.—*President:* Sir William Fergusson, Bart., F.R.S., London. *Vice-Presidents:* George Southam, Esq., Manchester; J. Vose Solomon, Esq., Birmingham. *Secretaries:* Furneaux Jordan, Esq., 22, Colmore Row, Birmingham; T. Vincent Jackson, Esq., Darlington Street, Wolverhampton.

SECTION C. MIDWIFERY.—*President:* Dr. Evory Kennedy, Dublin. *Vice-Presidents:* Samuel Berry, Esq., Birmingham; Dr. J. Matthews Duncan, Edinburgh. *Secretaries:* Dr. Underhill, Summerfield, West Bromwich; Lawson Tait, Esq., Great Charles Street, Birmingham.

SECTION D. PUBLIC MEDICINE.—*President:* The Rev. Dr. Haughton, D.C.L., F.R.S., Dublin. *Vice-Presidents:* Dr. Birt Davies, Birmingham; Dr. T. P. Heslop, Birmingham. *Secretaries:* Dr. Arlidge, Newcastle-under-Lyme; Dr. Alfred Hill, Winson Green, Birmingham.

SECTION E. PSYCHOLOGY.—*President:* Dr. Maudsley, London. *Vice-Presidents:* Dr. J. Batty Tuke, Cupar, Fife; Dr. J. Crichton Browne, Wakefield. *Secretaries:* Dr. G. F. Bodington, Sutton Coldfield; Dr. J. Thompson Dickson, 59, Queen Anne Street, Cavendish Square, London.

All the meetings in connection with the Annual Meeting will be held at King Edward's School, New Street.

The five Sections will be held—A. *Medicine:* Governors' Room, King Edward's School. B. *Surgery:* Lecture Room, King Edward's School. C. *Midwifery:* Upper Class Room School House, King Edward's School. D. *Public Medicine:* Classical School Room, King Edward's School. E. *Psychology:* Lower Class Room School House, King Edward's School.

The General Meetings and the Addresses in Medicine and Surgery in the Classical School Room.

The Annual Museum will be held in the English School Room.

TUESDAY, *August 6th.*

1 P.M.—MEETING OF COMMITTEE OF COUNCIL—Governors' Room.
3 P.M.—MEETING OF GENERAL COUNCIL—Governors' Room.
8 P.M.—FIRST GENERAL MEETING—Classical School Room.

Business—
President resigns Chair to President-elect.
Vote of thanks to Ex-President.
The President's Address.
REPORT OF COUNCIL and discussion thereon. Election of General Secretary; election of Auditors.

WEDNESDAY, *August 7th.*

9.30 A.M.—MEETING OF NEW COUNCIL.
11 A.M.—SECOND GENERAL MEETING.

Business—
Appoint place of meeting for 1873, and President-elect. Presentation of Hastings Medal.

11.30 A.M.—ADDRESS IN MEDICINE, by SAMUEL WILKS, M.D., F.R.C.P., F.R.S., Physician to Guy's Hospital.
1 P.M.—PUBLIC LUNCHEON—Exchange Assembly Rooms.
2 P.M.—MEETINGS OF SECTIONS—Exchange Assembly Rooms. Adjourn at 5 P.M.
9 P.M.—PRESIDENT'S SOIRÉE—Town Hall.

THURSDAY, *August 8th.*

10 A.M.—THIRD GENERAL MEETING—Classical School Room. Reports of Committees.
11 A.M.—ADDRESS IN SURGERY, by Professor OLIVER PEMBERTON, Surgeon to the General Hospital.
1 P.M.—PUBLIC LUNCHEON—Exchange Assembly Rooms.
2 P.M.—MEETINGS OF SECTIONS.
6.30 P.M.—PUBLIC DINNER—Exchange Assembly Rooms.

FRIDAY, *August 9th.*

10 A.M.—MEETINGS OF SECTIONS.
1 P.M.—PUBLIC LUNCHEON.
2 P.M.—CONCLUDING GENERAL MEETING.

RECEPTION-ROOM.—The upper Corridor will be fitted up as a Reception-Room, and will be opened at 10 A.M. on Tuesday, August 6th, and on the following days at 8 A.M., for the issue of tickets to members and for supplying all necessary information.

Gentlemen are requested to register their names and addresses in the Reception-Room immediately after their arrival.

The Offices of the General Secretary, of the Editor of the JOURNAL, and of the Honorary Local Secretaries, will be found in connection with the Reception-Room.

The Honorary Local Secretaries are:—T. H. Bartleet, Esq., 8, Old Square; Dr. Balthazar W. Foster, 16, Temple Row; and J. F. West, Esq., Broad Street.

On Friday and Saturday, excursions will be arranged to visit (1) Dudley Caverns and Lord Dudley's Ironworks; (2) Stoke Salt Works, the Sanatorium, and the Lickey Hills; (3) Warwick, Leamington, and Kenilworth; (4) Stratford-on-Avon.

On Friday, a Flower Show will be held at the Botanical Gardens, Edgbaston, to which members of the Association will be admitted on presenting their cards.

GENERAL ARRANGEMENTS.—*Reception-Room.*—Provision will be made for the receipt and postage of letters, and for the care of parcels, etc. A writing-room and lavatories will be provided.

The General Post Office is in New Street, and the Postal Telegraph Office is in Cannon Street, near King Edward's School.

Gentlemen intending to visit Birmingham during the meeting are requested to send their names as soon as possible to the Secretaries of the Visitors' Committee—Dr. Mackey, Newhall Street; and Mr. Lloyd Owen, Newhall Street.

Members requiring Private Lodgings are also requested to apply at once to either of the Secretaries of the Visitors' Committee.

HOTELS.—The following are the chief hotels: "The Hen and Chickens", New Street; "The Queen's", attached to the London and North-Western and Midland Railway Station; "The Great Western", attached to the Great Western Railway Station; "The Union", Union Street; "The Stork", Old Square; "The Swan", New Street; "The Royal Hotel", Temple Row; and at Edgbaston, "The Plough and Harrow".

The new Club Masonic Hall, New Street, will (by the kindness of the Committee) be open to members of the Association during the meeting.

The Honorary Local Secretaries regret that up to the present the railway companies have refused to grant any extra accommodation to the members of the Association visiting Birmingham.

THE ANNUAL MUSEUM.—The Committee invite contributions of the following articles.

1. New or improved Surgical Instruments or Apparatus.
2. New Drugs or Pharmaceutical Preparations.
3. New Articles of Diet for Invalids.
4. New Medical Works.
5. Pathological Specimens, wet or dry; and Casts, Photographs, Drawings, or Diagrams, illustrative of Pathological Conditions.
6. Preparations, etc., illustrative of Diseases of the Organs of Circulation; and Instruments employed in their detection and treatment. It is the intention of the Committee to arrange these in a separate department of the Museum.

Contributors are requested to send a description of the matters which they propose to exhibit to the Honorary Secretaries before July 13th, as it is intended to issue a printed catalogue.

CHARLES J. BRACEY, M.B., Old Square, Birmingham.
ROBERT JOLLY, M.D., Newhall Street, Birmingham.

NOTICE OF MOTION by DR. A. B. STEELE.

That the Treasurer be authorised to pay the travelling expenses of members attending the meetings of Committee of Council, and of its

Subcommittees in all cases in which provision for such payment does not already exist.

ALTERATION OF LAWS.—Notice of Motion by Dr. A. B. STEELE.

That Laws 15 and 16 be so altered as to read as follows.

1. The subscription to the Association shall be one guinea *per annum*, which shall entitle each member to receive the publications of the Association for the current year. The subscription shall date and be considered due in advance on the 1st of January in each year, except in the case of a member admitted on or after the 1st July, when the subscription for such part of a year shall be half a guinea in advance.

2. Any member whose subscription shall not have been paid on or before the 31st December of the current year shall be suspended from all privileges of membership; and at the end of the succeeding year, if the arrears be still unpaid, he shall cease to be a member, and shall be ineligible for readmission until he shall have paid all arrears due at the period of his suspension.

3. Any member wishing to withdraw from the Association shall give written notice of his intention to the General Secretary on or before the 1st December of the current year; and neither withdrawal, suspension, nor erasure of a member's name from the books of the Association, shall be deemed either in honour or equity to relieve such member from his liabilities to the Association.

PAPERS.—The following papers have been promised :—

A. B. Steele, M.D. On the Treatment of Puerperal Eclampsia.

W. F. Teevan, Esq. 1. On the Treatment of the Impassable Stricture.—2. Clinical Remarks on Stone in the Bladder.—3. On Impotence.

W. Macdonald, M.D. Embryonic Circulation.

Reginald Harrison, Esq. On the Relative Value of Certain Methods of Treating Stricture in the Urethra.

A. E. Sansom, M.D. The Disinfection of Air.

Edward John Tilt, M.D. On Uterine Inflammation after the Change of Life.

Protheroe Smith, M.D. Fibroid Degeneration of the Uterus, and the Best Way of Treating it.

J. Althaus, M.D. On the Treatment of Rheumatic Gout by the constant Galvanic Current.

A. R. Simpson, M.D. On the Removal of Portions of Morbid Tissue in Cases of Carcinoma Uteri.

Gentlemen desirous of reading papers, cases, or other communications, are requested to forward the titles to the General Secretary, or to one of the Secretaries of the Section in which the paper is to be read. All papers should be forwarded to one of the above named officers *on or before the 1st of August.*

No paper must exceed *twenty* minutes in reading; and no subsequent speech must exceed *ten* minutes.

All speeches at the General Meeting must not exceed *ten* minutes each.

FRANCIS FOWKE, *General Secretary.*

General Secretary's Office, 37, Great Queen Street, W.C.,
July 3rd, 1872.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE arrangements for the second annual meeting, which will be held at Merthyr, on July 17th, are as follows.

Invitation breakfast at the Bush Hotel, at 10.15 A.M.

Council Meeting at 11, and General Meeting at 11.30, in the Board Room of the Guardians of the Merthyr Union.

Dinner at the Bush Hotel at 3.15 P.M. Tickets 5s. 6d., without wine.

The titles of papers, etc., intended to be brought forward at the meeting, should be sent to us without delay.

A. DAVIES, Swansea,
A. SHEEN, M.D., Cardiff, } *Local Secretaries.*

SOUTH MIDLAND BRANCH: ANNUAL MEETING.

THE sixteenth annual meeting of this Branch was held at the Board Room of Harpur's Charity, Bedford, on Wednesday, July 3rd, at 1 P.M. There were sixteen members present. In the absence of W. CLARK, M.D., President, Dr. Bryan introduced A. D. MACKAY, M.B., President-elect, to the Chair.

Dr. BRYAN, Honorary Secretary, read the Minutes of the last Committee Meeting; also a short report in which was stated the continued success of the Branch. Allowing for deaths and secession to other parts, the numbers were the same.

Election of Officers.—The following were elected. *President-elect:* J. M. Bryan, M.D. *Secretaries:* W. Moxon, Esq., and J. M. Bryan, M.D. *Committee of Management.* — Frank Buszard, M.D.; C. J. Evans, Esq.; D. J. T. Francis, M.D.; J. H. Hemming, Esq.; F. H. Marshall, Esq.; R. W. Watkins, Esq.; and E. Woakes, M.D. *Representatives in the General Council.*—R. Ceely, Esq.; A. D. Mackay, M.B.; W. Newman, M.D.; W. Paley, M.D.; H. Terry, jun., Esq.; and J. M. Bryan, M.D., *ex officio.*—*Treasurer:* J. M. Bryan, M.D.—*Representative to Parliamentary Committee:* J. M. Bryan, M.D.

New Members.—The following gentlemen were duly elected. H. W. Sharpin, Esq., Bedford; R. H. Kinsey, Esq., Bedford; Lee F. Cogan, Esq., Northampton; David Williams, Esq., Olney.

Joint Meeting.—The question of a joint meeting with the Cambridgeshire and Huntingdonshire Branch was discussed, and left open for future consideration.

Vote of Condolence.—It was proposed by Dr. PRIOR, and seconded by Mr. H. TERRY, "That a letter of condolence be sent to J. P. Knott, Esq. (Blisworth) on the death of his son, W. P. Knott, Esq., late of Bugbrooke."

The PRESIDENT read an able address.

Papers were read by the following gentlemen.

1. A case of Uterine Hydatidiform or Vesicular Mole. By J. M. Bryan, M.D.

2. Cases of Diabetes and Acute Tubal Nephritis and Granular Kidney, which were much benefited by Skim-milk Treatment. By W. G. Johnson, Esq.

3. On Symmetrical Disease: with Case of Periostitis followed by Necrosis of the Lower and Posterior Part of both Thigh-Bones. By W. Newman, M.D.

4. On Anæsthetics, as Chloroform, Bichloride of Methylene, and Nitrous Oxide. By W. Newman, M.D. Regarding chloroform, he dwelt particularly on the danger of giving it abundantly and rapidly; and on the comparative safety in administering it sparingly and over a considerable time, and with a large admixture of external air. In bichloride of methylene, very little admixture of external air was necessary. Two drachms were placed in the inhaler at once, and the patient was anæsthetised in two minutes, and rapidly recovered from its effects. By nitrous oxide patients were brought completely under its influence in about fifty seconds, and it answered admirably for short operations.

The Autumnal Meeting.—It was agreed that the autumnal meeting should be held at Stony Stratford in October; and Dr. Mackay gave a general invitation to members to luncheon.

A Vote of Thanks was accorded to the President and officers.

The members and visitors, to the number of sixteen, then adjourned to the Swan Hotel, and partook of an excellent dinner.

CORRESPONDENCE.

BRANCH ORGANISATION.

SIR,—Allow me, in addition to Drs. Morris and Steele, to utter my wail of discontent at the mode of arranging the fixtures of meeting pursued by the Council of the South Wales and Monmouthshire Branch. Dr. Morris complains that the meetings of the "Midland" are limited to the various county towns in the district. You will perceive how much greater is our grievance, when I state that all our meetings have hitherto been restricted to one county (Glamorgan), while the district nominally comprises seven counties, the Branch already having enrolled members resident in five of these counties.

This Branch was resuscitated in the early part of last year, and already numbers more than one hundred members, in spite of the rage for centralisation exhibited by the Council. In November last, I proposed that the more convenient of the county towns should be visited in rotation, and ventured to indicate that the interests of the Branch would be materially improved thereby; but that, should the Council continue to limit its meetings to Glamorganshire, it would inevitably lead to monotony and a falling off in the attendances. This, I see, is verified by Dr. Morris's experience of the Midland Branch. Surely it is an anomaly to name the Branch "South Wales and Monmouthshire", and then restrict all its proceedings to one county. I have no doubt that, if a more liberal spirit be exhibited by the Council in its arrangement of fixtures, this Branch will increase to such an extent as to render it advisable to make a subdivision of the district, the same as has been done in other Branches.

I am, etc.,

Fishguard, July 9th, 1872. J. HANCOCKE WATHEN.

REPORTS OF SOCIETIES.

DUBLIN OBSTETRICAL SOCIETY.

SATURDAY, APRIL 20TH, 1872.

GEO. H. KIDD, M.D., President, in the Chair.

Report of Private Obstetrical Practice for Thirty-nine Years.—Dr. FLEETWOOD CHURCHILL presented a summary of his private practice, based on facts entered in his case-books at the time when they came under observation. In the period from January, 1832, to December, 1870, inclusive, he had attended 2,547 cases of labour, exclusive of abortions and premature births before the seventh month. The labours were most frequent in April, and least so in February. In 2,540 cases there were 1,290 male children, and 1,250 female; and the deaths numbered 130, or one in 19.54. There were sixteen cases of twins, with eleven deaths; and one case of triplets. In forty-seven of the 2,547 cases labour was protracted beyond 24 hours. In seven cases the second stage exceeded ten hours in duration. No death occurred in instances either of prolonged second stage or of tedious labour. The third stage was five minutes in 1,965, and an hour in only eight cases out of 2,387. *Post partum* hæmorrhage occurred three times, and once ended in death. Dr. Churchill had never known hæmorrhage to occur when firm grasping was applied to the uterus immediately after the child was born, causing it to contract rapidly and to expel the placenta into the vagina. The length of the funis varied from about fifteen to fifty-seven inches. In 2,565 children the following *presentations* were met with: superior extremities, six times; breech, forty-nine times; foot or knee, eighteen times; face, four times; forehead towards pubis, twenty-one times; prolapse of funis, eight times; hand or arm with head, seven times; foot and hand, once in a putrid child; spontaneous evolution, once. Of *complex* labour there were, one case of convulsions; five cases of accidental hæmorrhage (with two deaths among the children, and one among the mothers); two of unavoidable hæmorrhage (two children lost); one case of *præ partum* internal hæmorrhage (child lost); one of *post partum* hæmorrhage (fatal to mother); one of rupture of uterus (fatal in twenty minutes), came under observation, besides a few cases of laceration of the perineum, eight cases of prolapsed funis, and three of puerperal mania. As regarded *operations:* version was employed on seven occasions; the forceps cases numbered forty-two, or one in sixty and a half, with three deaths; and craniotomy was performed seven times, the mothers recovering in four cases. The deaths, after the last-mentioned operation, were caused by convulsions (for which the operation was performed in the hope of saving the mother), by hæmorrhage, and by phlegmasia dolens. In the 2,547 cases the maternal deaths amounted to seventeen, of which puerperal fever caused eight. The paper concluded with an enumeration of the malformations met with among children.—The PRESIDENT observed that the paper was especially useful, being a contribution to the literature of obstetric medicine in a department in which it was very deficient, that, namely, of records of private practice.—Dr. MC CLINTOCK remarked on the small proportion of forceps-cases, one in sixty and a half, in Dr. Churchill's clinical record. No one who knew the author could for a moment attribute this to any prejudice entertained by him against the use of the instrument. In managing the placenta, Dr. Mc Clintock said, he was in the habit of exerting gentle and firm pressure over the uterus, and then waiting for fifteen or twenty minutes. He believed he had had to employ manual interference more frequently than Dr. Churchill, to whose method of pressing out the afterbirth testimony was thus borne.—Dr. DENHAM said that the treatment of the placenta should depend on the operator's good sense in each case. Extremes were to be deprecated.—Dr. CHURCHILL expressed his gratitude to the speakers for the kind way in which they had spoken of him. He could say that for nearly twenty years he had never had occasion in his private practice to extract the placenta by hand.

Ergot of Rye.—The adjourned debate on Dr. Denham's paper on this subject was resumed.—Dr. T. MORE MADDEN said that two questions still remained for discussion; first, in what cases should ergot be given, and where was it contraindicated? and, secondly, what preparation should be chosen? Dr. Madden gave ergot only under the following circumstances. 1. Before the administration of chloroform, to ensure subsequent uterine action. 2. In cases where there was a history of former *post partum* hæmorrhage. 3. In the treatment of slight *post partum* hæmorrhage. The fresh powder, given in thirty-grain doses in hot water, was the best preparation. Dr. Long's "Liquor Ergotæ" ranked next.—Dr. ATTHILL did not think that ergot acted as a poison on the fœtus. If it induced uterine action its administration was attended with a certain amount of danger to the child. In cases where hæmorrhage was anticipated he would give the drug, but only when the head was already on the perineum. *Post partum* hæmorrhage he treated by the application of cold, and perchloride of iron. In using ergot, he always added a few drops of liquor strychniæ to each dose. In *post partum* bleeding, vomiting often followed the use of ergot.—The PRESIDENT said that when vomiting set in in such cases the patient often began to improve, the bleeding stopped, and the pulse came down. In one case only within seven years had he given ergot before the birth of the child. Probably vomiting was useful through its mechanical action on the uterus. He alluded to Mr. Higginbottom's remarks on ipecacuhana in *post partum* hæmorrhage.—Mr. A. RINGLAND gave details of the use, in sixteen instances, of ergotine hypodermically. The quantity employed varied from three to six grains. Action was caused in from sixteen seconds to a minute and three-quarters. The results were most satisfactory.—Dr. MC CLINTOCK did not consider ergot a dangerous remedy when properly used. The golden rule, never to be lost sight of, was not to give ergot unless the child was so circumstanced that the forceps could be applied. On the child ergot acted injuriously, evidently through causing uterine contraction. He spoke highly of the good effects of the remedy in *post partum* bleeding; but he agreed with Dr. Denham that its action was very unsatisfactory in uterine fibroids.—Dr. DENHAM having shortly replied, the Society adjourned.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, APRIL 20TH, 1872.

JOLIFFE TUFNELL, Esq., President, in the Chair.

Mitral Valve Disease.—Mr. R. CRYAN presented a specimen of extreme constriction of the mitral orifice, and great thickening of the curtains of the mitral valve. The subject of the disease was a woman, aged 27, in whose case there was a history of rheumatism seven years previously. Her symptoms were breathlessness, cough, distress in the region of the heart, and swelling of the lower extremities. The leading physical signs were a ventricular systolic murmur at the left nipple; a prolongation of the first cardiac sound at the base without any actual murmur; and a pulse small, weak, and irregular. No presystolic murmur could anywhere be detected. There was congestion at the base of both lungs. Dyspnœa increased, syncope set in, and death soon took place. At the necropsy considerable pericardial effusion was found to have occurred; probably just antecedent to death. The mitral orifice barely admitted the tip of the little finger, and it appeared as a crescentic slip, ten lines in length, and two lines in width. The left auricle was hypertrophied and also dilated. The pulmonary veins were dilated. On the right side of the heart the auriculo-ventricular opening also appeared contracted.

Amputation of the Male Organs of Generation.—Dr. BARTON exhibited the penis, scrotum, and testicles of a man aged about 48. The patient, a groom, had formed a *liaison*, and in a fit of remorse had cut off these parts. When visited by a physician he was depressed from loss of blood, but actual hæmorrhage had almost ceased; the urethra was seen projecting slightly beyond the cut surface. A catheter was fixed in the bladder, and for some days the man went on favourably. Rigors, however, occurred from time to time, and symptoms of pyrexia became developed, with obstinate hiccough. Dulness on percussion over the lower part of the right lung, and general crepitating *râles* were detected. Purulent infiltration of the lung took place, and the patient died with all the symptoms of pyæmia. Pus was found in the lungs and right pleura; and an abscess had formed in each lateral lobe of the prostate gland. The kidneys were diseased.

Very rare Luxation of the Sternal End of the Clavicle.—Dr. R. W. SMITH showed a cast of an extremely rare injury. On the 5th of April last a man, aged 60, fell off the shaft of a float, which was dragged across his body as he lay on the road. On arrival at the Richmond Hospital the presence of two serious injuries was ascertained—one a compound dislocation outwards of the right astragalus, the sole of the foot being turned inwards; the second, a luxation upwards, forwards, and inwards of the sternal end of the left clavicle. A tumour lay upon the trachea, just above the fourchette of the sternum. There was consequently great dyspnœa, especially while the sufferer remained in a sitting posture. The left shoulder was depressed, and had fallen in towards the middle line. The displaced end of the clavicle lay exactly above the sterno-clavicular articulation of the opposite side, on the lower part of the trachea, and between the sterno-hyoid and sterno-mastoid muscles. The deformity was at once reduced, when the patient assumed the prone position, but recurred on his sitting up. After a few days the pulse became rapid and feeble, and a train of typhoid symptoms appeared, speedily ushering in death on the 19th April. It had been noticed from the first that the wound in the foot presented an

unhealthy and lifeless aspect. There was no vascularity about it, nor any sign of inflammation; indeed, it resembled a similar injury inflicted on a dead body. Dr. Smith alluded to the history of this injury, of which the present is the seventh example on record. The luxation had been first announced by Bichat, then denied by Boyer, and first described as having occurred by Duvernay. The remaining cases had afterwards been noted by Malgaigne, Velpeau, and others.

OBITUARY.

CHARLES TRUSTRAM, M.R.C.S., Tunbridge Wells.

Mr. Charles Trustram was born at Shillington, in Bedfordshire, February 6th, 1809, the eleventh child of a family of sixteen. He was apprenticed to Mr. Hicks, of Baldock, in Hertfordshire. After this, he entered in 1829 at St. Thomas's and Guy's Hospitals, and during part of that time he was dresser to Sir Astley Cooper. In 1832, he commenced practice at Tunbridge Wells; and in July 1833, he married a daughter of the late John Prince, Esq., Surgeon, of that place. Very shortly after he settled at Tunbridge Wells, where he practised for forty years. During a large portion of that period he was Honorary Surgeon to the Infirmary and Dispensary. In his private capacity he was much respected. For many years he was an active Commissioner and member of the Local Board. He took the initiative at the Board for bringing about the present town water-supply, and in the Water Committee he laboured most zealously. As a surgeon his opinion and skilful treatment was much sought after and highly valued, and his services were largely and gratuitously bestowed upon the poor. On Monday, June 24th, the deceased gentleman, after visiting a patient, returned to his home shortly before ten o'clock, and after supper went to bed, apparently in his usual health. At two o'clock the next morning he woke up a relative who was staying in the house, and complained of severe illness, and, notwithstanding every attention, he died in about an hour afterwards. Mr. Trustram leaves a son and three daughters.

JOHN BAYLDON, M.D., Ararat, Victoria.

Dr. Bayldon was a native of Yorkshire, and studied medicine in the Edinburgh University. In 1860, he graduated as B.Sc. in the University of London, when he took high honours in Logic and Moral Philosophy. In the same year, he gained the exhibition in Anatomy and Physiology at the first M.B. examination, and graduated as M.B. in 1862. He was also Licentiate of the Royal Colleges of Physicians and Surgeons of Edinburgh. For a short time he was Demonstrator of Anatomy at the Royal College of Surgeons of Edinburgh, and for more than one session lectured on Botany in the Extramural School. Failing health made him resign this lectureship. To recruit it, he visited Algiers and many of the health-resorts in the south of England and of Europe. He settled for a short time in Sydney, but soon left that city to take charge of one of the divisions of the large Lunatic Asylum of Victoria, at the Yarra Bend, near Melbourne—a post which he held to within a few months from his death, when he was promoted to the office of Superintendent of the Ararat Asylum, in the same colony. Mixing very little in society, he devoted the latter years of his life to the study of classical and general literature; and those who had the privilege of knowing him thoroughly appreciated the wide range of his acquirements.

RICHARD COOPER, L.K.Q.C.P., Leek.

Mr. Richard Cooper was born at Cheddleton in 1803. He was educated for the medical profession at Guy's and St. Thomas's School, where he was a pupil of Sir Astley Cooper. In 1824, he became a Licentiate of the Society of Apothecaries, and in 1825 was admitted a Member of the Royal College of Surgeons of England. He commenced general practice in Leek in the last-mentioned year. In 1870, he became a Licentiate of King's and Queen's College of Physicians of Ireland. In 1837, he was appointed medical officer for the Leekfrith district of the Leek Union, and he occupied that position at the time of death, which took place on June 22nd. The Board of Guardians, at their meeting a few days afterwards, unanimously passed the following resolution.

"The Board of Guardians of the Leek Union desire to express their deep regret on hearing of the death of the late Dr. Cooper, who has been for about thirty-five years medical officer of the Leekfrith district, and throughout the whole period has been highly respected for his able, conscientious, and diligent discharge of the duties of the office, as well as those connected with his general practice in the town and neighbourhood of Leek; and this Board desire to convey their sincere condolence to his widow and family on their bereavement."

W. WATSON BEEVER, M.R.C.S., Senior Surgeon to the Royal Infirmary, Manchester.

Mr. Beever died in Manchester on June 23rd, in his 63rd year. From the age of 15, he applied himself assiduously to the study of medicine and surgery. After serving an apprenticeship of five years in the Manchester Royal Infirmary, he went to London, and entered at King's College, where hy attracted the attention of Mr. Partridge, the Professor of Anatomy, with whom he ever after was on terms of intimate friendship. After taking the diploma of the Royal College of Surgeons, he returned to Manchester, and was almost directly appointed House-Surgeon to the Infirmary. A few years later he was elected one of the members of the surgical staff, the duties of which responsible office he discharged for twenty-five years with rare judgment, skill, efficiency, and conscientiousness, until a few weeks ago, when he was disabled by a painful and fatal illness. He had reached the post of Senior Surgeon. Mr. Beever enjoyed a high reputation with his professional brethren and with the public. He possessed rare sagacity and good sense; and was noted for the soundness of his professional opinion, and his skill as an operator and practical surgeon. He was exemplary in all the relations of life, public and domestic.

J. GORDON SMITH, M.D., Aberdeen.

We regret to have to announce the death of Dr. J. Gordon Smith—a gentleman who was rapidly acquiring a good position and extensive practice in the city. Only a few years since Dr. Smith came to Aberdeen from Rhynie, where he had been practising for some length of time. After his arrival in Aberdeen, he was for some time associated with the late Dr. Christie, and, on the death of that gentleman, he succeeded him to a great extent in his large and varied business. He had been for some time back in rather weak health, but his death had not been expected. Dr. Smith, who was a native of the parish of Auchindoir, leaves a widow and family.

ADONIAH VALLACK, M.R.C.S.

Mr. Vallack died at Wringford, Rame, near Plymouth, on June 5th. He studied at the Aldersgate School of Medicine, and, after passing his examinations as Surgeon and Apothecary, he left England for New South Wales, and settled at Singleton. He left this place in 1848, and joined in an expedition undertaken for the relief of the explorers of the Cape York Peninsula in Tropical Australia, and with two others was successful, at great personal risk, in rescuing the survivors; the gallant leader, Mr. E. B. Kennedy, and others of the exploring party, having been speared by the aborigines or starved to death. The account of the whole transaction was published at the time in a pamphlet printed in Sydney, and forms an interesting appendix to the second volume of a *Narrative of the Voyage of H.M.S. "Rattlesnake", commanded by the late Captain Owen Stanley*, by Mr. Macgillivray, naturalist of that expedition. Mr. Vallack subsequently travelled much in California, Canada, etc., and wrote a description of the former country soon after the first gold discoveries, which was partly published in the Sydney newspapers. After an absence of between twenty and thirty years in the colonies, where, as a medical man and from his kindliness of disposition, he was much appreciated, he retired from the active exercise of his profession, and spent his latter days in rural occupations on a small family estate in his native county.

THOMAS CAMMACK, M.D., Spalding.

We regret to record the death of Dr. Cammack, which took place on June 6th, in his eighty-first year. The deceased was the son of parents much respected in Spalding. Having received a good classical education at the Grammar School, he was apprenticed to Mr. Dawson, an able apothecary of the olden time. On the termination of his apprenticeship, his medical studies were pursued at the united hospitals of Guy's and St. Thomas's, under Mr. Cline and Sir Astley Cooper. On their completion, he obtained an appointment as resident clinical clerk in the Manchester Royal Infirmary. In 1814 he was admitted a member of the Royal College of Surgeons, and immediately commenced practice in his native town, being the first medical man in the locality who held the College diploma. Dr. Cammack might be justly called a "self-made man." The secret of his success lay in his untiring energy, indefatigable zeal, and stern determination to surmount every

difficulty. He devoted himself to a conscientious discharge of duty amongst the poor, being not only minutely attentive to all their ailments, but manifesting towards them kindly sympathy. In 1834 he obtained the degree of M.D. of the University of Erlangen, by residence and examination. In 1854 he was admitted a member of the Royal College of Physicians of London; and, in 1859, he was elected a fellow of the College. Dr. Cammack's kindness and benevolence towards his professional brethren was a marked feature of his character. At the sacrifice of his time, even of his own health, he would most promptly and assiduously, and at any hour of the night, give his attendance. There are few medical men in Spalding and its vicinity who have not had ample proofs of his kindness. The respect which Dr. Cammack commanded in Spalding secured him a seat on the magisterial bench, where he brought to the duties of the office that mature judgment which had been the guiding star in his own calling. His eldest son, Dr. Thomas Armstrong Cammack, of Boston, Doctor of Medicine of the University of London, died a few months ago.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Monday, July 8th.

REGISTRATION OF BIRTHS AND DEATHS BILL.—The Earl of Morley, in moving the second reading of this Bill, said it was one to render the registration of births and deaths compulsory in England instead of permissive as at present. The Act regulating the present system of registration was the Act of 1837; but since the passing of that enactment compulsory Registration Acts had been passed for Scotland and Ireland. In England and Wales there was no penalty whatever attached to the omission to register a birth. In the case of deaths there was a penalty, but it was one of £10 on the official who buried any person without obtaining from the undertaker a certificate of death signed by the registrar. There was no compulsion on the family or friends of the dead person to register the death. This Bill would also increase the number of informants, and it would extend to the cases of children born dead. The obligation was brought home to relatives and friends. The noble earl concluded by moving the second reading. The Bill was read a second time.

THE INFANT LIFE PROTECTION BILL was read a third time and passed.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS.—At a meeting of Council held July 11th, the following gentlemen were admitted Fellows:

Boyd, Sprott, Sydney, New South Wales; diploma of membership bearing date March 15th, 1839

Elwin, John Fountain, Bristol; diploma of membership dated Aug. 29th, 1834

At the same meeting, the following Member was elected a Fellow:

Spencer, Francis, Chippenham; diploma of membership dated Dec. 20th, 1839

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 4th, 1872.

Ayling, Arthur Henry Williams, Great Portland Street, W.
Bracey, Herbert Richard, Birmingham
Fairbank, William, Highbury Hill
Maybury, Aurelius Victor, Frimley, Surrey
Maclean, Allan, Caistor, Lincolnshire
Payne, George Speke, St. Bartholomew's Hospital
Williams, Benjamin Harvey, Haverfordwest

The following gentleman also on the same day passed his primary professional examination.

Scott, Edward, St. Bartholomew's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

BATTLE UNION, Sussex—Medical Officer for District No. 4: £21 per annum.
BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN—Resident Medical Officer and Secretary: £50 per annum, board, lodging, and washing.
BLACKBURN AND EAST LANCASHIRE INFIRMARY—Resident House-Surgeon: £90 per annum, rooms, board, and washing.
BRADFORD INFIRMARY—Junior House-Surgeon: £50 per annum, board, and residence.
BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.
CALLAN UNION, co. Kilkenny—Medical Officer for the Kilmoganny Dispensary District: £100 per annum.
CENTRAL CRIMINAL LUNATIC ASYLUM, Dundrum, co. Dublin—Superintendent and Resident Physician.
CORK—Medical Officer of Health.
DEVONSHIRE HOSPITAL, Buxton—House-Surgeon: £100, board, and residence.
DORSET COUNTY HOSPITAL, Dorchester—Honorary Physician.
FETTERCAIRN, Kincardineshire—Parochial Medical Officer: £18 per annum.
GENERAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN, Manchester—Resident Medical Officer: £100 per annum, residence and board.—Dispenser: £70 per annum.
GLASGOW—Medical Officer of Health: £600 per annum.
GORTIN UNION, co. Tyrone—Medical Officer to the Workhouse and Fever Infirmary: £50 per annum.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Gortin Dispensary District: £100 per annum, and fees.
HAILSHAM UNION, Sussex—Medical Officer for District No. 3: £80 per ann.
HEREFORD COUNTY AND CITY LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, furnished apartments, rations, fire, light, and allowances.
HONITON UNION, Devon—Medical Officers for Districts 3, 10, and 11: £32:10, £30, and £8 per annum, respectively.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Dental Surgeon.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street—House-Surgeon: £80 per annum, board and residence.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
KILDALTON, Islay—Parochial Medical Officer: £70 per annum.
LEEDS PUBLIC DISPENSARY—Junior Resident Medical Officer: £60 per annum, rooms, board, etc.
LEEK UNION, Staffordshire—Medical Officer for the Leekfrith District: £30 per annum.
LIVERPOOL DISPENSARIES—Hon. Medical Officer to the South Dispensary.
LOCHCARRON, Ross-shire—Parochial Medical Officer: £115 per annum, and various perquisites.
MANCHESTER ROYAL INFIRMARY—In-door Physician's Assistant: 80 guineas per annum, with board and residence.
MIDDLESEX LUNATIC ASYLUM, Hanwell—Assistant Medical Officer to the Female Department.
MANOGHAN UNION—Medical Officer to the Workhouse and Fever Infirmary: £80 per annum.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Monaghan Dispensary District: £100 per annum, and fees.
NEWBURGH, Fifeshire—Parochial Medical Officer.
NEWBURY UNION, Berks—Medical Officer and Public Vaccinator for District No. 2: £140 per annum, and extra fees.
NORFOLK and NORWICH EYE INFIRMARY—Assistant-Surgeon.
OUGHTERARD UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cloonbur Dispensary District No. 1: £100 per annum, and fees.
PRESCOT UNION, Lancashire—Medical Officer for the Rainford District: £25 per annum.
RAMSGATE and ST. LAWRENCE ROYAL DISPENSARY—Resident Medical Officer: £100 per annum, furnished apartments, gas, and firing.
ROTHERHAM HOSPITAL AND DISPENSARY—Assistant House-Surgeon: £50 per annum, apartments, and board.
ROYAL FREE HOSPITAL, Gray's Inn Road—Junior Resident Medical Officer.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Physicion.
ROYAL ISLE OF WIGHT INFIRMARY, Ryde—House-Surgeon: £40 per annum, board, lodging, and washing.
ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor—Resident Medical Officer.
ROYAL PORTSMOUTH, PORTSEA, and GOSPORT HOSPITAL—Resident Medical Officer for the Lock Wards: £150 per annum for first six months; £200 per annum afterwards, and board.
SKIRLAUGH UNION, Yorkshire—Medical Officer and Public Vaccinator for the Aldborough District: £32 per annum, and extra fees.
SPALDING INFIRMARY and DISPENSARY—Physician.
STOCKPORT INFIRMARY—Assistant to the House-Surgeon.
TARBOLTON, Ayrshire—Parochial Medical Officer: £50 per annum.
THINGOE UNION, Suffolk—Medical Officer and Public Vaccinator for the Great Barton, etc., District: £84 per annum, and extra fees.
TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.
UXBRIDGE UNION, Middlesex—Medical Officer for the Hayes and Northolt District: £35 per annum.
UXBRIDGE—Certifying Factory Surgeon.
WESTERN GENERAL DISPENSARY—Resident Surgeon and Apothecary: £100 per annum, furnished apartments, fuel, light, and attendance.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

ANGUS.—On July 5th, at Newcastle-upon-Tyne, the wife of James Acworth Angus, Esq., Surgeon, of a son.
GRAHAM.—On July 7th, at Weybridge, the wife of A. R. Graham, M.B., of a daughter.
SMITH—On July 9th, at Pershore, the wife of S. W. Smith, M.D., of a son.

MARRIAGES.

EWART, John Henry Esq., M.R.C.S. Eng., of Cheetham Hill, Manchester, to Emily Matilda Christine, second daughter of Matthew KANE, M.D., Deputy Inspector-General of Hospitals H.M. Madras Army, of Dinan, France, at St. Mary's, Islington, on July 4th. No cards.
TAYLER, George Christopher, M.D., of Trowbridge, to Sarah Elizabeth, elder daughter of Perkins CLARK, Esq., of Wyke House, Staverton, at Trowbridge, on July 3rd.

DEATH.

TEMPLE, William, M.D., at Monaghan, aged 82, on June 23rd.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

WE are much indebted to Dr. Oppert (Berlin) for his kind communication.

DR. M. (Plymouth).—The account of the election of Fellows into the Council of the College of Surgeons published in the BRITISH MEDICAL JOURNAL was quite correct. The number of votes and plumbers given by a contemporary to Mr. Curling represented those given to Mr. Hancock, the senior Vice-President.

THE *British Journal of Dental Science* states that in 1859 there were in England and Wales seventeen females practising as dentists. A lady who was refused by the Faculty of Medicine at Munich to be admitted to examination for a License to practise as a Dentist, has been admitted at Erlangen by order of Government, who decided that sex should not debar any who submitted to the usual professional tests.

T. R.—Le Dran, who was surgeon to the Charité Hospital in Paris in the early part of last century, has expressed a strong opinion of the duty of hospital surgeons to make known to the profession the results of their practice. In the introduction to his *Observations in Surgery*, he laments the conduct of those who, though ornaments of their age and useful to their contemporaries, have "carried all the knowledge they have acquired by experience to their graves." Having been appointed, by order of the King, one of the surgeons at the hospital of La Charité, he says: "Therefore I think myself obliged to publish the observations I have made; and should think myself deficient in the acknowledgment of the honour conferred on me by His Majesty's nomination, should I neglect it."

SANITARIAN.—About five hundred years ago, butchers who sold bad meat in the city of London were punished by being placed in the pillory, and having the meat burned under them—*i.e.*, under their noses. We have seen notices of a number of cases of the kind in a volume of ancient civic records.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following questions were submitted on June 21st to the candidates for the diploma in Dental Surgery. Each candidate was required to answer at least one of the questions in Anatomy and Physiology and in Pathology and Surgery, and two at least of the three questions in Dental Anatomy and Physiology and in Dental Surgery. *Anatomy and Physiology.* 1. Describe the process of mastication, enumerate the muscles which are concerned in it, and state their respective functions. 2. Describe the structure of the salivary glands, their situation and relative size, the course and terminations of their ducts, and the influence of the saliva on food. *Pathology and Surgery.*—1. Describe the situation, pathology, and treatment of an epulis. 2. What are the local symptoms of periostitis of the lower jaw? and what are its effects? *Dental Anatomy and Physiology.*—1. Where is the enamel pulp situated? and what is its structure? 2. Describe the anatomical condition of the lower jaw in relation to the teeth, both temporary and permanent, in a child five years of age. 3. In what direction does calcification take place in the dentine, the enamel, and the cementum? *Dental Surgery,*—1. What symptoms, local and general, would lead you to diagnose between inflammation of the pulp and inflammation of the investing membrane of the root or roots of the teeth? 2. What conditions of the teeth give rise to chronic closure of the jaws? How would you treat such closure, and the conditions giving rise to it? 3. Describe the casts numbered 1, 2, 3, and 4; and state how you would treat the irregularities of the teeth which they exhibit.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

I or Y.—The proper orthography of the word is *phimosis*, not *phymosis*, as it is often incorrectly spelt. It is derived from φιμος, a muzzle.

THE CONTAGIOUS DISEASES ACTS.

SIR,—Though I do not know the writer of the article at p. 529 of last volume, complained of by Dr. J. B. Burrows at p. 628, I feel sure it was not intended by him that all the opponents of this Act were of the least educated classes. Indeed, the very sentence quoted does not say so, but only what is unquestionably true, that the opposition is a fanatical crusade preached (not exclusively by, but) chiefly *among* the least educated classes, by unscrupulous arts of agitation. If such of the agitators as are not ignorant themselves had not confidently relied upon the ignorance of others, they would not have ventured, as they repeatedly have done, to attack the Act not for what it did, but for what it did not contain; nor would they blame it, as Dr. Burrows himself does, for not doing what none of its supporters ever expected from it, and what no human law whatever can accomplish. All that any reasonable man expects, all that some even wish for, is a considerable diminution of the frequency and severity of the diseases in question; no one hopes that the diseases ever will be "stamped out", or will ever cease, unless by some such mysterious way in which they first commenced; but that because we cannot remove, we may not try to diminish an evil, can only be seriously urged either by a fool or a fanatic, and I should be sorry to suppose Dr. Burrows to be either.

The fallacy that the restraints of the Act are unjust towards women as a sex, because men are not subjected to them, is so transparent, that one wonders at anyone attempting to mislead another by it. The absurdity would be no greater for men to complain that it is unjust towards them as a sex, that males only should be liable to punishment for rape. Prostitutes supposed to be diseased are liable to the restraints of law, not because they are women, but because they are in law "disorderly characters", liable as such to punishment on summary conviction, which is inflicted in certain parts of the country, as it ought to be in all, if in addition to being known to be disorderly they are also suspected to be diseased, and thereby unusually dangerous. If any class of men can be shown to be diseased by characters suspected to be dangerous, let them be liable to similar treatment; but until such a class of men are shown to exist, all the talk about subjecting them to examination is mere twaddle.

Another pet argument is that the Acts have failed in Paris, Stockholm, and elsewhere; to which it is replied that they have not failed greatly to diminish disease in those places; and, secondly, the Acts alleged to have failed differ essentially from the Act of England. It has been again and again asserted by those who must know better, that, by the Act, women are licensed to pursue a shameful trade, and that under its authority they are certified as safe to use; the fact being that the Act does not do the first, and forbids the second being done under its authority. It is chiefly by the repetition of such fallacies by those who know they are untrue to those who know nothing about it, that a fictitious opposition has been got up. It is a pity that those who have objections to what the Act really does direct, should not separate themselves from those who oppose it for it what it does not contain; but if they did so, their numbers would be small indeed.

I am, etc., P. H. HOLLAND, M.R.C.S.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, July 6th; The Royal Cornwall Gazette, July 6th; The Edinburgh Courant, July 1st; The Merthyr Express, July 6th; The Northern Whig, July 5th; The Leek Times, July 6th; The Aberdeen Herald, July 6th; The Birmingham Daily Gazette, July 9th; The Belfast Morning News, July 10th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Arthur Farre, London; Dr. G. M. Humphry, Cambridge; Dr. A. B. Steele, Liverpool; Dr. W. F. Wade, Birmingham; Dr. Bradbury, Cambridge; Dr. J. G. Swayne, Clifton, Bristol; Dr. J. Thompson Dickson, London; Mr. Vincent Jackson, Wolverhampton; Dr. A. P. Stewart, London; Mr. T. H. Bartleet, Birmingham; Dr. Broadbent, London; Mr. Soutter, London; Our Manchester Correspondent; Dr. Joseph Bell, Edinburgh; Dr. J. W. Langmore, London; A Member; Mr. T. Holmes, London; Dr. E. Headlam Greenhow, London; An Associate; Dr. Murchison, London; Dr. G. Buchanan, Glasgow; Our Dublin Correspondent; M.R.C.S.Eng.; Dr. Dewar, Glasgow; Dr. Fiddes, Aberdeen; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Paul, London; Dr. J. M. Bryan, Northampton; Mr. Wanklyn, London; Mr. John Tweedy, London; Dr. L. Aitken, Berwick-on-Tweed; Mr. G. C. Parnell, London; Mr. J. F. Nicholson, Stratford Green; The Secretary of the Royal Botanic Society; Dr. Aveling, London; Mr. D. Kent Jones, Beaumaris; Mr. J. A. Angus, Newcastle-upon-Tyne; The Secretary of the City of London Truss Society; Messrs. Evans, Lescher, and Evans, London; Mr. Nelson C. Dobson, Clifton; Mr. W. H. Spencer, Clifton; Dr. L. W. Sedgwick, London: Dr. Tilt, London; Mr. Stevens, Islington; Dr. Oppert, Berlin; Dr. Dixon, Cardiff; etc.

BOOKS, ETC., RECEIVED.

On Cerebria and other Diseases of the Brain. By C. Elam, M.D. London; 1872.

Possessions and Products of the Different Provinces of the Empire of Brazil. London: 1872.

Cancer, its Varieties: their Histology and Diagnosis. By Henry Arnott, F.R.C.S. London: 1872.

On some Affections of the Liver and Intestinal Canal. By Stephen H. Ward. London: 1872.

Injuries and Diseases of the Jaws. By Christopher Heath, F.R.C.S. Second Edition. London: 1872.

A Treatise on Diseases of the Bones. By Thomas M. Markoe, M.D. New York: 1872.

CARLSBAD & FRIEDRICHSHALL versus VALS & VICHY.

Sir HENRY THOMPSON on "CALCULOUS DISEASE". See *The Lancet* of January 13th, 1872.

EXTRACT.—"Thus such patients are often better for a time after a visit to Vichy; but, as a rule, are not permanently benefited. I am satisfied, after observation on the spot, and on the effect of the waters (*Vichy* and *Vals*) here, that they only temporarily mitigate the complaint, and do not cure it. Now the principle on which the waters of Friedrichshall and Carlsbad are beneficial is, that they produce activity in all the digestive functions; and thus waste matters, which have been hitherto thrown out as uric acid by the kidneys, are eliminated in some other form. And thus it is that, if it be necessary to send these patients abroad, I prefer very much Carlsbad to Vichy, provided always that the subject of a Carlsbad course must not have become too weak, as for a time it makes a demand on the strength not well supported by a feeble person. Generally, however, this is not at all the condition of those who are passing uric-acid gravel. Happily, also, for most people, our purpose can be attained as well at home. I believe that a short course of Friedrichshall first, followed by Carlsbad, or a combination of the two, produces the best results in these cases. This method has at all events been more successful with me than any other. Such a course should be continued, according to circumstances, for six or eight weeks."

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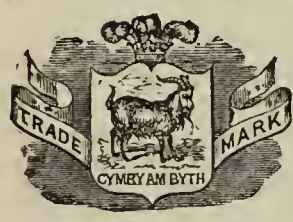
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Choice Dessert Clarets	30s.	36s.	42s.	48s.	60s.	
Sparkling Champagne	36s.	42s.	48s.	60s.	78s.	
Hock & Moselle, 24s.	30s.	36s.	42s.	48s.	60s.	
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Old Sherry ..	23s.6d.	14 15 0	29 0 0	57 0 0
Good Port	14s.6d.	10 5 0	20 0 0	39 0 0
Old Port.....	20s.6d.	13 15 0	27 0 0	53 0 0

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By G. M. HUMPHRY, M.D., F.R.S.,
Lecturer on Anatomy and Physiology in the College; Professor of Anatomy in the University of Cambridge; etc.

Lecture III.—*June 21st*, 1872.

In my last lecture, Mr. President and gentlemen, I described the muscles of the upper parts of the limbs as consisting of prolongations of the ventro-lateral muscle, forming ventro-appendicular sheaths; and each sheath was shown to be disposed in two layers—a superficial and a deep; and these again are divided into parts or sectors.

In the remainder of the limbs, the muscular fibres cease to be disposed in a circular manner about the joints, and are, in accordance with the movements, massed upon the flexor, or palmar and plantar, and the extensor, or dorsal, aspects. Those upon the flexor aspect prevail, and are occasionally aided by derivatives from those upon the dorsal aspect, which incline to the palmar or plantar surface, and so acquire a flexor action. The movements effected by the two sets of muscles, though antagonistic, are similar; and there is, accordingly, a general similarity in the arrangement of the flexor and extensor muscles. Each set consists, for the most part, primarily, of intrinsic fibres—that is, of fibres passing from the segment of the limb next above the joint to the segment next below it; secondarily, of the fibres from a higher segment, which, in the upper region of the limb, are often members of the deep ventro-appendicular or girdle-sheath; and, thirdly, of extensions of the superficial ventro-appendicular sheath, which, as before said, often clothe the whole, or nearly the whole, surface of the limb. There are thus usually three strata more or less blended together; and the dorsal or extensor divisions, and the palmar and plantar, or flexor divisions, of the three strata are, in each instance respectively, most closely associated or blended. Still, as just intimated, members of the dorsal division of a stratum are not unfrequently blended with the palmar or the plantar division of its own or of another stratum; and we shall also find instances, though they are not so common, of the converse—that is, in which members of the palmar or plantar division pass upon and blend with the dorsal muscles, and associate themselves with them in their action. It will be borne in mind that in the primitive limb—that, for instance, of Lepidosiren—all the strata are blended in an uniform, or rather an undivided, muscular investment, extended over the whole limb.

With regard to the flexors of the fore-arm, the examination of various animals shows that the coraco-brachials, the biceps, and the brachialis anticus, form one continuous series, composed of deep ventro-appendicular and intrinsic fibres, extending, from the coracoid, upon the humerus and the upper part of the radius and ulna. They are covered to greater or less extent by, and in some instances are blended with, the pectorals, or palmar sector of the superficial ventro-appendicular sheet; and, in their turn, they extend upon, and to some extent are blended with, the flexors of the wrist and fingers. In Man, they are segmented into the three muscles—the coraco-brachialis, the biceps, and the brachialis anticus—acting respectively upon the humerus, the radius, and the ulna. Still, even in Man, the one, or coracoid head of the biceps, continues to be united with the coraco-brachialis; and the other, or glenoid head, arises in great measure from the base of the coracoid, where that bone contributes to the glenoid cavity. Hence the biceps remains essentially a coraco-brachial muscle; and it partly expands into the fascia of the fore-arm. Moreover, the brachialis anticus, the representative of the intrinsic stratum, though usually separated in great measure from the others in Man, yet retains some connection, either directly or through the internal intermuscular septum, with the coraco-brachialis; and it sometimes retains also a connection with the biceps, by means of slips detached from the ulnar side of the humerus, which constitute what are called the "humeral origins" of the biceps. The fact of the biceps becoming, by virtue of its insertion into the tubercle of the radius, a powerful supinator, renders it a good example of somewhat opposite or antagonistic movements being performed by the same muscle, and of that nice balancing of antagonistic actions by virtue of which the steady movements of the limbs are executed. For, supination is ordinarily associated with extension; yet the biceps is the most powerful flexor of the fore-arm, and also the most powerful supinator. During the flexion of the fore-arm, the supinating tendency of the biceps, as well as that of the supinator radii longus, are counteracted by the pronator teres; and the force of all these muscles is combined in the one effort of flexion; whereas, under other circumstances, the two muscles are free to assist in supination. By this alteration of adjustment, and this combination of muscles in the one or the other movement, an economy of muscular substance is effected, with the attendant gain to lightness and activity.

The biceps plays round a groove in the inner tubercle of the humerus, whereby it steadies the bone, and prevents that rotation upon its axis which the pull of the muscle upon the radius, and so upon the outer condyle of the humerus, has a tendency to cause.

In the triceps extensor muscle of the fore-arm, the intrinsic or substratum, arising from the humerus, and standing in the relation of antagonistic homologue to the brachialis anticus, is large, and is extensively blended with the scapular or deep ventro-appendicular stratum. The latter is the antagonistic correspondent to the biceps; but it is less intimately blended with the dorsal scapular muscles—with the other elements, that is, of the dorsal division of the deep ventro-appendicular or girdle sheath, the infraspinatus and teres minor—than the biceps is with the coraco-brachials. The triceps is inserted into the ulna, rather than into the radius, for the purpose of leaving the latter bone free to rotate in pronation and supination. In lower animals, it is blended with, or in variable ways related to, the latissimus dorsi, —the overlying sector, that is, of the superficial ventro-appendicular sheath—just as the flexor muscles are related to, and in some instances blended with, the pectoral or palmar sector of that sheath; and more or less of this connection is often traceable in Man.

The quadriceps extensor of the leg corresponds very closely with the triceps extensor of the fore-arm. The chief differences from it which it presents are as follows. First, the rectus, the girdle element—a deep ventro-appendicular element—is attached to the anterior edge of the ilium; this being the edge towards which the dorsal surface of the limb is turned. Both it, however, and the long head of the triceps, incline to the dorsal surfaces of their respective girdles; those being the surfaces towards which, in the primitive state of the limb, the extensor aspects of both limbs are directed. That the chief attachment of the one to the anterior, and of the other to the posterior, edge of its girdle, depends upon the direction of the corresponding surface of the limb, is shown by the fact that in Bats, where the rotation of the hind limb is the reverse of what it usually is, the rectus is attached behind the acetabulum. Secondly, a patella is commonly developed in the quadriceps. This is also the case in Bats and some other animals in the triceps. Thirdly, the quadriceps is inserted chiefly into the tibia or preaxial bone of the limb, evidently because the upper end of this bone is constructed of large size, for the purpose of transmitting the weight through one solid stem from the knee to the ankle. Fourthly, the quadriceps is more distinctly covered by the expansion of the superficial ventro-appendicular sheath, being to a considerable extent invested by the fascial continuation of the gluteus maximus. In the Bird, the gluteus and the rectus are inseparable. Fifthly, it is not traversed or supplied by the great extensor nerve of the limb. This nerve—the peroneal—turns round the post-axial side of the lower limb at a lower point than that at which its homologue—the radial—takes the similar course in the upper limb. Sixthly, there is no piece segmented from the quadriceps corresponding with the anconeus.

I have, I think, clearly shown in another place that the biceps flexor cruris is really a derivative from the ventro-appendicular, or gluteo-rectus, part of the extensor mass, which, inclining to the plantar side, has acquired a flexor action, and which, in its upper part, has become in great measure attached to the tuber ischii. This attachment is in consequence of the tuber ischii having grown down into the track of the biceps and intercepted the greater number of its fibres on their way to the ilium and sacrum, where, if my view be correct, the muscle would properly derive its origin: indeed, it may still be said to do so, in part, through the fibres of the sacro-sciatic ligament, with which its own are, to some extent, continuous; and in many Mammals it is continued quite over the ischium to the sacral or caudal vertebræ, beneath the gluteus. In the Racoon, it in addition receives a slip from the gluteus. As it descends, it is joined by the femoro-fibular muscle, usually called the short portion of the biceps. This is the intrinsic flexor of the leg. In many animals it is absent; but in some it is a separate muscle, passing to the fibula. It is accordingly the only antagonistic representative of the vasti and the crureus, and the only serial representative of the brachialis anticus; and it arises from the narrow space between the ridges of the linea aspera of the femur, which represents the flexor surface of the bone, just as the brachialis anticus arises from the flexor surface of the humerus. I am not aware,

however, that it ever presents connections with the adductors and the tibial flexors of the leg similar to those which the brachialis anticus has, or often has, with the coraco-brachialis and the biceps brachii.

It will be remembered that the semitendinosus arises, in conjunction with the biceps, from the ischium, and that the two are connected, for some distance from the ischium, by a tendon from which both arise. Moreover, the semitendinosus is in some lower animals continued, like the biceps, over the ischium to the caudal vertebræ ; yet, below, it is attached to the inner side of the tibia and is associated with the adductors and the gracilis. In the Cryptobranch, it forms one mass with them, and at about the middle of the thigh is joined by the muscle from the tail, which I have named "caudo-crural"; and there is a tendinous intersection at the point of junction. It seems to me, therefore, not improbable that this intersection in the Cryptobranch represents the well known inscription or tendinous intersection in the semitendinosus of Man. I conceive that the portion of the muscle below the inscription is the part segmented from the pubischio-femoral, or gracilis and adductor, mass—that is, from the plantar division of the superficial and deep ventro-appendicular sheaths ; and that the portion above the inscription is segmented from the caudal part of the biceps and gluteus mass—that is, from the dorsal division of the superficial and deep ventro-appendicular sheaths. I may observe that this view is corroborated by the dissection of Saurians. In them there is a thick transverse septal band between the caudal and the femoral parts of the muscle.

The purpose served by the retention of the inscription in the semitendinosus is probably the same as that served by the inscriptions in the rectus abdominis—viz., to break the length of the muscular fibres. The range of action of the semitendinosus is considerably greater than that of the semimembranosus or of the biceps, in consequence of its lower insertion in the leg ; hence its muscular fibres are longer. In a woman of average height I found that they measured ten inches ; whereas none of the fibres of the semimembranosus exceeded three inches, and none of the fibres of the biceps exceeded six inches. It is, moreover, a muscle which has to bear severe and sudden strains ; and therefore the remarks made with reference to the use of the intersections in the rectus abdominis apply to this inscription in the semitendinosus. In reference to this point, it is not without interest to observe that the length of the muscular fibres in each of the three flexors of the leg bears a proportion to the distance of the insertion of each from the centre of motion, and, therefore, to the range or amount of contraction required of its muscular fibres. Thus the semitendinosus is inserted lowest in the leg ; and its fibres are the longest. The semimembranosus is inserted nearest the joint, and its fibres are the shortest ; and the biceps is, in both respects, intermediate between the other two.

The two hamstring muscles—the biceps and the semitendinosus—pass to opposite sides of the leg for the purpose of giving the rotatory movement (the pronation and supination) of the leg upon the thigh, which is admitted in the flexed or semiflexed position ; and it is worthy of note that in the Bat, where these movements are not permitted by the shape of the articular surfaces, the biceps is absent and the semitendinosus is united, below, with the gracilis, and is inserted into the middle of the back of the tibia.

The biceps cruris, if the view above given be correct, has no distinct representative in the upper limb ; neither has it, as just said, any representative in the hind limb of the Bat, which is turned upon the girdle in the same manner as the fore limb—viz., with the extensor or dorsal surface directed backwards. The semitendinosus is probably in part represented in the upper limb by the coracoid portion of the biceps brachii. Its exceptional insertion in the Bat, above referred to, resembles the ordinary insertion of the biceps brachii. The semimembranosus is a tolerably accurate representative of the larger or glenoid part of the biceps brachii. Moreover, the semimembranosus is, in some animals, inseparably connected with the adductors ; and it often retains connections with them as close as, or closer than, those of the biceps brachii with the coraco-brachials.

The muscles of the middle and distal segments of the limbs may be most conveniently considered together, forasmuch as they are blended both in function and structure.

Two chief points of difference are noticeable in the two limbs (upper and lower) which require special muscular adaptation. The first is the pronation and supination of the radius upon the ulna in the upper limb ; and the second is the projection of the heel-bone in the lower limb, and the employment of it as a lever to flex the ankle and throw the weight of the body over the ball of the foot. Both these specialised conditions are more marked in Man than in any other animal. In him, therefore, the muscles deviate most, and especially in the lower limb, from the simple form of those lower animals in which the movements and the construction of the two limbs are more nearly alike. Hence we must educe the plan of their morphology in the more complex and specialised condition of the human limbs from the simpler disposition in the animals referred to. In those animals, as I have shown from the dissections of the Cryptobranch, the muscular fibres are, on both surfaces of both limbs, directed obliquely from the post-axial towards the preaxial side, as well as downwards, forming a pronato-flexor mass on the palmar or the plantar side, and a supinato-extensor mass on the dorsal side, of each. The more superficially placed fibres have the least obliquity, and become separated as a superficial flexor or an extensor stratum, with little of pronator or supinator function, except in the case of the pronator teres ; while the deep fibres have more obliquity and more of a pronator or a supinator function. The chief features of this arrangement are tolerably distinct in ourselves ; and it will be interesting to trace the modifications which it undergoes in the two limbs to meet the requirements of each. The superficial stratum in each instance—that is, on the flexor and extensor aspects of both limbs—is divided into three sectors. Of these, one passes along each side of the limb—that is, along the radial or the tibial side, and along the ulnar or the fibular side, to the corpus or tarsus ; and the third, or intermediate, sector passes to the digits.

Let us now follow the modifications of these on the flexor and extensor aspect of both limbs, beginning with the radial sector of the superficial stratum on the palmar aspect of the upper limb, and remembering that in the simplest form the whole of the pronato-flexor muscles are one simple unsegmented mass, radiating from the ulnar condyle downwards and to the radial side, and attached to, and deriving fibres from, the radius and the ulna, the carpus, metacarpus, and digits.

The radial sector reminds us of this in the fact, that the upper part retains its connection with the radius, forming the pronator radii teres ; and further, in the fact that the part segmented as this muscle also retains a derivative from the ulna, constituting the ulnar origin. This ulnar origin of the pronator teres is a remarkable feature. It is found in the Chimpanzee ; but we rarely meet with it again in the descending series till we reach the Reptiles, in some of which it is of considerable size, and constitutes an intermediate pronator between the pronator teres and the pronator quadratus. Its presence is advantageous in ourselves, as assisting in pronating the radius in the flexed position of the elbow, in which state the condyloid portion of the pronator teres is so relaxed or shortened as to render it incapable of effectually executing that movement. The ulnar artery passes behind the ulnar origin, or the "pronator intermedius", as it might be called, for the purpose of supplying vessels to the deep region of the fore-arm, back and front : whereas the median nerve, not having to supply that region, takes a somewhat more direct course by penetrating the muscle, or rather by passing between the superior and the intermediate pronators ; following, in this respect, the same course which it takes in the Reptiles just referred to.

The remainder of the radial sector forms the flexor carpi radialis. The tendon of this muscle passes deep in the palm to the metacarpus, though the belly of the muscle lies superficially in the fore-arm. It thus offers one of the many examples of that blending of parts of different strata to form one muscle which I have mentioned in speaking of the digastricus.

The ulnar sector of the superficial stratum forms the flexor carpi ulnaris. It retains connection with the ulna ; and the connection serves in Mammals as an additional origin. In some of the lower animals the connection serves rather as an insertion, in the same manner as does the connection of the pronator teres portion of the radial sector with the radius in Mammals.

The intermediate sector forms the palmaris longus and the flexor digitorum sublimis. It retains in Man a connection with the radius, in the form of the radial origin of the flexor of the fingers, which is not commonly found in lower animals. I may observe that this muscle is usually in two portions—a superficial and a deep—both arising from the ulnar condyle of the humerus. The superficial, which includes the radial origin, is muscular to about the middle of the fore-arm, where it divides and terminates in the tendons to the middle and the ring fingers. The deeper portion has a broad tendinous interruption, an inch and a half below its origin ; it then again becomes muscular, and the lower muscular belly divides and terminates in the tendons to the fore and the little finger. The two portions are connected by muscular slips, which pass from the lower belly of the deep portion to the divisions of the superficial portion, or *vice versâ*. The purpose served by this arrangement would seem to be simply that of convenience in packing ; the tendons being thereby arranged in front of one another at the

wrist, and the muscular fibres being, by virtue of the tendinous interruption in the deeper portion, disposed at different heights in the forearm, so as to avoid inconvenient massing of them at one part; at the same time the equality of length in the several fibres is preserved. The intermediate position of this deeper portion is also a reminder of the union, or rather imperfect segmentation, of the superficial and deep flexors of the digits in many of the lower animals. A similar division into two parts, and for the same purpose, is found in the biceps brachii of Saurians, which is muscular where is arises from the coracoid, tendinous where it passes beneath the pectoralis, and again muscular lower down.

I may here observe that the tendinous interruptions, or septa, or inscriptions, in muscles are, in some instances, the result of persistence of the transverse septa of the lateral muscle, as in the case of the rectus abdominis, the biventer cervicis, and some other of the dorsal muscles—the sterno-hyoid, the omohyoid, and the digastricus—the persistence of the interruption in the last two being associated with the angular form of the muscles. Secondly, they may be caused or retained by one muscle impinging upon and joining another at an angle. This is the case with the latissimus dorsi in the Racoon, where it is joined by the teres major nearly at a right angle, and with the semitendinosus in the Cryptobranch, where it is joined by the caudo-crural muscle. Thirdly, they may be found where one muscle is crossed or pressed upon by another muscle, as in the biceps brachii of Saurians, and in the deeper portion of the flexor digitorum sublimis of Man. Fourthly, the interruption is sometimes at the part where a muscle turns over a bone or a joint, as over a pulley. This is seen in the mode in which the rectus femoris internus of the Bird is continued over the knee into the flexor digitorum, and in the mode in which the muscular crural part of the flexor digitorum sublimis (*i.e*, the plantaris) in the hind limb of some animals, becoming tendinous, is continued behind the ankle and then expands into the muscular pedal part of the same, commonly called the flexor brevis digitorum. To this I shall again presently refer.

The superficial element of the intermediate palmar sector—the palmaris longus—is a somewhat diminutive, variable, and inconstant muscle; the elements of the sector being chiefly, and sometimes altogether, absorbed by the flexor of the digits. It is of much interest, however, morphologically, for it is the representative of the extension of the external or superficial ventro-appendicular sheath upon the distal segment of the limb which we meet with in some of the lower animals. Its inferior or palmar part, at any rate, corresponds with the caudo-pedal part of that sheet in the hind limb of the Cryptobranch, and, like it, expands upon the flexor aspect of the distal segment and upon the digits.

The deep stratum of the pronato-flexor mass in the upper limb is, with the exception of the small deepest portion—the pronator quadratus—entirely devoted to the digits, and is converted into the flexor profundus digitorum and the flexor longus pollicis. The complete isolation of the radial part of it as flexor longus pollicis, which is, I believe, peculiar to Man, and is not always accomplished in him, must be associated with the free and independent movements of the pollex with which he is endowed.

The pronator quadratus is sharply marked off from the remainder of the stratum by the transverse, or even obliquely ascending, direction of its fibres. Its relations, however, to the rest of the stratum are well shewn in the Cryptobranch, as represented in the *Journal of Anatomy* (vol. vi, page 38, fig. 18), where it is distinctly seen to form part of the stratum, and where, moreover, the continuity of the deep and the superficial muscles is shewn by the blending of the upper fibres of the pronator quadratus with the lower fibres of the pronator teres. I have already intimated that the connecting fibres between the two muscles are, in Saurians, separate from both sufficiently to constitute a pronator intermedius, and that a representative of them is afforded in ourselves by the ulnar origin of the pronator teres.

It is rather remarkable that the superficial strata—pronato-flexor and supinato-extensor—in each limb and in most of the higher animals, sedulously, as it were, avoid the first digit (pollex or hallux). They leave that digit to be supplied exclusively by the deep strata.* We may connect this omission with three points. First, that digit never has more than two phalanges; and the flexor sublimis (the same may be said of the extensor sublimis) has commonly especial relation to the middle one of the three phalanges in the other digits. Hence we can scarcely be surprised at its absence in digit 1, especially since we find that in some animals, as Sloths and Anteaters, in which the usual number of phalanges is hardly attained in the other digits, the flexor sublimis is proportionately abortive; and in them the whole available flexor strength is concentrated in the muscular fibres of the flexor profundus, which passes to the long, clawed, terminal phalanges. Secondly, the flexor sublimis descends vertically, and is directed more particularly upon the middle digits. It supplies the marginal digit (No. v), on the ulnar edge of the limb, rather sparingly, and sometimes imperfectly, passing perhaps only to its radial side, or, more rarely, only to its ulnar side; and it commonly omits altogether the marginal radial digit (No. 1). Thirdly, I have mentioned that the deep strata of the pronato-flexor and supinato-extensor masses have a more oblique direction towards the pollex and hallux than the superficial strata; and they are therefore more naturally and easily extended upon those digits.

In the lower limb, the disposition of the components of the pronato-flexor or plantar mass differs considerably from that of the corresponding or palmar mass in the fore limb. The great feature of difference consists in the amount of muscular force which is combined in effecting the flexion of the foot upon the leg, and which is obtained by applying to this purpose many of the elements answering to those which, in the fore limb, are employed in pronating the radius or in flexing of the digits.

Thus, in the first place, the whole of the superficial stratum is employed in flexing the foot, and is, for this purpose, brought to bear upon the os calcis in the form of gastrocnemius, soleus, and plantaris. The various elements which, in the fore limb, arise from the ulnar condyle, and are divided into flexor carpi ulnaris, flexor carpi radialis, palmaris longus, and pronator teres, find their only representatives in the outer or fibular head of the gastrocnemius, while the fibular origin of the soleus represents the ulnar origin of the flexor carpi ulnaris. The plantar fascia is clearly the representative of the palmar fascia; but its continuity with the muscles above is interrupted by the projection of the heel-bone. The plantaris and the flexor brevis digitorum are the representatives of the flexor sublimis digitorum manus, their continuity being, like that of the fascia, interrupted by the heel-bone. There does not appear to be any purpose served by the persistent individuality of the plantaris, and its continuation as a distinct tendon to the inner side of the os calcis, in Man. The muscular fibres gathered in it would, so far as one can see, do their work as well if they were blended with the calf-muscle. In some of the lower animals it is so blended; in many it is continued on into the flexor brevis, forming with it a flexor sublimis digitorum pedis, which is thus a biventer muscle; in some, it is more or less blended with the plantar fascia on the one side, or with the flexor profundus digitorum on the other.

Secondly, an additional element appears in the form of the tibial head of the gastrocnemius, for which there is no representative in the upper limb. This is wanting in the Urodelans; but, as I have shewn,* it is traceable in Reptiles and Birds as a derivative from, or an extension of, the plantar division of the ventro-appendicular sheath, being in those animals, or several of them, continuous with the adductors or the semimembranosus, or both. The tibial origin of the soleus, so rarely present except in Man, is an extension of this upon the tibia; and the situation of its attachment to the tibia, along the edge and between the popliteus and the rest of the deep stratum of muscles, corresponds precisely with that of the radial origin of the flexor digitorum sublimis manûs.†

Thirdly, not only is the superficial stratum thus entirely employed in the work of flexing the ankle, but a part of the deep stratum, which in the upper limb passes to the digits, is in the lower limb devoted to the same task with the superficial stratum. Thus, the tibialis posticus is made up of fibres lying close upon the tibia, the homologues of which in the upper limb are converted into the radial portion of the flexor profundus digitorum manûs—of the part of it, that is, which forms the flexor longus pollicis. This at least is the case with the muscular portion of the tibialis posticus; though the tendinous portion corresponds with the tendinous portion of its functional representative—the flexor carpi radialis. The flexor hallucis corresponds with the remainder of the flexor profundus digitorum manûs; and the flexor digitorum pedis longus is segmented from the surface of this deep stratum, from the surface, that is, of the tibialis posticus and the flexor hallucis; and it, together with the flexor hallucis, make up the flexor profundus digitorum pedis, the flexor sublimis being represented, as already said, by the flexor brevis and the plantaris. This disposition

* The Manis (*Journal of Anatomy*, iv, 44) and Jerboa are exceptions to this. In each of them, the superficial flexor in the fore limb supplies all the digits.

* *Journal of Anatomy*, vi, 360; *Observations on Myology*, p. 72.

† In Pteropus (*Journal of Anatomy*, iii, 314), these tibial factors, as well as the greater part of those from the tibial condyle of the femur, together with others derived from the semitendinosus, are diverted to the flexor digitorum; but it is to the flexor profundus, not, as we might have anticipated from the usual disposition of the corresponding parts in the fore limb, to the flexor sublimis.

is well illustrated in the Cryptobranch, where the deep pronato-flexor mass extends from the fibular side of the limb, downwards upon the tarsus and digits, inclining to the tibial side, and is inserted chiefly along the tibial side of the tarsus and the hallux. From its surface is segmented a long narrow flexor digitorum profundus; and the main part of the mass represents the tibialis posticus and the flexor longus hallucis. The chief difference in the disposition of the structures of this region in the Cryptobranch and in Man and the higher animals consists in the fact that in the latter the muscles—the tibialis posticus and the flexor hallucis, which constitute the deepest part of the flexor mass—are free from the several pedal attachments (attachments to the tarsus and metatarsus) which the flexor mass has in the Cryptobranch, and are connected only with the tarsal and metatarsal bones of the hallux and with the phalanges. They are thus able to act more efficiently on these parts, because they are devoted more exclusively to them.

I must not, however, forget one other interesting representative of these tarsal attachments in the Cryptobranch to which I have been referring, viz., the accessorius. The morphology of this muscle is, I think, thus to be explained; and we may regard it as a part of that common deep pronato-flexor mass which, in lower animals, covers and arises from all the tarsal bones of the fibular side of the foot. Its frequent connexion with both divisions of the deep flexor (flexor longus and flexor hallucis), as well as their connexion with one another, is a reminder of the fact that they are all segmented from one common mass. Of this fact we are still further reminded by the very variable ways in which, in different animals, the two divisions of the flexor muscle of the digits are distributed to the different toes. The purpose served by the accessorius resembles that served by the ulnar origin of the pronator teres, in that it prevents the flexor power over the digits from being quite lost when the long flexor muscles are relaxed in the state of forced flexion of the ankle. No homologous muscle and no such assistant exists in the upper limb; and we accordingly find that, when the wrist is bent, the power of flexing the fingers is partly, and that of the thumb is almost entirely, lost. In the fore limb of Saurians, however, an accessorius is found passing from the ulnar side of the carpus to the deeper surface of the flexor digitorum, and precisely corresponding with the accessorius in the hind limb of Man and Mammals.

The popliteus answers functionally and in general disposition to the pronator teres, pronating the foot, and passing diagonally from the post-axial condyle of the upper division of the limb to the pre-axial bone of the middle division; but it is, in the main, on a deeper level than the pronator teres, so that only the deeper fibres of the latter muscle can be regarded as answering homologically to it. Indeed, it and the other muscles which we have been just considering are a good illustration, among many others, of the free manner in which corresponding masses are variously moulded and segmented to suit the special requirements of the particular limb or the particular animal.

There is no special portion segmented from beneath the deep stratum, and passing across from the fibula to the tibia, which would correspond with the pronator radii quadratus. In Reptiles and Amphibians,* however, such a pronator tibiæ is not uncommonly present; and it may have relations of continuity with the popliteus, similar to those which I have mentioned that the pronator radii quadratus in these animals sometimes has with the pronator teres.

[*To be continued.*]

OBSTETRIC MEMORANDA.

THE TREATMENT OF INERTIA OF THE UTERUS.

Mr. Lawson Tait, in speaking of "the method of assisting the inert uterus by external pressure", says that "it would seem to be not of older date than 1856". The following quotation from Dr. Sermon's *Ladies' Companion or English Midwife* proves the plan to have been used in England as early as 1761. "Sometimes the midwife may gently press the upper parts of the belly, and by degrees stroke the child downward; the which pressing down with discretion will hasten and facilitate the delivery." (P. 95.) Raynald, in the sixteenth century, speaking of the "meanes to help and provoke the byrth, says: "The sides of the woman must be stroken downward with the hands, which helpeth greatly and furthereth." (Chap. v.) See also the same advice in Rueff, 1637, ch. ii; and Counsell, 1758, ch. iv; etc.

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* See account of pronator tibiæ in Cryptobranch, *Journal of Anatomy*, vi, 27.

PRESIDENT'S ADDRESS.

Delivered at the Annual Meeting of the South Midland Branch.

By ALLAN D. MACKAY, M.B., Stony Stratford.

Gentlemen,—My first duty is to thank you for the honour you have conferred upon me by placing me in your presidential chair, an honour which I trust will be safe in my keeping; for, though I am well aware that I may in many respects fall short of my predecessors in that chair, yet to none of them will I yield in my desire and endeavour to urge forward, as far as in my poor power lies, the welfare and prosperity of our Branch and its parent Association. From my earliest student days I took a deep interest in the doings of the British Medical Association, feeling assured that those ends (the advancement of medical science and the bringing into closer intercourse, one with another, the members of the medical profession), for which Sir C. Hastings and his worthy coadjutors founded it, would elevate the character of the noble profession to which we belong, and prove to the public that, though "doctors may differ," still, after all, they are "at unity amongst themselves." Step by step, then, since those days, have I watched with satisfaction the onward course of the Association, till I can to-day congratulate you on its having become one of the most powerful associations for good, noble, and unselfish ends in the kingdom. It would be idle on my part to tell you that it makes itself now felt as a political power—a political power used for the most unselfish ends; this you all know. It would be also idle on my part to tell you how frequently our Journal is now quoted by the leading newspapers—this, too, you know; but I do think we owe a debt of gratitude to our Editor (my old fellow-student) for the very high-class periodical that the Journal has now become; and I feel the more bound to make this observation, as, some few years ago, in a discussion on this subject, I was one of those who felt that our Journal was not what it ought to be, and what Mr. Hart has shewn it could become. Gentlemen, our reported lectures will now cope with those of any other periodical, if they do not surpass them. What can be more simple, more plain, and yet more eloquent, than Sir James Paget's lectures on Hernia?—so plain, that by the study of them the merest tyro may feel himself safe in the operation; so eloquent, because so simple in their diction, that the most practised writer cannot surpass them. This, gentlemen, after all, is the test of true eloquence: to express our thoughts in the simplest and most common words—a fact which did not escape (few did) that jovial philosopher of old, Horace—

> "In verbis, etiam, tenuis cautusque serendis,
> Dixeris egregiè, notum si callida verbum
> Rediderit junctura novum."

The lectures, too, in course of publication, by Dr. Murchison, will be waited for anxiously, as written by a master hand, and a worthy successor of Sir Thomas Watson in a line in which he has hitherto been *facile princeps*. And for keeping us in the provinces *au courant* with the latest medical news, whether social or scientific, and inculcating amongst us medical morality, the Journal is not equalled.

Since our last autumnal meeting, two great subjects, which I think all will admit are of the utmost interest to the medical profession, have been touched upon, and will sooner or later become the law of the land. I allude to the Public Health Bill and the Conjoint Examination Scheme. I am aware that, with many members of our Association, as well as others outside it, the former does not find acceptance; and whilst I admit that it is far from being a perfect Bill, yet I do think that it is a step in the right direction, and that we should, with some alterations, which no doubt it will receive before it becomes law, accept it as an instalment of future legislation on the subject; and that, as "coming events cast their shadow before," we may look for this shadow of good being hereafter more perfectly elaborated. How accidents appear to rule the destinies of nations! Scientific men and sanitarians have long laboured hard in the field for the public health; but that which they have long desired, legislation on sanitary measures, might have yet long been delayed, had not our Prince's illness been one "nigh unto death." That which had well nigh been counted a nation's loss, must now be counted a nation's gain. It has long been said of railway accidents that they will never be dealt with as they should be until a bishop or director be killed; and so, I take it, had it not been for the Prince of Wales' illness, our legislators would still be avoiding the sanitary question. Even now, notwithstanding that the cry has gone forth, "*Sanitas sanitatum*", they buckle to in much lukewarmness. The Conjoint Examination Scheme we must all hail with satisfaction, delighted that at last the opprobrium shall be taken away from our profession that there are nineteen (how

many more I know not) examining bodies licenced to confer diplomas for practice; because, though these bodies will still remain, few of them, I take it, will reap any longer the ample reward of their competition. The scheme, as you all no doubt are aware, has been taken up warmly by our ancient universities; they having, in that spirit of judicious liberality which has eminently characterised their actions of late years, consented to withhold their diploma for practice unless their alumnus has previously passed the conjoint examination. Scotland and Ireland are also adjusting the differences of their licencing bodies, and will no doubt, ere long, carry out what I believe I may say has been accomplished in England. The Apothecaries' Company of England would have done well to have thrown in its lot with all that was liberal and elevating in our profession, but hitherto, like all the City guilds, it has been too conservative.

The Poor-law Act needs, and must have, revision; and its medical officers must find advice alone, not medicines. In this way only, I believe, can the best man be retained for the poor.

I have said that one object the founder of this Association had in view was to bring medical men into closer intercourse one with another, and so establish a good fellowship between the individual members of our profession. This it has undoubtedly done to a great extent; but much still remains to be done even in this respect. Our Branch numbers ninety-five members; and yet how few of us, comparatively, do meet together on these truly social occasions to give the "God speed you" that we, working in a laborious profession, especially require. Granted that the pressing engagements of some may, on some occasions, prevent their joining in or holding out the right hand of fellowship at these meetings—a right hand which should not be thrust back into our pocket when again at our homes—still surely our profession, if no other, in a money-seeking age, might well now and again for one day forget the fees, assured that in the meeting together and exchanging ideas we are acquiring that which is more precious than gold—goodwill one to another, and peace and charity in the medical profession. Were these more studiously practised, surely we should not hear so frequently of bickerings amongst us, such as have lately been in London, and which every now and then crop up here and there, and are so terribly humiliating to our profession, and which, whilst they do the individuals no good, cannot but lower us in the eyes of an observant public.

Gentlemen, the time, I trust, is fast going by when each medical man shall play the bull-dog, as I heard it very aptly described the other day, to his fellow practitioner. We can gain nothing by it. We may snarl, but the other dog can snarl as well, and may be he can bite; and is the bite on either side worth the trouble it takes in giving it? Some of us complain of the manner in which the public treat the medical practitioner. Whose is the fault? If we set no value on ourselves, will others set a value on us? Yes, forsooth, but a value of their own! If we endeavour, either by word, or even the shrug of the shoulders, or a lower fee, to supplant our brother practitioner, what is the result? We may gain a patient, but does the patient think any the better of us for doing it? He only uses us perchance so long as the whim pleases him, and then we in our turn give place to another. And here I would say that I think it very desirable that our Branch (one can only speak of one's own Branch, or I would say all the Branches of our Association) would institute a tariff of fees, such as has been done by the Shropshire Branch, and deem it quite a legitimate subject for any of our members to bring forward at this or any future meeting. Depend upon it, gentlemen, till we are at perfect unity one with another we cannot expect, as a body, to take that high standing in the social scale which is due to our profession. Till we by our actions make the public say of us, as was said of old of the first Christians, "Behold how these doctors love one another", we cannot expect to take that position which is our right—a position which, I am thankful to say, the improved education of the medical man will amply fit him to fill. I do not mean by position that we are to expect to have amongst our order peers and privy councillors—though the latter I believe to be very desirable for the public weal—but I mean it will be a position second to none in the social scale.

One thing which has always struck me amongst members of our profession—a matter to which my attention was directed very early in my professional career by an old friend, a very shrewd and liberal physician—is the absurdity of looking upon a person who has once or oftener consulted us as one always to remain our patient. He is only *our* patient so long as he is under our treatment, and we should not quarrel with him because he chooses some other adviser. Do not let us expect such a thing as medical gratitude, and "we shall be saved much heartburning". If the gratitude come, as it sometimes does, then indeed may we treasure it up, and consider it a pearl of costly price.

In our professional dealings, gentlemen, one with another, we cannot be too nice or particular. The public laughs at medical etiquette. Well, let it laugh. Medical etiquette has been well described by that dear old physician, Dr. Stokes, as only "the conduct of a man and the morality of medicine". When a patient chooses to consult a fresh practitioner, the latter cannot be too careful or wary in the opinion he gives. The patient in such a case is ever on the alert to catch some encouragement in his own idea that his disorder has not been treated properly or well understood. In such a case, how must we act? Never speak slightingly of what has been done. In the first place, we should assuredly suggest a consultation with the late attendant: but this cannot always be; the circumstances of the patient may not admit of it, or he may desire to be off altogether "with his old love". Well, then, in such a case let us treat the case as it presents itself to us, and listen not to the long tale of woes. In our profession, as in all others, some are shrewder, by practice more observant and practical, and can hit off a case much sooner than other; but this is no reason why we should not

> "Be to his faults a little blind,
> And to his failings wondrous kind."

And here, whilst touching on the duties we owe to one another, let me recommend to those of my audience who may not have already read it, a most admirable discourse of Dr. Stokes of Dublin, delivered at the Meath Hospital on November 1st, and published in the *Medical Times and Gazette* of November 13th, 1869. No words of mine can enhance or describe the sentiments therein set forth—the sentiments of the high-minded physician and Christian gentleman; but they should be read and re-read by each one of us, till they are engraven as tablets on our minds.

Again, in dealing with a case, do we not often take κῦδος to ourselves for that which we really do not deserve? How often have we not flattered ourselves that such and such a patient has recovered because we have treated him after such and such a manner; asserting that the *post hoc* is *propter hoc*, whereas in very many of these cases we may safely congratulate ourselves that the patient has recovered in spite of the doctor—a jeer of old against our order; a jeer which, I trust, by improved means of observation and treatment, may soon be scattered to the winds. Again, if a case do badly, do not let us forget to analyse it closely, and see where the mistake is, if any, that we have made. That great clinical teacher, Todd, always insisted on this, and carried it out most honestly. It is the only way of acting fairly to our patients and ourselves; and it has been well said—

> "To thine own self be true;
> And it must follow, as the night the day,
> Thou canst not then be false to any man."

There is another thing of which it behoves us of to-day to take care—that we do not undervalue the work of those who have gone before us. Diagnosis and morbid pathology may have been carried to very near perfection, though a late discussion at a scientific society leaves this even doubtful. But are we far superior to our predecessors in the knowledge of the action of our drugs? It is true, working with the more improved instruments we have now at command—the stethoscope, the microscope, the ophthalmoscope, the laryngoscope, the clinical thermometer—we have greater facility for inquiring into and studying the natural course of a disease, *i.e.*, a disease let alone, untreated by drugs: and so in many cases where our predecessors worked boldly, as it were, in the dark with heroic treatment, we prudently cry "hold, enough". But we must always look upon those wise and great men in our profession who have gone before us—Harvey, the Hunters, Jenner, Heberden, Sydenham, Abercrombie, Graves, Brodie, Prout, and others whose names will occur to you "as household words", whether of this or other countries—as the pioneers in our ranks, who have served their profession well, and to whom we should be ever thankful that they, with fewer and more imperfect means at command, have cleared away many opposing obstacles in the onward march of science, and left us an easier track to follow. The greatest problem in medicine, the action of drugs, is still unsolved, though much is being done towards its solution. For its fair solution, however, a very candid and observant mind is required; a mind thoroughly unbiassed by any preconceived dogma, and one that can study facts alone, with due consideration for adventitious matter—that can, in fact, sift "the wheat from the chaff". To judge by the wonderful array of new preparations advertised as recommended by some "eminent physician", one would think we had a specific for nigh every disease; whereas to my mind, and I doubt not to the mind of many whom I am addressing, the longer one lives and deals with drugs, the greater faith one has in those that have stood the test of years when properly applied. It is true, ever and again a new useful drug crops up, such as in our time have been iodide of potassium, bromide of potassium, chloroform, chloral, and perhaps some few others: but in those wonderful combinations of three or four drugs together, which are daily advertised in our journals, I have little faith; nor do I think that the mul-

tiplicity of drugs in prescribing is desirable, if we are ever to attain to an accurate knowledge of their therapeutic uses. The therapeutic effects of drugs must be studied, each one solely and alone; and in this all of us can more or less assist, and so each in our little sphere help forward that which we must all have at heart—the foundation of medicine on a rational basis. I say that all of us, wherever our lot may be cast, can help this matter forward. A pencil and a scrap of paper in our pocket can note down all we want, and at our leisure we can copy down more indelibly the effects we have seen; but a fair and unbiassed analysis of results must be insured.

One other point in medical ethics I would just touch upon, feeling sure that you agree with me that it should be most vigorously discountenanced—*i.e*, the puff (I might almost say advertisement puff) which ever and anon appears in print, and against which, I am glad to say, our JOURNAL has steadfastly set its face. I remember once a young practitioner succeeding to another's practice, being urged by some well-wisher to send round his testimonials (very good ones) to all the old patients. His predecessor, on learning his intention, cried, "Good God, do nothing of the kind; would you tout for practice like a baker?" Gentlemen, I feel assured he spoke your sentiments as well as mine.

One word with regard to that celebrated document, the "Medical Declaration respecting Alcohol". I cannot help thinking that a march was stolen on the *dii majores medici* in this matter, or they would not have countenanced this their declaration being sent in company with a Temperance League pamphlet to practitioners throughout the kingdom.

In conclusion, I think it but justice to say that the medical profession does now stand higher with the public than it has at any previous time; and it is our own fault if, having reached so many rungs in the ladder, we do not command the topmost of all. In the foregoing remarks, I trust I have said nothing which may be considered dictatorial or harsh; nothing would be further from my intention. I have simply stated what are the sentiments which naturally occur to one thinking over such matters—matters which I believe to be of the most intrinsic value to members of our profession. For myself, I am thankful to say that my professional lot has always "fallen in fair places"; and, had I had the mind, I have never had the occasion to play the bull-dog.

Gentlemen, I thank you for the kind attention you have this day paid to my poor words.

PARTIAL AMPUTATION OF THE GLANS PENIS BY THE ACCUMULATED DETRITUS OF UNDERCLOTHING.*

BY WALTER WHITEHEAD, F.R.C.S.E.,
Surgeon to St. Mary's Hospital for the Diseases of Women and Children, Manchester, etc.

THE case is that of a boy aged 7, who was circumcised about two years ago for a troublesome congenital phimosis. He also suffers from incontinence of urine. Last May, his mother brought him to St. Mary's Hospital, with what she imagined to be a piece of string tied round the base of the glans penis. This was readily removed; and, although the boy stoutly denied having placed it there, it was generally considered to have been used by him as a means of controlling the escape of his urine. In the course of a few days, he was again presented with another piece of what appeared like string tied round his penis; but this time so tightly, that it had eaten into the tissues and opened into the urethra, permitting the constant dripping of urine through the aperture thus produced. It was observed that there was no knot on the material encircling the glans, or any other indication of being joined at any particular spot. It was cut through and removed, and afterwards, by means of a microscope, made out to consist of three colours of animal fibre—blue, brown, and yellow—the colours which were subsequently identified as those in a flannel shirt the boy was wearing at the time. On several occasions after this he was brought to the hospital with fresh, but similar, accumulations, and each time the indentations became deeper and deeper; and as he was wearing during this time alternately woollen, linen, and cotton shirts, it was possible definitely to ascertain the source of these accumulations, and that they consisted solely of the detached flocculi from these fabrics. He can now remove the material for himself, and does so each morning, so that the mischief is stayed; and it is considered possible to repair, in a measure, by a plastic operation, the injury which has already taken place. At present the gland is constricted to certainly one-half its ordinary diameter, and there are two openings into the urethra through which the whole of the urine is passed.

It is singular how the loose fibres detached from the child's clothing should become so arranged as to attain a textile firmness of sufficient power to accomplish such destruction of tissue. Once formed, it is easy to comprehend that, by the absorption of moisture, it could swell to a sufficient extent to constrict, by slow degrees, structures of such delicate organism as those composing the glans penis.

* The case was shown at the annual meeting of the Lancashire and Cheshire Branch, June 29th, 1872.

ON A CASE OF INJURY TO THE SPINE.*

By H. GRACE, Esq., Bristol.

ALTHOUGH the following case occurred more than five years ago, I have considered it worthy of mention before this Association, not so much as exhibiting a remarkable recovery from an injury to that part of the body where a fatal result generally attends such a violent shock, as from the extraordinary phenomena presented since recovery—phenomena which I consider sufficiently interesting to be worthy of being laid before this Society.

On the 26th of October, 1866, William Spicer, aged then 22 years, met with an accident while working at the Bull Hall Pit. He was on his knees, hewing coal from the seam in which he was then at work, when, without previous warning of any kind (such as sometimes enables the miners to avoid the danger of falling masses), an ironstone from the roof, weighing between ten and twelve hundredweight, fell suddenly on his shoulders; the weight literally doubled him up, forcing his head down between his thighs, and the perinæum close against the heels. It required the united efforts of three powerful colliers to lift the mass, by the aid of long iron bars, sufficiently high to allow a fourth to drag him from underneath—his own impression afterwards being that he lay there about five minutes. He was placed in this flattened condition in a cart, and carried to his home. I was hastily summoned; and, in my absence, my assistant hurried off to his residence. He found him cold, breathing in a short and hurried manner, with the pulse feeble and intermittent, and to all appearance rapidly sinking.

The first, second, third, and fourth lumbar vertebræ all appeared more or less implicated in the injury; both sensation and motion below the parts affected being utterly lost. One of the doors of the room in which the man was lying was soon taken down from its hinges, and placed under the mattrass. With the aid of two men at his shoulders and two at his feet, extension was made; and the back resumed its normal position with a crack, that was heard at a considerable distance. The breathing was immediately relieved, and the pulse improved by this reduction. The time that had elapsed from the occurrence of the accident was about an hour.

The man was in a club, of which I was not the medical attendant; my assistant therefore recommended him to send for his own medical man, which he did; but, after eight or ten days, as he was not satisfied with his treatment, at his earnest request—several times repeated—I consented to undertake his case.

I found that the door above spoken of had been removed from beneath the mattress, and that, consequently, the sacking of the bed had sunk considerably in the centre; moreover, he had been raised and held in an upright position daily, for the purpose of introducing the catheter; these two causes combined had again displaced the back. I had the door immediately replaced on the bedstead, and a second time made extension, and again restored the spine to its normal position. This restoration was almost instantly followed by a slight motion in the great toe of the left foot.

I gave strict orders that he should remain still on his back, and that not even his shoulders should be raised on any pretext whatever. Sensation and motion gradually returned to the anterior portion of the left foot, leg, and thigh, and to the posterior portion, in a less degree, about half way up the thigh; and, about a month after the accident, similarly to the right leg. During the first two months, it was necessary to pass the catheter daily; after which period, the urine began to escape involuntarily, and it has continued to do so up to the present day.

Three months elapsed before he could move his legs tolerably in bed, at which period I turned him on his side, and found, on examination of the back, a small bed-sore just over the sacrum, utterly devoid of sensation, of considerable depth, the slough of which was a long time in separating.

In another month he was able to sit in a chair, and to walk across the room by the aid of the various articles of furniture. His progress towards perfect recovery of physical strength extended over a period of

* Read before the Bath and Bristol Branch.

two years and a half, when he was able to resume his work as a collier.

His present condition as regards sensation has not altered in the slightest degree since the fourth month after the accident, and is as follows. The sensibility in the soles of both feet, and in the posterior portion of both legs, is much impaired; and around the anus, perinæum, inner part of both buttocks, scrotum, and penis, it is *entirely* destroyed. Although there is a slight sensation under pressure in the testicles, so complete is the absence of sensation in the buttocks, that when, last summer, he sat down on a garden-flue, ignorant of the fact of its being heated, his trousers were burnt through, and the skin completely charred, yet he was unaware of the fact till his wife noticed it, three days afterwards, whilst he was washing. The slough was somewhat deep, and the scar is still visible.

Whilst at work in the pit, he frequently gets severe scratches and cuts on the soles of his feet, which he hardly feels. Each day, on his return from work, he regularly goes to the closet, and, by dint of powerful efforts, forces the fæces to pass when solid, for, when liquid, they are not retained. At this time, the urine runs involuntarily in a stream, though at other times it drips continuously into an India-rubber urinal which he wears permanently; but in neither case is there any feeling of the passage of fæces or urine.

At the time of the accident, he was married, and the father of one child a twelvemonth old. Six months after the accident, in spite of the utter absence of feeling in the penis, he began to resume his matrimonial duties; and two children have been born to them since the resumption of the functions of his generative organs.

The first loss of sensation and motion below the seat of injury was doubtless owing to the pressure on, or the solution of continuity in, the nerves forming the lumbar and sacral plexuses, the former of which evidently recovered its powers gradually during the first four months. The total loss of sensation can, I think, be only attributed to the breach of the pudic lesser sciatic nerve. Hence it would appear that, if the fact asserted by Günther—viz., "that the erection of the penis in the horse entirely ceases on cutting the pudic nerve"—be correct, it has no analogy in the case of man; for here we have the pudic nerve evidently destroyed (as proved by the entire absence of all sensation in the perinæum, integument of the penis, etc.), and yet the power of erection is retained to such an extent as to allow fruitful coition. I cannot, therefore, but hold the opinion that the erection of the penis is due to the operation of the sympathetic system, the functions of which, I think, still remain in considerable obscurity. I take it there is very little doubt that the nerves of the sympathetic system may be regarded as conductors of impressions; and, this being the case, what more natural than that the fact of dwelling upon the enjoyment to be derived from coition should cause a turgescence of the organ lasting sufficiently long for it to enter the vagina and there fulfil its purpose in the animal economy? Moreover, the sympathetic system seems in general to influence the processes of involuntary motion, secretion, and nutrition; and this, considering the fact of the continued secretion of the semen by the testicles, and its ejection on coition, accompanied by no diminution of the sensations usually accompanying the act, may, I think, be fairly considered an additional argument in favour of my opinion that the pudic nerve can have but very little to do with the erection of the penis; whilst the nerves of the sympathetic system, which have not suffered any material injury, are directly concerned in that erection.

MECHANICAL PRESSURE IN INERTIA OF THE UTERUS.

By A. B. STEELE, L.K.Q.C.P.,
Lecturer on Obstetrics Royal Infirmary School of Medicine, Liverpool.

THE application of mechanical force to push out the fœtus instead of dragging it out, of arousing or imparting a *vis a tergo* in lieu of giving oxytoxics or of resorting to the *vis a fronte*, or as an auxiliary to the latter, is an important principle in obstetrics, and one that I have for some years taught in my class-room.

It is specially noticed and recommended by Dr. Barnes in his admirable Lectures on Obstetric Operations. Dr. Barnes quotes Von Ritgen as the first to direct attention to the subject in a memoir published in 1856, and Dr. Kristeller as having carried the idea into practice. The method is thus described by Dr. Barnes. "The patient lying on her back, the operator places his hands spread on the fundus and sides of the uterus, and combining downward pressure with the palms on the fundus with lateral pressure by means of the fingers, the uterus being brought into correct relation with the pelvic axis, its contents are forced down into the cavity. The pressure is so ordered as to resemble the course and periodicity of the natural contractions." (*Op. cit.*, p. 5.) This appears to me a more simple and effective mode of applying pressure to the uterus than that of passing the arm round the patient's body, as described by Mr. Lawson Tait in the JOURNAL of June 22nd. This resource, as Dr. Barnes states, may in certain cases obviate the necessity of using the forceps, and may stand one in good stead when instruments are not at hand.

The principle of arousing the uterus to action by external manipulation as a substitute for the uncertain and uncontrollable action of ergot, was taught at least thirty years ago by my preceptor, Dr. Robert Lee, at St. George's Hospital. I fully endorse Mr. Tait's protest against the use of ergot by midwives; and in my own practice and in my teaching, in accordance with the views of Dr. Tyler Smith, I restrict its employment to cases of abortion, when all hope of saving the ovum is lost, or to promote uterine action after the expulsion of the fœtus—in other words, I never give it or recommend its use as an adjuvant during labour, except immediately before the expulsion of the head where *post partum* hæmorrhage is anticipated.

A NEW MODE OF PERFORMING THE OPERATION OF PARACENTESIS THORACIS.

By T. J. MACLAGAN, M.D.Edin., Dundee.

THE usual mode of drawing off fluid from the pleural cavity is well expressed by the word "tapping." Until very recently, the operation was regarded as a last resort; and even now there is great difference of opinion regarding the exact time at which it should be resorted to in cases of serous effusion. The tendency of the present day, however, is to regard unnecessary delay as a greater evil than too great haste. The entrance of air during or after the operation has very generally been looked upon as a source of mischief, and many devices have been had recourse to in order to prevent this accident; the most efficacious and commonly adopted of these being Dr. Bowditch's.

From what has been written in the BRITISH MEDICAL JOURNAL during the last few months—notably from the observations of Drs. Fuller, Playfair, and Douglas Powell—it is evident that the profession is by no means at one as to the evils likely to follow the admission of air into the pleural cavity. My own belief is, that the dangers likely to result from its admission are much overrated. I would not, however, ignore or disregard the opinion of those whose experience has been different; and if there is any truth (and I believe there is not a little) in the views with which Mr. Lister's name is so intimately associated, there is at least a strong theoretical reason for excluding air if possible. I do not think, however, that we should try to exclude it at the expense of retaining any part of the fluid which ought to be got rid of. Is there any way by which both objects can be attained, by which the fluid may be effectually drawn off, and yet no air be admitted? It seems to me that there is, and that its adoption might obviate many of the objections which are advanced against a free evacuation of the fluid, and the consequent risk of the entrance of air.

Mr. Lister and those who have adopted his views and treatment have shown us how incisions may be made into joints, and how psoas and lumbar abscesses may be opened without any of those dreadful consequences which, prior to the adoption of his mode of treatment, used frequently to follow such surgical interference. Why not apply the same practice to the treatment of empyema and hydrothorax? If the entrance of air be an evil to be avoided, why not guard against it by creating an artificial atmosphere around the wound by means of a spray-producer, so that, if anything enter the pleural cavity from without it will not be air, but whatever the operator chooses to put in the spray-producer? And furthermore, if we wish to guard against such an accident during the subsequent progress of the case, why not adopt the same means which are found efficacious in lumbar and psoas abscess, and dress the wound in the same way as surgeons do an opening into such an abscess? I see no reason why we should not do all this, and no reason why we should not expect good results from its adoption. Had I the opportunity, I should certainly put this plan into practice. In performing the operation, I should discard the trocar and canula altogether, and simply make an incision with a bistoury. As one does not often have an empyema or hydrothorax to treat in private practice, I have ventured to suggest this mode of treatment to those who may have such cases to deal with.

In performing the operation, I would simply carry out Mr. Lister's instructions for opening a psoas abscess. A filtered solution of carbolic acid, of the strength of 1 in 100, should be put in the spray-producer, and the spray kept playing around the part at which the opening is to be made. The usual precaution should be taken of first inserting a

grooved needle or small trocar and cannula, previously dipped in carbolised oil (1 of carbolic acid to 7 of olive oil). The surgeon being satisfied as to the proper part for the incision, a free opening should at once be made into the pleural cavity by means of an ordinary bistoury, also previously dipped in the carbolised oil. The spray, of course, must be kept constantly playing over and around the wound, not only during all this time, but also while the fluid is running away, and must be continued till the dressing is applied. The best dressing is Lister's antiseptic gauze (to be had from Duncan, Flockhart, and Co., Edinburgh). A strip of this should be cut and folded so as to form a square of six or eight inches; eight, twelve, or sixteen layers may be used, according to the amount of anticipated discharge: this should be applied over the wound as soon as the fluid is all away; until it is applied, there should be no intermission in the play of the spray around the wound. If it be considered desirable to wipe the side before applying the dressing, this should be done with a cloth dipped in a solution of carbolic acid twice the strength of that used for the spray. A piece of some waterproof material should be applied over the gauze, and the whole fastened round the chest. The dressing should be changed on the following day, and afterwards every second, third, or fourth day, according to the amount of discharge. If it be desired to keep the wound open, this may be done by inserting a bit of the antiseptic gauze between its edges. The spray must always be kept playing on and around the wound while the dressing is being changed.

The chief advantages of the above mode of treatment are (1) that the withdrawal of the fluid is effected more speedily and efficaciously than by any other mode; (2) that there is no trouble, either to physician or patient, with drainage-tubes or other inconvenience; (3) that the entrance of air, with whatever germs or other ingredients it may happen to contain, is efficiently guarded against; and (4) that the patient need not be confined to bed, but may even take open air exercise before the wound is closed (if his general state permit it) without interfering with the efficacy of the treatment. In some cases, this last recommendation is one of great importance.

To one other point I would refer before concluding. The existence of tubercle in the lung is regarded by some as a reason for not having recourse to paracentesis in cases of effusion. I am of those who take a diametrically opposite view, and see in the presence of tubercular mischief only a reason for avoiding unnecessary delay. The chance of ultimate recovery in such cases is, of course, very much less than it is in cases in which the lung-tissue is sound. But the chance of improvement in the tubercular case becomes less and less the longer the fluid (which is generally purulent or sero-purulent) is allowed to remain in the chest, irritating an already damaged lung, and further undermining an already impaired state of the general health. In such cases we should tap early. The mode of performing the operation which I have recommended appears to me particularly applicable to these tubercular cases.

The exclusion of air in Dr. Bowditch's operation is, of course, as complete as may be; but there are many cases in which it is impossible for the lung to expand freely at once, and in which the fluid cannot be all drawn off unless its place is supplied by something else. Nature abhors a vacuum, and the place which was occupied by the fluid must, to permit its full evacuation, be taken by the lung, by air, or by an artificial atmosphere: the first is the best, but is not always attainable; the second is the worst, and is to be avoided if possible; there remains only the third, which may be formed of anything capable of being converted into spray. I have suggested Mr Lister's carbolic acid solution as probably the best. I believe, too, that this mode of operation and after-treatment will be found to remove the necessity for drainage-tubes in cases of empyema. Should the fluid be fœtid, I should not hesitate to inject a solution of carbolic acid of the strength of 1 in 50. To exercise its full protective influence, the spray should be fine enough and dense enough to thoroughly replace the air all round the wound.

MEDULLARY CANCER OF THE BLADDER IN A CHILD.

By SPENCER T. SMYTH, M.D., Great Yarmouth.

C. E. F., aged 4 last October, was born of healthy parents. She had always enjoyed good health, with the exception of occasional attacks of biliousness. In November last, she had a slight attack of measles, which, after a short time, was followed by whooping-cough, and continued, more or less, throughout the winter. Her parents considered her not so strong as previously to the measles; and, whenever she partook of warm drinks and food, she was under the necessity of evacuating the bladder. The general health was in other respects good, although she was rather more pallid looking than previously to the attacks of measles and whooping-cough.

On February 27th, I was requested to visit her, as the nurse had noticed for some days that she voided blood in her urine. The bladder was irritable, and upon the least exertion blood in larger quantity was passed. She complained of no pain whatever, nor was there any uneasiness or tenderness over the pubic or inguinal regions. The spirits were naturally good. There was neither febrile disturbance nor nausea. The bowels were always regularly acted on. The urine was of specific gravity 1010, and albuminous. I regarded the case as one of renal hyperæmia. The treatment consisted in quietude, the use of warm hip-baths, and the administration of nitrate of potash and liquor ammoniæ acetatis. The bowels also were freely moved; in short, they were easily excited by the repeated straining to which she was subjected. Milk diet, without stimulants, was ordered. On the following day, there was no nausea; her appetite was good; and she was allowed an egg and a mutton chop with the milk.

In the early part of March, there was a considerable discharge of blood, apparently from the bladder itself, rendering the child spanæmic and weak, with puffiness of the face, particularly under the eyelids. There was still neither pain nor tenderness in the back or lower part of the abdomen. Matico was then administered, with cold drinks, especially milk. After some days, no amelioration being produced, gallic acid in five-grain doses was given for several days, without any particular change. On the 23rd, 15 minims of liquid extract of ergot were given with each dose of the gallic acid. On the 30th, the child being anæmic and feeble, 10 minims of the solution of perchloride of iron were substituted for the gallic acid. On the morning of April 10th, there suddenly occurred a discharge of arterial blood (at least half a pint), followed by purulent matter; the result, no doubt, of a giving way of an abscess, either external to the bladder or within its coats. This prostrated the little patient to such a degree, that I deemed it necessary to administer port wine. Invalid stout was now allowed; it did not in any way aggravate the vesical irritation. For some days there was a free discharge of muco-purulent matter, tinged with blood; the bladder was excessively irritable, the child every few minutes straining, and making the remark "that it would not come", as if a calculus were located near the neck of the bladder.

On April 13th, I introduced a sound without difficulty, having previously obtained the assistance of my partner, who administered chloroform. The bladder was found to be capacious; and on the left side, somewhat inferiorly, a roughness was perceptible, but nothing like the sound elicited from the striking of a stone could be diagnosed. This, I considered was the spot at which the abscess had given way; phosphatic deposits (as evidenced upon *post mortem* examination) being discernible at that part. Opiates were afterwards freely given, also on account of the excessive irritability of the bladder; bicarbonate of potash, with belladonna and bucha, three times a day. By these measures, partial relief was afforded. I then gave chloral hydrate in ten-grain doses, and solution of acetate of morphia in twenty-minim doses—at first alone, then in combination: the combination gave the greatest relief.

Mr. Cadge of Norwich saw the patient with me on April 26th, and introduced a sound, but could not detect a stone. After this, several phosphatic fragments were passed, after much straining, with mucus tinged with blood; there were also observed small portions of medullary matter, which at the time I regarded as metamorphosed purulent substance, not conceiving that a child so young could be labouring under malignant disease of the bladder: in short, I had never heard of or met with a similar case. The child was unable to retain the smallest quantity of urine. Dilute nitro-hydrochloric acid was ordered in five-minim doses, with liquor cinchonæ; but after two doses, the vesical irritability became so great that it was discontinued.

On May 25th, an attack of bilious vomiting occurred, and she became so drowsy that I suspected that urea was circulating in the cerebral vessels. Two grains of calomel were immediately given, followed by a simple enema, which, upon being repeated, caused the bowels to be freely moved. The gastric disturbance was relieved by a few doses of citrate of potash.

On May 29th, after a most restless night, although a dose or two of chloral had been given, she uttered a most piercing shriek (as if a calculus were passing along the ureter), followed by syncope. Brandy was freely administered, but she died in about three hours.

A *post mortem* examination was made on the following day. The abdomen was the only part examined. The right kidney was considerably hypertrophied, nearly twice as large as that on the left side. The left kidney was in a state of granular degeneration; its pelvis was dilated. A small portion of urine was found in both kidneys. The ureters were greatly dilated, being distended with fluid. The bladder

was much hypertrophied. A cyst of an abscess was discovered on the left side inferiorly, upon the edges of which were phosphatic depositions. The interior of the viscus was filled with soft, broken-down medullary matter—resembling, in fact, pounded cerebral substance. Under the microscope, several irregular cancer-cells were discernible. The liver was healthy. The other viscera were not examined.

I regard the case as one of medullary cancer of the bladder, having its origin in the lining mucous membrane. The muscular tunic was hypertrophied, owing to repeated acts of straining. The ureters and kidneys were, I should say, secondarily affected. The case is, as far as I am aware, unique, occcurring in one of such tender age, and without the evidence of active symptoms until within three months of her decease, although as far back as November last the bladder was rendered somewhat irritable after taking warm drinks. A relative on the maternal and one on the paternal side suffered from cancer; and, as far as I can learn, these are the only two relatives that were afflicted with malignant disease. Malignant disease is occasionally known to attack the urinary bladder in adults; but I have been unable, in my limited sphere of books, to meet with an instance of its attacking the bladder of a child so young as four years. Brodie mentions that it is that variety termed "fungus hæmatodes" that is usually met with in the adult bladder; scirrhus being very rare, and the medullary variety but seldom. In my little patient, nothing of an unusual character, except extreme pallor and emaciation, was manifested. She never at any time complained of actual pain, although I should imagine that such must have existed, not only from the nature of the malady, but also from the irritating action of the urine upon an ulcerated surface.

THERAPEUTIC MEMORANDA.

TRATMENT OF IN-GROWING TOE-NAIL.

THE remarks by Mr. Stilwell of Epsom, in the JOURNAL for July 13th, on the above painful malady, are very appropriate. The method recommended by him has long been practised at the London Hospital, and was, I believe, introduced there by Mr. Curling. There are three cutting operations, either of which can be resorted to for the relief of this disease: 1. Evulsion of the nail, which only affords temporary relief until a new nail is produced; 2. Removal by the scalpel of the matrix with the bent nail; 3. Removal of the overlapping integument in which the side or sides of the nail are buried. This latter is the least severe method, and recovery is not protracted. The integument having been cut away freely from the side of the toe, there is no longer any material left into which the nail can be pressed, and so the disease is cured, and cannot be repeated. I have now a female in the hospital upon both of whose great toes I adopted this method. She is convalescent, and the result is most satisfactory. C. F. MAUNDER, F.R.C.S., Surgeon to the London Hospital.

New Broad Street, July 14th, 1872.

TREATMENT OF ULCERS OF THE LEG.

WHATEVER may be the topical applications advocated by one or another of the authorities lately cited in the JOURNAL on the treatment of ulcers, all seem to be agreed that equable support by some form of bandage is the expedient best adapted to overcome the peculiar morbid condition of the sore on which its intractability depends. All, too, concur in the opinion that bandaging alone does not afford the requisite amount of support, and have recourse to plaster-strapping as the supplement of the roller. Now, there are certain rather serious drawbacks to the utility of plaster-strapping—viz., its stiffness and impermeability, which not unfrequently give rise to very mischievous irritation, inflammation, or excoriation, by undue pressure at the edges; by the diffusion over the healthy surface of the secretions from the ulcer; or simply by the retention of perspiration. In order to avoid these evils, I have for many years substituted for plaster straps of wet linen or calico, which adhere quite as firmly as plaster, give equal support, are far less heating and irritating, and, owing to their softness and pliability, interfere less with the free movement of the limb. Their greater permeability favours the absorption rather than the diffusion of the discharge, and admits the more effective use of lotions or water. The cheapness of the material, moreover, when compared with any kind of plaster, is no slight recommendation. In using lotions with them, one precaution is sometimes needed. Moisture constantly applied to the skin in hot weather is very apt to excite a troublesome eruption of inflamed vesicles, prone to coalesce. This may be prevented by lightly anointing the skin with zinc-ointment previously to the application of the wet strapping. Treated in this simple manner, in conjunction with water-dressings, with certain lotions, and occasionally with ointments, this class of cases can, as a general rule, be dealt with more successfully as out- than as in-patients of our hospitals. The patients recover quite as speedily while following their usual occupations; and cicatrisation is certainly more lasting than when accomplished by keeping the leg in the horizontal position. My experience, in fact, coincides in the main with that of Mr. Nourse; but I do not quite share his confidence in the permanence of the cure. The morbid conditions which have once produced the ulcer will too often reproduce it sooner or later, unless the patient can be induced to persevere in the continued use of support, and for this purpose nothing answers better than an elastic stocking of thread, which is in all respects preferable to one of cotton or silk.

21, Lower Seymour Street. HENRY T. CHAPMAN, F.R.C.S.

CLINICAL MEMORANDA.

ON HYSTERIA.

FORTUNATELY, patients seldom die of hysteria, and therefore the opinion generally entertained by gynæcologists that diseases of the sexual system have much to do with the promotion of hysteria can be seldom brought to the test of a *post mortem* examination; and it is, therefore, worth while noticing the pathological bearings of the fatal case of hysteria reported by Dr. Foss in the JOURNAL of July 6th. A woman aged 19 had been more or less subject to hysterical attacks for fourteen months; and this occurrence and liability to hysteria coincided with the occurrence aad continuance of leucorrhœa. This having gone on for fourteen months, the patient died, after a succession of hysterical attacks; and the only important lesions were thus described. "The base of the uterus was congested, and its walls were thicker than usual. The mucous membrane lining the interior was covered with a thick glassy mucus like the white of egg, which was also exuding from the os. The left ovary was about the usual size, and, on section, was found to present a honeycombed appearance, consisting of numerous little cavities filled with gelatinous matter, constituting what is called colloid tumour of the ovary. The right ovary was of the size of a large walnut, and consisted of one large parent cyst, containing many smaller ones springing from its internal surface."

I look on this case as a complete demonstration of the possible induction of the severest form of hysteria by disease of the sexual organs. There was no hysteria until what is called leucorrhœa came to give evidence of uterine disease; and, as it is stated that the vaginal discharge was often offensive, it is clear that the uterine disease must have been severe. It is further proved to have been so by the increased thickness of the uterine walls, and from the fact of the base of the uterus being still congested. The medical attendants told the parents "that the patient was simply suffering from hysteria and leucorrhœa, and that she rather required moral than medical treatment." I do not blame them for not seeing that the sexual disease and hysteria were related as cause to effect, because a man of Dr. King Chambers's eminence teaches his pupils "that hysteria has no more to do with the sexual organs than with any other part of the body; and that it is no truer to say that women are hysterical because they have wombs, than that men are gouty because they have beards." Without having put it so graphically, other good pathologists hold the same opinion, which had, I believe, a disastrous influence on this case. Judging it by ordinary notions of general pathology, the frequent occurrence of an offensive vaginal discharge should have directed attention to the uterine disease; and my conviction is that, if this unrecognised uterine disease had been properly treated, the patient would be still alive; while, in all probability, no treatment could have checked the morbid processes progressing in both ovaries. In discussing the subject of pseudo-narcotism in the third edition of my work on *Diseases of Menstruation and Ovarian Inflammation*, I have given the particulars of several cases in which nothing morbid was found but sundry lesions of the sexual organs. These cases have been called hysterical coma or hysterical apoplexy; and, for my mode of interpreting them, I beg to refer the reader to that work.

E. J. TILT, M.D., Grosvenor Street.

DR. RICHARD MENZEL, senior assistant of Dr. Billroth of Vienna, has been appointed Surgeon of the General Hospital in Triest.—The session at the University of Vienna closed on the 12th instant.—It is reported that Dr. Karsten, Professor of Botany in the University of Vienna, whose conduct towards the students was the pretext for great disturbances some time ago, will not lecture next session.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. THOMAS'S HOSPITAL.

Dr. Murchison's Clinic, Monday, July 1st, 1872.

[*Continued from page* 41.]

Obstinate Constipation, probably dependent on Chronic Lead-poisoning.—The patient, a woman aged 40, was admitted with colic and constipation of ten days' standing. She complained of great pain in the abdomen, which was mostly paroxysmal, but from which she was never entirely free. There was very little tenderness of the abdomen, and no fever, but there was occasional sickness and vomiting. There was a distinct blue line on the margin of the gums, and this symptom assisted in arriving at the diagnosis of simple constipation, although it was impossible to trace the manner in which the lead had been introduced into the system. Small enemata of oil and laudanum, followed by large injections of gruel, were administered, with good results. One or two spontaneous motions were afterwards passed, and she seemed to be doing well. Latterly, however, she appeared to be again getting into the same state, and for five days her bowels had not been opened. She was now ordered enemata of assafœtida. To relieve the abdominal pain, she was at first ordered pills of belladonna and opium, with satisfactory results.

Intermittent Sarcinous Vomiting with Organic Disease of the Stomach.—The subject of this affection was a woman aged 49, who had been suffering for six months from vomiting of sarcinæ, and other symptoms pointing to malignant disease of the stomach. The vomiting came on at intervals of about seven days, and was very copious. All the gastric symptoms, including the vomiting, were relieved by creasote and morphia, in the proportion of one minim of the former to doses of the latter increased to half a grain.

Circumscribed Empyema pressing down the Liver: Paracentesis.—The patient, a female, about eight years of age, had fallen six weeks before admission. This was followed by pain in her right side. When admitted, she presented all the signs of pleuritic effusion in the lower part of the side. The lower margin of the liver descended below the umbilicus, and there was displacement of the heart towards the left. The measurement of the right side increased greatly, without the dulness extending higher. At last, fluctuation was detected at the most prominent part *below* the ribs. This was tapped below the ribs four weeks ago, and fifty-four ounces of pus were drawn off, greatly to the relief of the patient. The liver now ascended, but the level of the upper margin of dulness remained unchanged. The fluid, however, began to reaccumulate, and her temperature once more rose, and she presented symptoms of constitutional disturbance. A counter opening was now made in the back, when eight or ten ounces of fetid pus passed out. A drainage-tube was introduced and the pleural cavity was washed out daily with an aqueous solution of carbolic acid, in the proportion of one per cent. of the acid. Her progress had since been satisfactory; her general health and the local conditions had improved; and the temperature was now normal.

Cases in Dr. Peacock's Wards, and Clinical Remarks.

Pleurisy.—When we visited Dr. Peacock's wards lately, there had been a "run" of cases of pneumonia and pleurisy, acute and chronic, simple and tubercular—forming together a very interesting group. One woman had been admitted with one side of the chest so full of fluid that the advisability of paracentesis was mooted; however, a diuretic and tonic plan of treatment with counterirritation to the chest had effected the absorption of the fluid, and the patient was convalescent. Dr. Peacock observed that pleurisy was generally described in books as a disease attended with active inflammatory symptoms; but in many cases the patient was scarcely aware of anything being wrong till one side of the chest was more or less full of fluid; there was generally some discomfort, but often little pain and little fever, little more indeed than great prostration of strength and some shortness of breath. The disease progressed insidiously until the patient began to suffer from dyspnœa, etc., due to the effusion. Pains in the chest were common enough, but were often due to other causes, as pleurodynia; still they must never be neglected. Simple pleurodynia occasionally passed into pleurisy. He had been annoyed more than once by hearing unmistakable friction after listening vainly on several days, and after having given an opinion that the pain was merely rheumatic. The study of text-books, again, would lead to the idea that there was but one sort of pleural friction; that usually described is the "sound of ascent and descent" of Laennec—a harsh, sonorous friction-sound, due probably to the rubbing together of the dry surfaces of the pleura. This is very characteristic, but is by no means the only, nor even the most common, form of friction-sound; and, when it occurs, it has often disappeared before the patient is removed into hospital. Perhaps the most common form is what might be called "subcrepitant friction," a somewhat fine crackling sound, which differs from the subcrepitant *râle* chiefly in being very superficial. This form of friction is very commonly heard during the process of absorption of a pleuritic effusion; it is probably due to the rubbing together of the surfaces of membrane when covered by thick soft layers of lymph. In many cases, too, this is not constant; it disappears after a few deep respirations, to reappear in the same place after an interval. In many of the insidious cases just referred to, friction is absent throughout; there is a large effusion of fluid with only a little lymph, and when the fluid is absorbed, the pleura retains its healthy condition.

Encysted Pleurisy.—Another very interesting case was that of a blacksmith, a tall, well-made man, aged 27, who, on admission, had absolute dulness with complete absence of breath-sound over the upper third of the left lung, and much fulness in that situation. Six months before admission, he had some hæmoptysis, and a little before that had suffered from slight cough and some failure of health; on the other hand, his aspect was not tubercular, and his family history good. The physical signs were so marked as to give rise to a suspicion of malignant growth, but there was no acute pain, swelling of the arm, or other sign of the pressure of a tumour. Dr. Peacock diagnosed encysted pleurisy, and, with the aid of blisters and tonics, the fluid was absorbed; some amount of consolidation, apparently tubercular, was left.

Empyema.—There were two cases of empyema, in both of which the fluid had been evacuated by the lungs. In one, a girl, about twenty-four years of age, the pus had also discharged itself externally, but the opening had healed quite soundly, the side was gradually contracting, the respiratory sounds were returning, and the young woman had improved greatly in health. The other was a boy, aged 10, who had been sent into the hospital for supposed pneumonia. Shortly afterwards, he suddenly expectorated, after a severe fit of coughing, a large quantity of pus; a considerable part of the previously dull area of his chest was now found to be somewhat tympanitic, and when he coughed there was a loud amphoric sound. Since then he had continued to expectorate pus at intervals, but the side was gradually contracting, the lung expanding, and the amount of fluid in the cavity was diminishing. Although pale, the patient was stout and lively; indeed, the trouble throughout had been to keep him quiet in bed.

Dr. Peacock remarked that, in cases of phthisis, the symptoms of perforation of the lung are often much less severe than one would expect. When it occurs in a case of early phthisis, whilst the patient is still in fair health, the symptoms are sufficiently well marked; but, in many more advanced cases of the disease, pneumothorax may supervene, with so little local pain and additional constitutional disturbance that its occurrence may be overlooked. In some cases, too, the escape of air and consequent effusion of fluid is limited by adhesions, rendering the physical signs very anomalous and puzzling. A sign which is always mentioned in books, and often the first which is given by a student under examination, is the peculiar sound produced by succussion; this is, however, a very uncertain sign, only met with when there is a considerable amount both of air and fluid in the pleural cavity, and when this cavity is tolerably free from adhesions. Dr. Peacock added that, although the prognosis of such cases as these is not very favourable in adults—permanent fistulæ being often the result—children generally do well. He has witnessed so many spontaneous cures that he does not, as a rule, advise an operation; if, however, the patient be distressed or greatly inconvenienced by the amount of the effusion, or if he cannot readily expectorate the matter, he would at once perform paracentesis: he prefers that the opening should be free and that the patient should wear a cannula, or, better still, that a counter-opening should be made and a drainage-tube inserted.

Speaking of *Pneumonia*, Dr. Peacock said that his experience of the disease as seen in London did not agree with what was generally stated, as to the rapid recovery of the patients and the complete disappearance of the physical signs in a short time. A sudden fall of temperature, indeed, does generally occur; but he finds that the physical signs usually clear off very gradually, and that evidence of a certain amount of damage to the lung often persists for a considerable time. The

rapidity of the recovery depends also very much on the simple or complicated character of the case; after pleuro-pneumonia and broncho-pneumonia, convalescence is often very protracted.

THE LONDON HOSPITAL.

REMARKS ON CASES OF INTRACRANIAL TUMOUR.

(Under the care of Dr. HUGHLINGS JACKSON.)

Intracranial Tumour.—At a recent visit to the Hospital, we saw several cases of intracranial tumour, or rather cases in which that diagnosis had been confidently made. One was that of a boy nearly nine years of age, who was supposed to have a tumour of the middle lobe of the cerebellum. A case very like it, in the life history, and in which tumour of this part was found, is recorded by Dr. Hughlings Jackson in this JOURNAL, November 4th, 1871, p. 528. In both cases, there was, at the beginning, irregular gait; there were double optic neuritis and enlargement of the head. The patient we saw at our recent visit is in an advanced stage; he lies on his back with his legs and feet extended, and with his arms flexed acutely at the elbows. There is, however, no drawing back of the head; there is no arching of the back; and his abdomen, although sunken, is not at all hard. The head is almost constantly turned to the left, as are also the two eyes. From this position, he never moves, except that the eyes occasionally wander to the right. His head is not only large—strikingly above the ears—but it is evidently enlarged, for the sagittal suture gapes widely (no relics of rickets in his body). A tumour of the middle lobe, by pressure on the veins of Galen, will cause hydrocephalus. Mr. Hilton thinks that the cause of the common form of hydrocephalus is the result of closure of the cerebro-spinal aperture, which, according to him, is usually open. Possibly, then, in this case, the tumour closes this opening. But, whatever the mechanism may be, we see that, in an indirect manner, disease of the cerebellum can affect the cerebrum; there are mental symptoms in these cases. In a case closely like this in Guy's Hospital, many years ago, Sir Wm. Gull drew attention to the very general fading out of mind (a tumour of the middle lobe of the cerebellum was found, *post mortem*, as Sir Wm. Gull had predicted). In the boy whom we saw, there is great apathy; he never speaks unless he be spoken to, when he replies correctly. He lies on his back in one position all day, never taking notice of anything unless directly addressed. But against this is to be noted the fact that he can sing. Mr. Stephen Mackenzie has heard him sing several songs; songs which he had learned when well, and which he used to sing at home. He sang for the class, and apparently with great interest, the first verse of "Up in a balloon."

In these cases, the intracranial pressure will be very gradually exerted (nervous matter bears slowly exerted pressure very well) and very evenly distributed—pressure by fluid. Thus we may account for the very general mental affection—the "fading out of mind." Power to sing is no very strong evidence of mental power. It is a largely automatic act. Aphasics can sometimes sing, and some idiots can. But it must be again remarked that the boy gives courteous and exact replies to simple questions; moreover, he replies readily. In Sir Wm. Gull's case, towards the end of life, the interval before replying was so long, that a hasty observer would have supposed that the patient was deaf or entirely demented; but at length the reply came, and it was slow and monotonous. The absence of deafness in these patients is noteworthy. In cases of intracranial tumour, it is as important to note the almost constant absence of deafness as it is to note the almost constant presence of blindness (partial or total).

In the boy whom we saw, there have been no tetanus-like fits, as there were in the case recorded in November. From theoretical considerations, Dr. Hughlings Jackson has been led to suppose that the changes which cause the tetanic paroxysm and the interparoxysmal "set" of the trunk and limbs in tetanus are seated in the cerebellum, and not in the spinal cord, or not limited to it. But, since two such able observers as Lockhart Clarke and Clifford Allbutt have described changes in the cord in tetanus, he has refrained from fully stating this hypothesis. In the meantime, he diligently collects observations as to the tetanus-like affections, especially in the case where a gross (an obvious) lesion is likely to be found *post mortem*, to fix approximately the seat of the minute changes causing the paroxysm. Hence the interest of the tetanoid fits in the case related in November. In some cases of cerebellar disease, there is only a fragment of the tetanus-like condition.

There is (we may now say there was, for the patient died a few days after our visit) a woman, aged 52, who was plainly the subject of intracranial tumour. The double optic neuritis, the severe headache, and urgent purposeless vomiting, warrant this diagnosis. The doubtful questions were as to the position and nature of the tumour. She mostly lay in bed during her stay in the hospital, but when induced to walk, she "walked badly." Besides being quite blind, she was so dull and also so exceedingly timid and suspicious, that it was difficult to make a more precise statement. She could not stand by herself; and it was particularly remarked that she fell backwards when left without support. Besides this, she was quite deaf of the right ear. These were the only localising symptoms at first. Later, there was a nasal articulation, and the head was placed slightly to the left; her voice remained good to the last. It was supposed that the tumour lay under the tentorium, on the right side, so as to compress the auditory nerve. It was found, however, in the right posterior cerebellar fossa, or rather inserted, as it were, betwixt two flaps of the right cerebellar lobe, from which position it was detached—almost fell out—on removal of the brain. Whether the deafness was the result of old changes in the ear, or was the result of indirect compression of the soft auditory nerve, remains doubtful. In such a case it is not worth while to speculate as to the relation of the falling backwards to disease of the auditory nerve or the semicircular canal, as there was a large tumour of the cerebellum. It would be unwarrantable to say that disease of the cerebellum itself produced the deafness—although the cerebellum does receive a large share of the auditory nerve—because in most cases of cerebellar disease there is no deafness. But, again, it may be urged that the deafness was the result of an auditory neuritis. But, once more, tumour of the cerebellum is very rarely attended by deafness any way caused. Nothing is rarer, says Vulpian, than trouble of hearing in alterations of the cerebellum. (Of course, cases of abscess of the cerebellum from disease of the ear have no bearing on the question.) As to the nature of the disease, there were, at first, no doubts on the important question whether it was syphilitic or not, or rather, the style of the symptoms never suggested syphilis, and inquiries elicited no information about it. But about a month before her death, a nasal tone of voice led to an examination of her throat, and there was seen what was supposed to be an ulcer on the back of the pharynx; "supposed", as, from her condition, only a flying sight of it was to be got. On the chance of its being syphilis, large doses of iodide of potassium were given. At the necropsy, the pharynx was examined, and no trace of ulcer or cicatrix was found. The tumour was not syphilitic.

There is a woman in the Hospital, aged 37, who is believed to be the subject of intracranial tumour. She has had headache, vomiting, and double optic neuritis. She was in the Hospital just about a year ago; and the interest of her case is that both then, when the neuritis was in an acute or severe stage, and now, she can read No. 2 of Snellen, although the changes in her discs have not even yet completely disappeared. It is, Dr. Hughlings Jackson says, extremely common for severe optic neuritis to exist when the patient can read the smallest type, and, what is more important, in some cases the changes pass away almost entirely—so far that a careful examination by the direct method is necessary to detect any abnormalities—when sight has never been affected. In short, occasionally there may be the pathological condition optic neuritis without the symptom amaurosis attending or following it.

The other day, a necropsy was made on a patient who had had hemiplegia of the left side, and also had, Dr. Hughlings Jackson supposed, optic neuritis on but one side, the side opposite the lesion. This is the second case in which Dr. Hughlings Jackson has seen uniocular neuritis from intracranial tumour; in that case, also, the tumour was in the side opposite the neuritis (case reported *Royal London Hospital Reports*, November 1871, p. 130, microscopical examination of both eyes by Dr. Hermann Pagenstecher).

There is a woman, aged 42, who has double optic neuritis, and also loss of smell—possibly owing to olfactory neuritis. There is no affection of taste in the strict sense of the word taste; at any rate, she can recognise bitters and sweets (quinine and sugar were used). The existence of anosmia, Dr. Hughlings Jackson believes, does not warrant the diagnosis of disease actually involving or directly squeezing the olfactory bulbs, any more than optic neuritis warrants the diagnosis of disease actually involving or directly squeezing the corpora quadragemina, optic tracts, or optic nerves. Probably, in most cases, the disease which causes the anosmia is of the anterior lobe; as to the optic neuritis (with or without defect of sight), it is of no value whatever in localising, any more than "cerebral" vomiting is. When the class saw her last, she was reading; and on trial, when helped by convex glasses to correct her presbyopia, she could read, although badly, No. 1½ of Snellen. Nevertheless, her optic discs are much swollen, the arteries are not traceable, the veins knuckle over the edge of the swelling, and there are effusions of blood. She has other symptoms, and these localise. She has occasionally convulsions, followed by hemiplegia, and nearly complete loss of speech. These symptoms point to disease of convolutions of the left cerebral hemisphere. Although there is no demonstrable evidence of syphilis, syphiloma of the brain is most

likely to be the cause of the symptoms; and as her convulsive seizures have varied not only in degree, but in kind, probably there is more than one focus of disease in the brain.

ST. BARTHOLOMEW'S HOSPITAL.

Notes of Cases, June 11, 1872.

Mr. Savory pointed out to us many cases of interest now under his care. The following is a short account of some of them.

Case I. *Tumour on the Inner Side of the Left Thigh* just above the knee-joint, of the nature of recurrent fibroid, in a man about forty years of age. A swelling about the size of a small nut was noticed about nine months ago; this rapidly grew. The patient says that three mouths ago a seton was passed through the swelling, after which it spread more rapidly, and took on ulcerative action. At the present time, the tumour is about the size of a large orange, and presents a grey sloughy surface at the inner aspect of the thigh. It is gradually extending more and more towards the popliteal space, and is so closely connected with the tissues about the joint that amputation has been advised, although it is doubtful whether the joint itself is actually implicated. The general health has been tolerably good, but is beginning to fail.

Case II. *Cretinism* in a boy aged 18, not more than three feet high. As far as can be ascertained, he was born in England, of parents who were first cousins; there are other children of the family, but they are healthy and well developed. In this case there are some enlargement of the thyroid body and some supraclavicular swellings. The intellectual faculties are low. The history and particulars of this interesting case are, we understand, shortly to be published.

Case III. *Two Cases of Acute Necrosis of the Tibia.*—In one case, the epiphyses are affected in addition to the shaft. The patient, a boy aged about 14, has long had threatening of pyæmia, but no secondary deposits have been detected, although he has had frequent rigors and sweatings. The knee-joint and ankle-joint are both affected. In the second case, the shaft only is diseased; and it was noticed, on admission, that the redness of the skin abruptly terminated above and below, opposite the union of the epiphyses with the shaft. In speaking of the latter case, Mr. Savory remarked that reparative processes did not take place so readily in the young as in adults, in whom the periosteum is lifted bodily from the bone; whereas, in very young persons, the periosteum is often broken up into shreds.

Case IV. *Iliac Abscess* in a woman aged 54. This was opened a short time ago in the thigh just below Poupart's ligament, when about two pints of pus escaped. Although the patient is of such an age, yet the abscess is rapidly filling up under ordinary treatment.

Case V. *Ununited Fracture* of the bone of the left leg in a child. The history dates from birth. The seat of fracture is at the lower part of the leg. When admitted, the lower end of the upper fragment projected forwards and downwards to such an extent that when the patient walked the end of the bones rested on the dorsum of the foot. A large bursa was noticed to exist over the ends of the bones. A few weeks ago the tendo Achillis was divided, and since then extension has been applied. Now, however, the tendon has reunited, and is firm and rigid, drawing the lower fragment of the bones together with the foot backwards and upwards. It is, therefore, proposed to divide the tendon again and reapply extension, and thus gradually to bring the two fragments into a line, when the patient will have a boot to extend some distance up the leg with side supports. Mr. Savory objects to cutting down on the bones in these congenital cases; for, he says, the bones are so soft and atrophied, and the reparative processes so low, that union does not take place.

SOUTH STAFFORDSHIRE GENERAL HOSPITAL.

Cases of Severe Injury of the Limbs.

(Under the care of Mr. Vincent Jackson.)

Case I. *Smash of the Right Leg and Thigh: Amputation at the Hip-joint: Death.*—Thomas Reeves, aged 14, was admitted on June 4th, 1872. A short time before admission, whilst he was at work in a large manufactory, he was caught in the rolls, and his right lower limb was ground to pieces. When seen by Mr. Jackson, it was considered, owing to the destructive injury of the hard and soft parts, impossible to save his life, unless the shattered limb were removed. Chloroform having been given, amputation at the hip-joint by anterior and posterior flaps was rapidly performed. The vessels were secured by fine silk ligature, the ends being cut short; the edges of the wound were then brought evenly together by hare-lip pins and interrupted metallic suture, and then left exposed. The patient died from shock. No hæmorrhage occurred.

Case II. *Severe Smash of the Right Leg: Amputation through Knee-joint: Recovery.*—William Paget, aged 24, single, a fireman, was admitted June 4th, at 8 P.M. Whilst at work on his engine, he fell off; and two wheels of a railway waggon passed over his right leg, smashing it. His habits were temperate. At 9 P.M., amputation was performed through the knee-joint by a long anterior oval and a short posterior square cut flap; the patella was removed. The vessels were tied by fine silk ligatures, cut short. The edges of the flaps were brought together by interrupted metallic suture. The stump was covered with a thick layer of oakum, secured by a bandage. On June 8th, he was doing well. The dressings were changed, the parts being first washed with carbolic water. On the 10th, the dressings were again changed. There was threatening of an abscess over the condyles of the femur; also a slight slough of the free margin of the upper flap. He took plenty of proper food. The stump was dressed daily; and, on the 13th, the sutures were removed, and the abscess opened. The slough had separated, with hardly any noticeable loss of the long flap. Solid food was taken now. On the 30th, the stump was almost well. The abscess still discharged. He was able to sit up.

Case III. *Smash of the Left Forearm: Amputation through Elbow-joint.*—George Carver, aged 13, was admitted May 27th. Whilst he was at work, his left forearm was entangled in the rolls, and almost torn away. Under chloroform, amputation was performed through the elbow-joint; a flap as long as possible being made by transfixion in front of the articulation, the joint opened by a short flap made behind. Silk ligatures cut short were used, and metallic sutures; and oakum dressing. On May 29th, there was a slight slough of the upper flap at the outer angle. On June 8th, he was allowed to get up; and, on the 30th, was discharged quite well.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

LOCAL REMEDIES FOR THROAT-DEAFNESS.

At a meeting of the East Surrey District of the South-Eastern Branch, Mr. Hodgson (Brighton) offered for notice a contrivance which he represented he had for some time been in the habit of making, and using to excellent purpose, as a mode of applying medicaments (especially glycerine of tannin, diluted with an equal quantity of spirit of wine, and weak solution of nitrate of silver) to the posterior nares, the upper part of the pharynx, and the Eustachian passages, in cases of throat-deafness.

The instrument consisted of nine inches of glass tube, of the size of a small quill, bent at an angle of about 95 degrees, one end drawn out nearly to a point, and carefully rounded, and the other end filled with a few inches of India-rubber tube, in the farther end of which was a bit of glass tube to act as a mouth-piece.

The bent portion of the glass tube having been charged by suction from a glass with the medicament (of which it will hold about twenty minims), the pointed end is to be carefully inserted for about an inch along the floor of the patient's nostril, and the mouth-piece in the operator's mouth.

The patient's nostrils are then to be grasped around the tube, and the patient directed to swallow, at which moment the operator is briskly to blow forwards the contents of the tube, and thereby scatter them into the upper part of the pharynx, etc.

Mr. Hodgson stated that almost any druggist could make the instrument, and any intelligent person (with one lesson from the surgeon) could learn to use it, a point of no little importance in such chronic cases as these are apt to be.

Hydrate of Chloral in Hooping-Cough.—Dr. Karl Lorey reports (*Deutsche Klinik*, 46, 1871) the results which he has obtained from the use of chloral hydrate in pertussis. He gives it in the following formula: Hydrate of chloral 5 parts, distilled water 150 parts, syrup of orange-peel 15 parts. The dose is from one to three teaspoonfuls, according to the age of the child. Generally, one teaspoonful is given in the morning, and one or two in the evening. The medicine is commenced as soon as the earliest characteristic symptoms appear, and is continued until the cough loses its catarrhal character. It is borne well by children, and produces no unpleasant consequences. It produces a marked reduction in the number and intensity, as well as in the duration, of the paroxysms.—*Wiener Med. Wochenschr.*, June 15.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 20TH, 1872.

THE PUBLIC HEALTH BILL.

IN the House of Commons, on July 12th, Mr. Stansfeld made an important statement as to the intention of Government regarding the Public Health Bill. He stated that the amended bill contained a clause enabling boards and local authorities to raise loans at an interest of three and a half per cent. The measure, he said, went further, and proposed that the Imperial treasury should bear half the salary of the medical officers of health to be appointed under the bill, stipulating that, as Government was to bear that proportion of the salary, it should be entitled to share in the appointment ; and he hoped this joint appointment would be the rule rather than the exception. If the Government were to be partners in payment it should also be partners in the appointment and partners in dismissing ; that was to say, when an appointment was made the consent of Government should be asked, and no officer should be subject to dismissal without the sanction of the Government or the local Board. Next to the medical officer of health, the most useful officer was the sanitary inspector. It was of the greatest consequence that the local authorities should be encouraged to appoint a sanitary inspector, and that he should be a man free from capricious dismissal, and at liberty to perform the duties which the legislature had imposed upon him. With these views he proposed to ask Parliament to contribute one-half of the salary of the sanitary inspector also. These three features—the lending local boards money at three and a half per cent., the payment of half the salary of the medical officer of health, and the payment also of half the salary of the sanitary inspector, constituted the principal proposals of the bill.

Sir M. H. Beach said that he very much doubted whether it would remain satisfactory that only half the salaries of medical officers of health and of sanitary inspectors should be paid by the Treasury. The Local Government Board practically, to his mind, had the power almost of appointment, and entirely of dismissal, with regard to these officers, because in very many cases their consent was necessary before the local authorities could take any action in regard to either appointment or dismissal. He thought that, when the time came for the house more fully considering this important question, it might very fairly be argued that the whole instead of half the salaries of the officers of this character should be paid by the Treasury, and that nothing at all should be paid from the rates. As a matter of practice, the salaries paid to these officers were not within the control of the local authorities.

Mr. Corrance regretted that a bill equal in importance to any which had been before the house should have been delayed to the end of the session. He thought it was a most incomplete and imperfect measure. The right hon. gentleman had told them that his present proposal was only provisional ; that fact ought to be considered. He thought its operation would be only partial, and as the right hon. gentleman had admitted that in small boroughs and areas the security was inferior and the percentage high, it might be that larger areas might obviate that inconvenience and make that boon not inconsiderable. The right hon. gentleman said that he would pay half the salaries of the officers, and that was what he (Mr. Corrance) had always asked him to do. He did not wish to see the Government pay the whole of the salaries of the officers, because he wished to see local payment and local responsibility continue. He trusted that the medical officers of unions would almost always be appointed health officers ; but, as they already received half their salaries from the Government, the end would be that, if the course he suggested were adopted, the parishes would only receive about the same amount of money from the Government as they now received. Mr. Stansfeld had said that he wished to prevent capricious dismissals from taking place, and it was to be hoped that the appointing authority would be such that there would be no danger of capricious dismissals. He regarded this bill as one of the greatest consequence, and he should be very sorry if anything were done which would cause its rejection.

Dr. Brewer regarded as of great importance the proposal that not only should the Government pay half the salaries of the medical officers, but that they should also have a voice in their nomination. Having this voice, it would be most important that the Government should encourage the idea of medical officers being appointed, not merely for a parish or union, but for several parishes, unions, and even districts. They did not want medical officers to be mere inspectors of nuisances, nor did they want them to make reports on all sorts of subjects. The special functions of a medical officer should be to report, not only upon the special circumstances of his own district, but so to concentrate his attention upon all the sanitary peculiarities of the locality as to be able to make suggestions to the central office for them to carry out in connection with the Government for the improvement of the sanitary condition of the people. He looked upon the influence of the central office as of the highest possible consequence, and he hoped that they would have appointed medical officers who would not be under the necessity of making up their incomes by adding private practice to their public functions. The functions of such an office were extremely difficult to carry out, and would require the whole attention of any person who had to do the work.

After some remarks from Colonel Barttelot and Mr. Craufurd, a debate took place on a proposal of Mr. W. M. Torrens, "That it be an instruction to the committee that they have power to provide for the rebuilding of workmen's dwellings, in cases where the same shall be extensively pulled down under or by virtue of any acts of Parliament."

In the discussion on this proposal, Mr. Henley observed that the motion of the hon. member for Finsbury only showed the unfortunate position in which the House was placed in consequence of the Government bringing forward such an important question at that late period of the session in its present shape. The hon. gentleman opposite only asked to add one more subject to seven or eight other subjects which were mixed up with this Bill. Various Acts of Parliament, involving important and conflicting powers, were jumbled together in a curious hodge-podge fashion, and all the business arising under them was to be tumbled into the hands of the rural and urban sanitary authorities, without any directions as to how they were to administer them. Many of those Acts which were now thrown higgledy-piggledy together, involved matters demanding the experience of legal minds to point out what was to be done in the case of those conflicting statutes. It appeared to him that the workmanlike course which the Government should have pursued would have been first to consolidate all those different Acts together, and then to proceed to legislate for the general health of the public. He urged upon the Government the propriety of withdrawing this measure, and not attempting to press it when there was little chance of its passing. Even if they should succeed in passing it, it was impossible, in its present shape, that it could give any satisfaction.

Mr. Muntz, Mr. Dimsdale, and Mr. H. Lewis, spoke in favour of postponing the Bill till next session ; while Colonel Hogg, Sir T. Acland, Mr. Brand, and Mr. D. Dalrymple, were in favour of immediate progress. The motion of Mr. Torrens was withdrawn.

On Tuesday, the House went into Committee *pro formâ* on the Bill. On the motion for going into Committee, a debate took place, which was commenced by Sir Massey Lopes, who thanked the Government for consenting to bear a portion of the general expenses, such as the payment of medical officers and inspectors of nuisances. But he com-

plaincd that the Bill had failed to carry out the recommendations of the Royal Sanitary Commission as to the consolidation of the sanitary laws, and as to the making the legislative provisions compulsory instead of permissive. Lord R. Montagu also spoke strongly in favour of making the counties the areas of sanitary jurisdiction. Mr. Stansfeld defended the conduct of the Government in not attempting the consolidation of the sanitary laws, and in adopting the union as the area of local sanitary administration. It had been suggested that, if local bodies were prepared to pay the salaries of their own officers, they should have the independent power of appointing and dismissing them. Now, that was the proposal in the Bill, but it was worded in this way—that the Local Government Board should have Poor-law powers in the case of officers under the sanitary authority in boroughs, whose salary was paid by money voted by Parliament. He had no intention of committing the whole sanitary administration of this country to medical men. It would not be acceptable to the country, and it would not be acceptable to himself. After all, what were all those matters of sanitary protection and administration which he hoped would be taken advantage of? They were cleanliness and purity; and they did not want medical men to effect that, or to determine the conditions of buildings which every man of common sense knew to be necessary for the health of himself or anybody else. But there were many respects in which a professional and skilled opinion and advice were necessary; for instance, to trace a fever to its source. Therefore there were abundant reasons why there should be some organisation for the appointment of medical officers of health. It had also been suggested that medical officers of health should not be appointed for life; and he might assure the House that he would be o party to life appointments.

The statement made by Mr. Stansfeld places the medical officers of health in a more satisfactory position than that which, as was stated in the JOURNAL a fortnight ago, seemed likely to be their lot. From some of the expressions in the debate, however, it is not clear that the interference of the Local Government Board is to be universal; it appears rather that it is only when a local authority seeks aid from the Government, that the Board is to claim a share in the appointment and dismissal of the health-officer. This is a matter which requires to be made plain. If the Bill must pass into law in its present imperfect shape, it would be satisfactory to know that the control of the Local Government Board over the appointment and dismissal of health-officers is to be universal, and not only conditional and partial.

THE PATHOLOGY OF TRAUMATIC FEVER.

IT is now about ten years since Dr. Billroth of Vienna published an elaborate exposition of his views on the fever which follows surgical operations and injuries. He pointed out that fever might arise under two conditions: as traumatic fever, appearing generally about two days after the injury, as the result of the absorption of decomposing matters from the surface of the wound; and as secondary or inflammatory fever, the consequence of inflammation of the parts in the neighbourhood of the wound. He has lately published in the *Archiv für Klinische Chirurgie* a further series of observations on traumatic fever, and arrives at results of which the following is a summary.

In a very large number of cases, even when a large wound has been made—as in amputations, resections, and ovariotomy—there is no primary traumatic fever. This fever is, then, no necessary result of a wound, but is rather to be regarded as an accidental disease. When it appears, it does so, as a rule, on the first or second day (more frequently the latter), and sometimes not until the fourth day; but rarely, if ever, at a later period. It does not usually last beyond the seventh day.

It was held by Schönlein and his school, that traumatic fever was a reflex result of the irritation of the nerves of the injured part. Billroth for some time accepted this view, but was led to abandon it by observing that there was no constant relation between the extent of the injury and the intensity of the fever. It was evident, he saw, that there was some intimate relation between the fever and the destruction of tissue; but the course of the fever presented phenomena not at first readily comprehended—namely, remarkable differences of temperature. These variations in temperature after operations have been the subject of special investigation by Billroth. He arranges the cases under three principal types. In one series of cases, comprising ten out of twenty-one patients who remained free from fever, the temperature remained below 100 deg. Fahr.; in another (six cases) it rose slowly; and in a third it rose rapidly, sometimes as high as 104 deg. These differences are not in relation with the nature of the injury; but the depression of temperature may be accounted for by loss of blood, chloroform narcosis, pain and other nervous influences, leaving the patients long uncovered during operation, etc.; as well as by the division of large nerve-trunks, and by rupture of internal viscera, even though there be but little hæmorrhage.

With the object of ascertaining under what conditions the elevation of temperatures take place, Billroth made a series of experiments on healthy dogs. He observed the temperature in the rectum of those animals at intervals of five minutes, commencing five minutes after the introduction of the instrument. At the commencement of the observation, the temperature rose; it then fell, and was noticed to undergo a series of oscillations of about half a degree. The same phenomenon occurred in rabbits, and was also observed when the mercurial tube was protected by a glass outer tube containing a layer of alcohol, so as to protect it from pressure. The digestive process, in one of the experiments, appeared to have a marked influence in raising the temperature for some hours.

The next point examined was the effect of muscular action on temperature. In man, muscular exertion in air of moderate temperature produces a slight increase, while in a cold atmosphere there is sometimes a fall. In animals, on the other hand, especially in dogs (as Bergmann had already observed), muscular movements, even for a short time, were found to raise the temperature in the rectum by about one or two degrees; and the elevation lasted from half an hour to an hour and a half.

Injuries, such as the ligature of vessels, or long incisions in the skin, were not followed by rise of the temperature in the rectum of dogs within three hours. Nor was elevation of temperature a constant result of irritating the sensory nerves by chemical and mechanical agents, such as inflation of the skin, subcutaneous injection of water, etc.

Some pathologists, notably Albert and Stricker, have insisted on the intimate connexion between fever and the vaso-motor nerves; and the influence of dilatation and contraction of the vessels on the animal temperature must not be overlooked. Billroth, however, has failed in producing fever by irritation of the walls of the vessels by the introduction of cannulæ, or by distending and lacerating their walls by laminaria cylinders. The injection into the systemic vessels of starch or charcoal suspended in water produced a lowering rather than a raising of temperature. When the injection was made into the pulmonary circulation, fever was not produced, although the temperature underwent remarkable variations, manifesting with tolerable regularity two distinct elevations and depressions.

When a filtered infusion of putrefied muscular tissue, swarming with vibrios, was injected into the arteries, veins, or areolar tissue of dogs, the following results were observed. Injection of a large quantity was followed by rapid death, the temperature falling; while the injection of moderate or small quantities produced fever of a remittent character. The increase of temperature was noticeable in an hour when the injection was made into the veins, but not within three or four hours when it was made into the areolar tissue. The introduction of healthy pus, whether pure or mixed with a small quantity of water, either into the vessels or into the areolar tissue, sometimes produced fever, sometimes not. The same inconsistency of result was observed after the injection of water, serum, and the fluid of hydrocele.

The only two agencies, then, of which an elevation of temperature is a constant result, are muscular action and the injection of putrid mat-

ters. Muscular action, whether voluntary or artificially induced, may give rise to an accumulation of heat in the body; but it is not shown that a similar accumulation attends irritation of the sensory and vaso-motor nerves.

In proceeding finally to explain in what way traumatic fever is produced, Billroth notices the various theories which have been put forth by Zimmermann, Traube and Senator, Leyden, and Liebermeister. He is most inclined to accept the hypothesis that materials are carried into the blood from the sloughing or inflamed part, and act on certain parts of the nervous system in such a way as to disturb the regulation of the temperature. The difference between septic products and those of inflammation is only in degree; there is no essential difference between them. It has been supposed that these products, when introduced into the blood, give rise to fever (increase of temperature) through an intermediate process of inflammation; but this is rendered improbable by the circumstance that the increase of temperature may take place when there is no trace of inflammation, and that it sometimes follows the injection of water, serum, etc., which do not produce inflammation. Again, although embolism by starch or charcoal causes the temperature to be raised, it is rarely attended by inflammation, or, if it be, it is only after some time has elapsed.

The fever-producing materials carried into the blood from sloughy and inflamed parts are not produced by the injury, but are the result of a septic process exercised on the wound. As to the question whether there is an introduction of germs or vibrios, Billroth abstains from giving a decided opinion, although he regards the truth of the germ-theory as probable.

DR. G. H. SAVAGE has been elected Assistant Medical Officer to Bethlem Hospital.

A MONUMENT in honour of the celebrated Boerhaave is to be unveiled at Leyden on the 26th instant.

DR. SHEPHERD has been appointed Assistant-Physician, and Dr. Wiltshire Assistant Obstetric Physician, to St. Mary's Hospital.

AMONG the Bills before the House of Commons which will not be proceeded with this session, are the Contagious Diseases Prevention Bill and the Masters and Servants (Wages) Bill.

THE Société Français de Secours aux Blessés has presented its bronze cross and diploma to Mr. J. B. Walker of Clifton Gardens, Bayswater, for services rendered in the ambulances of Beaumont, Saarbruck, and Metz.

THE *German Pharmacopœia* has just been published in Berlin, and on November 1st is to come into use throughout the German Empire, in place of the Pharmacopœias at present in use in the various States.

THE distribution of prizes at the Charing Cross Medical School will take place on Friday (to-day), at 4 P.M.; Robert Few, Esq., in the Chair.

AT the last annual meeting of the American Medical Association, the following gentlemen were appointed delegates to the British Medical Association:—Dr. Charles A. Hart, New York; Dr. John D. Jackson, Kentucky: Dr. J. R. Bronson, Massachusetts; Dr. F. Henderson and Dr. J. F. Johnson, Alabama; and Dr. J. M. Dacosta, Pennsylvania.

THE number of candidates for the diploma of membership of the Royal College of Surgeons at the close of the present session, who underwent the written portion of the primary examination on Saturday last, is represented by 117, against 109 last year; and it is stated that there is the same increase in the number now going through their examinations for the final, or surgical and pathological, examination.

THE WIMBLEDON CAMP.

THE camp has never been more healthy than this year. Diarrhœa has been rare, and in most cases traceable to indiscretion in diet, or to drinking water from dirty water-carts. The only accidents have been a splash of lead in the face, previously recorded; a severe scald from boiling grease, which occurred to one of the refreshment contractors' men; and a badly cut face, which a sergeant of the Rifle Brigade got by falling on a tent-peg. One unlucky volunteer has spent nearly the whole fortnight in hospital, first with severe febrile diarrhœa, and afterwards with acute rheumatism, affecting both knees. No other serious illness has occurred. Mr. Gladstone visited and inspected the hospital on Wednesday.

THE CHOLERA.

THE cholera is surely and even rapidly travelling from the East of Europe to the West. It has already almost reached the Russian frontier, and Berlin is growing alarmed. This is not without reason; for, owing to the negligence of the municipal authorities, some of the broad navigable watercourses of the city were a few years ago converted into open sewers. The unhealthy condition of Berlin is proved by the death-rate having increased one and a half per cent. during the last four years; and a visitation of cholera will be very severely felt in a city where drainage is so criminally neglected. A correspondent, writing from Cork, compares the sanitary system of that city to Berlin, and complains that the beautiful river should be turned into a noisome and pestilential drain. Official notice has been received in this country of the outbreak of cholera in St. Petersburgh. On July 12th, there had been, since the appearance of the disease on June 22nd, 565 cases, with 54 recoveries and 240 deaths. The number of cases is sufficient to demand from the authorities in this country immediate steps in supervising vessels arriving from the Baltic, and otherwise carrying out similar efficient measures which last year prevented the entrance of the disease into this country. Diarrhœa has already begun to swell the mortality in the metropolis and other towns in England, and we may expect a continued increase during August and September, if the weather continue warm.

DR. LOCKHART CLARKE.

WE understand that our eminent associate, Dr. Lockhart Clarke, F.R.S., has been invited to join the Infirmary for Epilepsy and Paralysis in Portland Terrace as one of the physicians, and has accepted the post. It is an appointment in every way creditable to the governors; and it is not a little singular, and not to the credit of our greater hospitals, that Dr. Clarke has not before this been invited to join the staff of one of these institutions. His is one of the lives which do honour to our profession and to our country, and his career has been one of those which, for the sake of science and humanity, deserve to be crowned with all the honours and the success which the support of the profession can accord. Amid the laborious duties of a general practice, Dr. Clarke has found the time, the energy, and the self-denying resolution to apply his remarkable powers to unwearied, toilsome, and most important investigations of the minute anatomy and pathology of the brain and spinal cord. He has touched nothing without throwing light upon it. His elaborate and splendid monographs in the *Transactions* of the Royal Society are monuments of well applied skill and great powers of manipulation, observation, and thought, to the solution of most intricate questions in the anatomy of the nervous system. Lockhart Clarke's methods and memoirs are the starting-points of innumerable fresh inquiries; and he has not only made more important contributions to our knowledge on these subjects than any other living anatomist, but has rendered possible the advancing researches of others in the same directions. His papers on the pathology of the nervous structures in tetanus, locomotor ataxy, progressive atrophy, and paralysis, are classical labours in literature; and from them date, and on them rest, the greater part of what is being done in these directions by other European and British workers. In entering upon a consulting

practice, Dr. Clarke brings to his sphere of work a large store of special clinical experience in nervous diseases, and a remarkable clinical acumen, with a great command of therapeutical resources. With these great advantages, he can hardly fail to add largely in future years to our knowledge, and to command the confidence and support of his medical brethren. In wishing for ample opportunities for usefulness in his new field of work, we desire to see a career so honourable to the general practitioners of the country and to British science, crowned with the success and endowed with the field of clinical study and labour which it deserves; and in this we are but doing a simple act of public justice and professional usefulness.

ANIMAL DISEASES TRANSMISSIBLE TO MAN.

AT the recent meeting of the American Medical Association at Philadelphia, Dr. Alex. W. Stein, of New York, offered the following resolution, which was adopted :—

"Whereas it has long since been recognised that diseases of a dangerous and fatal nature are transmissible from animals to man, and that certain zymotic affections which are common to both man and animals do very frequently manifest themselves first in the latter and subsequently in man, thus warning us that to be indifferent to the condition of the inferior animals is to introduce and to create centres of disease among ourselves ;

"That a committee be appointed to ascertain what measures can be instituted to prevent the extension of such diseases to man, and what sanitary measures can be effected to arrest the progress of such diseases in animals."

THE SANITARY CONDITION OF NOTTINGHAM.

THE excessive mortality from fever and diarrhœa last autumn, and the prevalence of small-pox throughout the borough, have brought down on Nottingham a long report by Dr. Thorne Thorne, of the medical department of the Privy Council. Dr. Thorne's report tells the old tale—polluted waters from the presence of liquid manure and other unpleasant and dangerous matters. The system of sewerage is defective, the ventilators being plugged, and there being direct communication between the houses and the sewers. There is, of course, the usual complement of foul midden-closets, which have been found to be intimately associated with the prevalence of enteric fever. The prevalence of scarlet fever is largely explained by the absence of provision for isolation. In the appearance of small-pox, there appears to have been an utter want of preparation on the part of the sanitary authorities to meet the emergency. It is gratifying to hear, however, that the Town Council has lately shewn strong, and it is to be hoped lasting, indications of a desire to remedy the health of the population. They have already carried out some excellent sanitary improvements, in the appointment of a temporary medical officer of health, in improved dwellings, bath-houses, of systematic plans for the removal of nuisances and temporary isolated buildings for infectious diseases, etc. But, so far as the Guardians are concerned, their intelligent brains have strangely failed to promote or carry out any plan of action except one of systematic neglect. The recommendations contained in the report of Dr. Thorne are sound, and should meet with the support of those desiring the good health of Nottingham.

MAD DOGS.

WE call attention to the measures recommended by the Council of Hygiene of Bordeaux, for protecting the people against the dangers of hydrophobia. It is well known that the madness of dogs has periods which one can call premonitory and harmless. If these periods were generally known, the dogs could be put beyond the power of hurting before they become a public danger. On this subject the Council of Hygiene has issued the following instructions. "A short time, sometimes two days, after the madness has seized the dog, it creates disturbances in the usual condition of the animal which it is indispensable to know. 1. There is agitation and restlessness ; the dog turns himself continually in his kennel. If he be at liberty, he goes and comes and seems to be seeking something ; then he remains motionless, as if waiting ; he starts, bites the air, seems as if he would catch a fly, and dashes himself, barking and howling, against the wall. The voice of his master dissipates these hallucinations ; the dog obeys, but slowly, with hesitation, as if with regret. 2. He does not try to bite ; he is gentle, even affectionate, and he eats and drinks ; but he gnaws his litter, the ends of the curtains, the padding of cushions, the coverlids of beds, the carpets, etc. 3. By the movement of his paws about the sides of his open mouth, one might think he was wishing to free his throat of a bone. 4. His voice has undergone such a change that it is impossible not to be struck by it. 5. The dog begins to fight with other dogs : this is decidedly a characteristic sign, if the dog be generally of a peaceful nature. The numbers 3, 4, and 5, indicate an already very advanced period of the disease, and the time is at hand when man will be exposed to the dangerous fits of the animal if immediate measures be not taken. These measures are, to chain him up as dangerous, or, better still, to destroy him." After having accepted this advice, the Council has desired that it should be inserted at least once a year in a public paper, or at more frequent intervals of time in the *Moniteur des Communes*. It has also desired, and which seems to us more particularly efficacious and practical, that it should be printed on the back of the notice for the dog-tax, on the back of the receipt for this tax, and finally on the back of the permissions for hunting. These excellent measures ought to become general.

THE LITERATURE OF THE INSANE.

FOLLOWING the excellent example of several of the largest asylums in Scotland, but creating what is, we believe, a new precedent for an English private asylum, the residents of Mr. Hyslop's private asylum at Church Stretton have commenced the issue of *Loose Leaves*, a little serial of pleasant literary character, wholly written by inmates of the asylum. Those lay journalists who are sometimes startled by received "rational" letters from persons under confinement in asylums, and who are thus induced to discredit the existence of mental alienation in the authors, will no doubt be surprised at finding them literary rivals of agreeable endowments. Physicians, to whom such phenomena are matters of ordinary experience, will recognise in the spirit and matter of the undertaking an excellent indication of the judicious means employed to alleviate the tedium of necessary confinement, and to accelerate the cure of partial mental disorder.

SMALL-POX IN VIENNA.

THE latest reports of the small-pox in Vienna state that the mortality from the disease, after a delusive appearance of abatement, has again increased. The deaths during the week ending July 12 were 59 ; most of them occurred in young unvaccinated children. The pressure of cases in the communal hospital was so great, that the municipal council was obliged to abandon its intention of using one of the district hospitals for the reception of convalescents only, and to admit into it patients suffering from the disease. The daily number of small-pox cases in the hospitals during the week varied from 300 to 316.

TREATMENT OF THE INSANE.

THE thirteenth annual commemoration of the opening of the Sussex Lunatic Asylum, Hayward's Heath, will be held on Thursday, July 25th. The following is the programme of the proceedings. Noon —Morning prayer, with commemoration sermon, by the Rev. Francis Kirkpatrick, Vicar of West Hoathly. 1 to 2 P.M.—Dinner in the wards (roast beef and plum pudding). 1.30 P.M.—Luncheon for the visitors in the recreation hall. 2 to 3.30 P.M.—Games on the grounds ; athletic sports ; Squire's Brighton Band will play. 3.30 P.M.—Mr. Basil Young will give a musical and comic entertainment. 6 P.M.—Tea. 7 P.M.—Patients' ball. To conclude at 9 P.M. The ball for the household will take place on Wednesday, July 31st, from 9 P.M. to 3 A.M. Mr. Squire's Brighton Quadrille Band will play. This is a good sample of the rational and pleasing kindness now shewn to lunatic inmates of public asylums, and forming part of the treatment.

SEWAGE CONTAMINATION AND TYPHOID FEVER.

DR. ISHERWOOD of Hayes, a practitioner much esteemed in the locality, has recently died at an early age of typhoid fever; the immediate cause of death being hæmorrhage from ulceration of the bowels. Mr. A. T. Norton informs us that, on endeavouring to discover the cause of the disease, he found a privy situated about five yards from a pump well, the water of which Dr. Isherwood had lately been in the habit of drinking, unmixed with wine or spirit, to the amount of a quart or three pints daily. The water in question is considered better than that from neighbouring pumps, and is used by several of the inhabitants of Hayes. We do not know, however, whether other cases of the disease have occurred among those who use it.

NERVOUS SEQUELÆ OF ENTERIC FEVER.

DR. NOTHNAGEL has collected a number of notices of affections of the nervous system following enteric fever, and has published an interesting essay on the subject in the *Deutsches Archiv für Klinische Medizin*. In most cases where these disorders are met with, they consist of paralysis of motion and sensation; while, along with the diminished cutaneous sensibility, there may be severe pain. Paraplegia is the most common form; it is generally limited to the lower limbs, but sometimes one of the upper limbs is also affected, or there may be slight paralysis of both arms and legs. Much more rarely, one limb alone is affected, or one upper and one lower limb on opposite sides: and sometimes the paralysis is limited to parts supplied by special nerves or branches, especially the ulnar and peroneal nerves. Disturbance of the sensory function is more frequent than of the motor; assuming the form of hyperæsthesia or of anæsthesia, being generally limited in extent, and affecting the lower limbs, especially the feet. Neuralgia without paralysis, motor paralysis of the parts supplied by the cranial nerves, disorders of the optic nerve, and vaso-motor disturbances, are of rare occurrence. The actual pathological condition producing this disorder is not yet known; but Nothnagel is inclined to attribute the paralysis of enteric fever to the same cause as the paralysis following diphtheria, which, according to the researches of Oestel and Buhl, is dependent on diphtheritic infiltration (cell-proliferation) in the sheaths of the nerves and between the fasciculi, as well as among the ganglion-cells of the sensory nerves.

THE HEIGHT OF MEANNESS.

WE doubt whether the height of meanness and impudent avarice was ever more nearly touched than in the following observations by Alderman Power, the Chairman of the Tenby Board of Health, in announcing to Dr. Lock, in attendance at the request of the Board, their intention to offer the appointment of borough medical officer to a medical man at the scandalous salary of £10 a year! We quote Mr. Power's speech as it is reported in the *Tenby Observer;* nothing can add to its force. We earnestly commend it to the attention of the Local Government Board. We can hardly suppose that any medical man will be willing to be led into disgracing his professional status and mocking the form of public appointment and the responsibilities of this high office, by accepting a salary which does not represent the worth of any known menial appointment of no matter how low a grade.

"Mr. Power stated that the Board had felt embarrassed in offering the appointment of borough medical officer with so small a pecuniary honorarium attached to it, which the state of the Corporation finances precluded from being fixed at a higher figure. Mr. Power added that having, however, enjoyed the privilege, during a lengthened period abroad and at home, of being on terms of intimacy with civil and military medical officers, he had ever found the members of that truly noble profession prepared to combat disease in its worst forms for public considerations, and entirely irrespectively of pecuniary advantage. He (Mr. Power) was therefore persuaded that the post, although with so trifling a pecuniary honorarium, would be accepted by a professional man. The Board of Health would be most happy to receive quarterly reports from the medical officer on the sanitary condition of the town, and would be quite prepared to give their best attention to any recommendation that officer might submit on the subject. The reports of the medical officer—an analysis of which would no doubt appear in the newspapers—would be doubtless of practical importance to the town, as it might be reasonably hoped they would afford favourable as well as authentic statements of the health of the borough."

MEDICAL EVIDENCE IN COURTS OF LAW.

THE American Medical Association, at its annual meeting in May last, unanimously adopted the following resolutions, to which was prefixed a preamble stating that, in important criminal trials involving questions of medical jurisprudence, there is an obvious disadvantage in the testimony of the experts being made to appear partial or antagonistic by being employed as witnesses on one or the other side. "That it is the sense of this Association that, in important criminal cases requiring the evidence of medical or chemical experts, the cause of justice will be promoted by the appointment by the court, in every such case, of a commission of experts empowered to collect all purely scientific testimony bearing on the case and report upon it to the court by which the case is to be tried. That, by the appointment of such scientific commission, the present system of summoning chemical and medical witnesses in criminal trials might be dispensed with to advantage. That the same recommendation applies also to cases of surgical or medical malpractice. That the State associations be requested to bring this matter at an early date before their respective legislatures."

ROYAL COLLEGE OF SURGEONS.

THE following is an analysis of the receipts and expenditure at this institution during the collegiate year ending at Midsummer-day last. The receipts amounted to £12,627 : 17 : 8, and the disbursements to £12,038 : 7 : 7, leaving a balance at the bankers' of £589 : 10 : 1, against the small sum of £7 : 11 : 10 last year. The largest sum in the receipts appears in fees paid for the diplomas of Fellow, Member, Licentiate in Midwifery and in Dental Surgery, amounting to £10,123 : 2. The next largest amount is dividends on stock (£36,000), represented by £1,053; followed by rent from the chambers adjoining the College, which produced £984 : 13 : 10. Elections to the Fellowship, Council, and Court of Examiners, yielded £157 : 10. In the expenditure, the largest sum appears in fees to Council, Courts and Boards of Examiners—viz., £4,672 : 3 : 4; this sum includes £416 : 6 : 10 paid to the College of Preceptors for conducting the preliminary examination in Arts, etc. The salaries and wages to the officers and servants in the three departments—College, Museum, and Library—amounted to £3,311 : 12 : 5; the taxes, rates, and Government stamps (exclusive of postage), £1,109 : 2 : 3; pensions, £409 : 17; law expenses, £117 : 1 : 3.

THE AUTHOR OF THE GENEVA CONVENTION.

IN forwarding the enclosed to us recently, Deputy Inspector-General Dr. Gordon writes :—The accompanying statement of the unfortunate embarrassment of M. Henry Dunant speaks for itself. The document has been sent to me by a Committee of his friends in Paris, with a view to publication; and I need only say that I shall be glad to forward any contributions that may be sent for his benefit. Surely your numerous readers, who have of late interested themselves in the international work for the sick and wounded in war, of which M. Dunant was the founder, will now help to relieve him from pecuniary difficulties, into which his exertions in that good cause have in a great measure led him.

"Some friends of M. Dunant, founder of the International Society for the Aid of the Wounded in War, now make an appeal to the public in his favour. This important charitable work, in which M. Dunant took the initiative eleven years ago, has exhausted all his resources; and, while many victims of war have benefited by his labours, he himself has, in promoting this work, been reduced to a state of pecuniary difficulty.

"The work of M. Dunant, published soon after the Italian war, and entitled *Un Souvenir de Solferino*, pointed out the insufficiency of the means existing after that great battle to meet the requirements of the wounded, and the urgent necessity there was of instituting a system of volunteer help for similar occasions. That work, translated into almost every European language, may be considered as having given the great stimulus to the various Societies organised under the

Red Cross of Geneva. Besides this, M. Dunant is the promoter of the Convention of Geneva. It is to his personal activity, to his perseverance and incessant efforts, to his travels throughout Europe during several years, that can be attributed this first diplomatic treaty in favour of humanity; in fact, it is owing to his own labours and initiative that the Societies of the Red Cross have been founded in the various countries of the Continent—in Berlin as well as in Paris—according to the plan which he traced in his work. Since then, misfortune has overtaken M. Dunant, who possesses now actually nothing, having sacrificed his own private fortune, and devoted himself entirely to this work of charity and mercy. A few of his friends have formed themselves into a Committee in Paris for the purpose of drawing attention to his circumstances, and, if possible, obtaining the means of relieving his misfortune.

"Deputy Inspector-General C. A. Gordon, C.B., Dover, has kindly undertaken to receive and forward contributions; and it is accordingly requested that such friends in England as desire to assist will be pleased to communicate with him. Subscriptions addressed to the undersigned will also be thankfully received by M. Baron Dutilh de la Fugue, 2, Rue Mosnier, Place de l'Europe, Paris.

"Signed.—Comte de Flavigny, President of the French Red Cross Society for the Aid of the Wounded in War; Elie de Beaumont, Member of the Institute of France, President of the Universal Alliance of Order and Civilisation; F. Marbeau, President of the Société des Crêches; The Marquis of Forbin Janson; Garcin de Tassy, Member of the Institute of France, President of the Asiatic Society in France; Comte de Hondetot; F. J. Eichhoff, Member of the Institute of France; L. de Cazenove; Colonel Staaff, Military Attaché of the Legation of Norway and Sweden; Fulton Cutting, of New York; The Baron Dutilh de la Fugue."

SMALL-POX STATISTICS.

DR. J. N. STEVENS sends us the following details of the number of cases, etc., of small-pox treated by him in the Small-pox Hospitals of the Local Board of Health, Plymouth, during the epidemic of this year, from January to June inclusive. In the Raleigh Street Hospital, there were admitted 83; discharged cured, 69; died, 14. In the Woodside Hospital, there were 66 cases, of whom 57 were discharged cured, and 9 died. The totals for both hospitals were: admitted, 149; cured, 126; died, 23. Of those who died, a few were admitted in a moribund condition. One child died of bronchitis when convalescent from small-pox, and during the continuance of severe north-easterly winds; and another death occurred from the confluent and malignant form of the disease in a woman in an advanced stage of pregnancy. Of the 149 patients admitted, 112 had been vaccinated more or less perfectly; 33 had not been vaccinated at all; 3 had been inoculated; and 1, aged 17, had had small-pox when four years of age. No death occurred in any of the patients who had been thoroughly vaccinated, but twelve in those who had only one mark. As a rule, the fatal cases were of the most severe confluent or malignant type. Only two were of the hæmorrhagic variety. In most cases, the immediate cause of death appeared to be either congestion of the lungs or capillary bronchitis. The antiseptic plan of treatment was carried out in every case, supplemented with stimulants and tonics, according to circumstances. These consisted, for the most part, of ammonia with compound tincture of bark, and the citrate of iron and quina. Great relief was obtained in the early and inflammatory stage (with extreme restlessness and delirium) from chloral hydrate in forty-grain doses at bedtime for adults. The antiseptic remedies were bisulphite of soda every four hours internally, and chloralum (in solution) and carbolic acid and olive-oil externally. Each patient, when quite convalescent, was put into a chloralum bath on three successive days, before being discharged from hospital. The bedding and clothes of the sick were disinfected by sulphurous acid gas in a closed room, and the wards by chloralum, Condy's fluid, and impure carbolic acid. Thermometers were in constant use throughout the hospitals, and the temperature ranged from 55 to 65 deg.

ALLOWANCE TO MEDICAL WITNESSES.

AT the Town-hall, Swansea, recently, on being bound over to appear as a witness, Mr. James Rogers, surgeon, took occasion to protest against the paltry allowance made by Government to medical witnesses. He said it would be a very proper matter for the Bench to make a presentment in the proper quarter, relative to the appearance of medical men in the case of prosecutions. The case in question, he remarked, might be taken as a very fair specimen of what medical men were subjected to. They were called out of bed in the middle of the night to attend men who had been stabbed, and were then compelled to attend the police-court, and if the person accused was committed they would have to attend the assize-court to give evidence, to the loss of time and the loss of practice. And this they were made to do for the paltry sum of ten shillings a day at the police-court, and a guinea a day and a second-class fare at the assize-court. He thought a strong recommendation ought to be made on the subject. To show the effect of the system he might be allowed to state that in this case he sent to several medical men and failed to get their attendance, except in one instance, and he thought it right the name of that gentleman should be given. It was Dr. Rawlings, who kindly came and assisted him, and he felt much obliged to him for his kindness and attention. He felt that the medical profession had a grievance in this respect.—The Clerk said that presentations had been made over and over again to Government, but to no purpose.—Mr. Rogers said that if it would not be taken as a mark of disrespect, he certainly would refuse to be bound over to attend at the assizes.—Mr. Brock said it would be by force of public opinion that the medical profession would obtain proper remuneration, which he was bound to say they deserved.—Mr. Glascodine (who appeared for the prosecution in the case) said it was a great injustice for a wealthy country like England, when society required the services of professional men, that they should make them so paltry an allowance. Their worships assured Mr. Rogers that, with the best wishes towards the medical profession, they were powerless in the matter.—Mr. Rogers was then duly bound over to appear at the assizes to give evidence.

THE ST. BARTHOLOMEW'S CONVALESCENT HOME.

DR. FORSHALL, a well-known practitioner at Highgate and medical officer for the parish, has been appointed Visiting Medical Officer to the new Convalescent Hospital, in connection with St. Bartholomew's Hospital, recently opened by the Prince of Wales.

NEWCASTLE-UPON-TYNE INFIRMARY.

CONSIDERABLE alterations and additions to the building department have recently been made to this institution. The increased demands upon the institution, and the progress made in scientific and sanitary arrangements, rendered it necessary that additional accommodation should be provided, with the view of re-classifying the administrative department generally. The new works comprise an operating-theatre, constructed and furnished on the most approved modern principles; a new washhouse and laundry, also supplied with the best mechanical arrangements for disinfecting, washing by steam, drying by hot air, etc.; the construction of male and female convalescent wards, and the re-arrangement of the whole of the resident and non-resident official administrative staff. The entire cost of these additions and alterations, amounting to £2700, has been generously borne by Sir William Armstrong. The building operations have been designed and superintended by Mr. Thomas Oliver, architect, of Newcastle-upon-Tyne, in accordance with the instructions of the House Committee, based upon the various reports of the Medical Council.

THE PHYSIOLOGY OF INFLAMMATION.

IN an article on Tissue Metabolism, in the *Journal of Anatomy and Physiology*, Dr. W. A. Hollis describes a series of experiments in which he applied blistering fluid to actiniæ. He says that the results show that the tissues of actiniæ are amenable to the influence of various physiological agents, and that the sequence of pathological tissue-changes induced by such means possesses many points of similarity to those structural changes which in the higher animals are named "the process of inflammation." The application of an irritant (such as blistering fluid) induces in the first instance swelling of the tissues; next, disintegration of them; thirdly (if the cause of the irritation be prolonged),

there is the production of a greenish-yellow muciform fluid containing numerous corpuscles and granules. These corpuscles are closely similar, as regards size and appearance, to the leucocytes, granulation-corpuscles, and granular débris of inflammation in man. He further remarks that, as such events follow the application of stimuli to the bodies of animals in which no definite nervous or vascular system is present, we must conclude that these changes are induced in them irrespectively of any influences usually ascribed to such systems.

PROVINCIAL HOSPITAL WORTHIES.

To commemorate the centenary of the Norfolk and Norwich Hospital, a series of portraits, chiefly of those who have held honorary appointments in the hospital during the first hundred years of its existence, has been collected and placed in the Board-room during 1871, by Mr. Charles Williams, assistant-surgeon to the hospital. They include the following.

1, H.R.H. the Prince of Wales, patron of the hospital, 1867 (engraving); 2, H.R.H. the Princess of Wales, patroness, 1869 (engraving); 3, Thomas Hayter, D.D., Bishop of Norwich, 1749-1761, in whose mind the idea of establishing a hospital originated (photograph from an original painting); 4, Earl of Orford, President, 1771 to 1791 (etching); 5, William Asheton, Lord Suffield, President, 1807 to 1821 (crayon); 6, Lord Wodehouse, President, 1821 to 1846 (engraving); 7, Earl of Leicester, President, 1846 (engraving); 8, Samuel Hinds, D.D., Bishop of Norwich, Vice-President, 1851 to 1857 (lithograph); 9, John T. Pelham, D.D., Bishop of Norwich, Vice-President, 1857 (engraving); 10, William Fellowes, of Shotesham, founder of the institution and its first Treasurer, 1771 to 1775 (oil painting, by Ventnor, from a portrait by Highmore at Shotesham House); 11, Robert Fellowes, M.P., Treasurer, 1775 to 1803 (etching); 12, Thomas Blofeld, Treasurer, 1803 to 1817 (oil painting); 13, John Henry Gurney, Treasurer, 1847 to 1867 (engraving); 14, Dr. John Beevor, physician, 1771 to 1793 (crayon); 15, Dr. John Manning, physician, 1771 to 1805 (oil painting); 16, Dr. John Murray, physician, 1771 to 1790 (oil painting); 17, Dr. Richard Lubbock, physician, 1790 to 1808 (oil painting); 18, Dr. James Alderson, surgeon, and subsequently physician, 1771 to 1821 (oil painting); 19, Dr. Warner Wright, physician, 1804 to 1840 (oil painting); 20, Dr. Henry Reeve, physician, 1808 to 1814 (crayon); 21, Dr. Edward Rigby, surgeon, and subsequently physician, 1771 to 1821 (oil painting); 22, Dr. Lewis Evans, physician, 1821 to 1850 (crayon); 23, Dr. John Yelloly, F.R.S., physician, 1821 to 1832 (oil painting); 24, Dr. Edward Lubbock, physician, 1832 to 1847 (lithographic stone); 25, Dr. Robert Hull, physician, 1840 to 1854 (water-colour); 26, Dr. Arthur Tawke, physician, 1847 to 1851 (oil painting); 27, Dr. William Harcourt Ranking, physician, 1850 to 1864 (oil painting); 28, Benjamin Gooch, consulting surgeon, 1771 to 1776 (oil painting); 29, Philip Meadows Martineau, surgeon, 1777 to 1828 (engraving); 30, Edward Colman, surgeon, 1790 to 1812 (oil painting); 31, William Dalrymple, surgeon, 1812 to 1839 (oil painting); 32, John Greene Crosse, surgeon, 1823 to 1850 (oil painting); 33, Henry Carter, surgeon, 1827 to 1830 (pencil drawing); 34, Benjamin Henry Norgate, surgeon, 1828 to 1857 (crayon); 35, Jonathan Matchett, assistant-surgeon, 1773 to 1778 (oil painting); 36, Page Nicol Scott, assistant-surgeon, 1814 to 1819 (water-colour); 37, Thomas Martineau, assistant-surgeon, 1819 to 1823 (water colour); 38, Dr. Edward Rigby, senior (etching); 39, Dr. James Alderson (lithograph); 40, William Dalrymple, surgeon (engraving); 41, Sir J. P. Boileau, Bart., founder of the Samaritan Fund (lithograph); 42, Sir Astley Paston Cooper, Bart., commenced the study of his profession at this hospital (engraving); 43, Bransby B. Cooper, Surgeon to Guy's Hospital, commenced the study of his profession at this hospital (engraving); 44, John Dalrymple, F.R.S., the eminent oculist, commenced the study of his profession at this hospital (lithograph); 45, Dr. Edward Rigby, junior, the eminent oculist, commenced the study of his profession at this hospital (photograph); 46, Dr. G. M. Humphry, Cambridge, late a pupil at this hospital (lithograph); 47, Rev. R. F. Elwin, a considerable benefactor to the institution (engraving); 48, Hudson Gurney, Keswick, a considerable benefactor to the institution (engraving); 49, Sir Thomas Browne, M.D., author of *Religio Medici* (oil painting); 50, Dr. John Caius, founder of Caius College, Cambridge, born in Norwich, 1510 (oil painting); 51, Sir Charles Mansfield Clarke, Bart., M.D. (engraving); 52, Philip Yonge, D.D., Bishop of Norwich, 1761 to 1783 (etching); 53, Sir William Jackson Hooker, botanist, born at Catton, 1785 (etching); 54, Sir James Paget, Bart., born at Yarmouth, 1814 (photograph); 55, Dr. William Baly, Physician to the Queen, etc. (photograph); 56, Edward Stanley, D.D., Bishop of Norwich, 1837 to 1849 (engraving); 57, John Brown, Surgeon to Charles II, a native of Norwich, born 1642 (engraving); 58, Rev. John Peele, one of the first Auditors, 1771 to 1773 (engraving); 59, Frank Sayers, M.D. (engraving).

THE NOMENCLATURE OF DISEASE.

OUR transatlantic brethren are proceeding with caution and deliberation in the work of preparing a nomenclature of diseases. Three years ago, at the annual meeting of the American Medical Association, a committee was appointed to report to the next meeting on the changes required in the *Nomenclature* of the Royal College of Physicians of London in order to adapt it for use in America. In 1870, the Committee received instruction from the annual meeting of the Association to prepare a system of nomenclature; and at the annual meeting of the Association in May last, they reported that they had framed a nomenclature on the basis of that of the English College of Physicians, with certain additions and modifications. They proposed that the report should be referred to a special committee to be reported on with a view to its disposal at the meeting then being held; and that, if approved, the report should be referred back to the Committee on Nomenclature in order that the plan might be carried out. An amendment, however, was proposed and carried, that the proposed nomenclature and classification should be printed in the *Transactions* of the Association, and also circulated in a separate form among the profession, and that the question of its final adoption should be postponed to the next annual meeting.

CHEMISTRY MADE EASY.

A CONTEMPORARY has an article, entitled "Simple Methods of Water Analysis," designed apparently to serve as a sort of popular guide to the subject. It treats of the undesirableness of having cesspools in the neighbourhood of wells, and especially on a higher level than the well; and recommends that search should be made for little fragments of muscle in the sediment left by drinking-water. For the chemical examination, it recommends—firstly, a determination of the nitrates; secondly, a determination of the chlorides; and thirdly, a determination of the amount of permanganate reduced by the water. Inasmuch as both good and bad waters are often charged with nitrates, it appears to us to be unwise to recommend the testing for nitrates as an easy popular method of ascertaining whether or not a specimen of water is fit to drink. Those persons who are conversant with the actual practice of water-analysis at the present day, will be amused with the omission of all reference to ammonia by our contemporary. To omit the ammonia in making an examination of water, is like the play of *Hamlet* with the part of Hamlet left out.

SCOTLAND.

THE LADY MEDICAL STUDENTS.

WE have received a copy of the closed record in action, at the instance of Miss Jex-Blake and others, against the Senatus Academicus and Chancellor of the University of Edinburgh. Although the first hearing was to come off this week, there is little probability of the case being concluded this term, as the courts rise to-day.

IRELAND.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE following circular is in course of issue; and we bespeak for it the attention of our Associates in Ireland.

"1, Harrington Terrace, Dublin, July 9th, 1872.

"My dear Sir,—I beg to inform you that Sir Dominic Corrigan, Bart., M.P., has accepted the Presidency of the Irish Poor-law Medical Officers' Association. In order to further complete its organisation, it is necessary to appoint county representatives. I send you, on the other side, a list of the members of the association in the county. Will you oblige me by letting me know whether you will allow yourself to be nominated as county representative? if not, will you kindly give

the name of the gentleman whom you would wish to vote for? An early answer would very much facilitate the issue of the forthcoming report.—I remain, yours very truly, D. TOLER T. MAUNSELL, Secretary.

"N.B.—By Rule III of the Regulations, 'In any county where it may be deemed advisable to do so, any member of the Association, although not being a Poor-law medical officer, may be elected to be the county representative.'"

WATER-SUPPLY OF BELFAST.

AT the meeting of the Belfast Board of Guardians on July 9th, it was announced that filters for the workhouse had been ordered from the London Water Purifying Company. Dr. Corry stated that it was intended to use them for the town water alone; the well-water not being considered fit for use for domestic purposes. The Belfast *Northern Star*, in commenting on this proceeding, commends the course which the guardians have taken in inquiring into the correctness of the representations made by Dr. Corry and Dr. Hodges, and promptly applying a remedy. It also contrasts their action with the "masterly inactivity" of the Water Commissioners. "Whatever other privations the paupers may have to endure, they will no longer be compelled to drink water with the germs of disease lurking in it, for the paternal care of the guardians has for them remedied the default of the Water Board. We wish we could give the same cheering assurance to our general population; but, unfortunately, as yet no ground for hope can be discerned by the most sanguine. The Water Commissioners still display their masterly inactivity, giving no sign of their being alive to the urgency of the plea for pure water."

HOSPITAL SUNDAY IN DUBLIN.

DUBLIN is about to follow the example of English and Scotch cities, and to institute Hospital Sunday. We understand that sermons will be preached next Sunday by the clergy of at least four hundred and eleven places of worship in Dublin and the vicinity, and subscriptions collected, in aid of the various hospitals. The Dublin hospitals at all times deserve and require the support of the public; but especially so at the present time, when, it is calculated, their additional expenditure in consequence of the small-pox epidemic has amounted to nearly £20,000. We trust that the experiment may be successful, and that Hospital Sunday may become an institution in Ireland.

GENERAL MEDICAL COUNCIL.

THE Chancellor of the Exchequer gave this week, we are glad to learn, a very courteous and considerate attention to the request of the General Medical Council, to be provided with official quarters for the transaction of the important business on behalf of the country and the profession which is imposed upon it by Act of Parliament. The Council keep, for the behoof of the public, the Government, and the profession, an authorised register of duly qualified practitioners, whose qualifications proceed from authorised bodies, and who are legally capable of holding public appointments and fulfilling medical and surgical duties. They have, moreover, at the cost of some thousands of pounds and of heavy labour, provided a national Pharmacopœia. Their labours in raising the standard of education have had the most beneficial effect; and, by restricting the competition of licensing bodies, and procuring the unification of examinations, they are likely to confer still larger public benefits. They have executed the whole of this national work for a series of years without asking for or receiving one penny of the public money. The request to be furnished with a more suitable residence than the shabby and discreditable lodgings which they now occupy in Soho Square is, therefore, a very modest and almost undeniable one. It has been so recognised by Mr. Lowe, who promised the deputation, consisting of Dr. Burrows, Dr. Acland, and Dr. Quain, an early and favourable consideration of the representations they were deputed to make on this subject.

The Executive Committee of the General Medical Council has decided that, in the present state of public business, no purpose favourable to Medical Reform will be answered by the proposed second session of the General Council, which is, therefore, adjourned till occasion arises.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
FORTIETH ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in Birmingham, on the 6th, 7th, 8th, and 9th days of August next.

President—JOHN WHIPPLE, Esq., F.R.C.S., Consulting-Surgeon to the South Devon and East Cornwall Hospital.

President-elect—ALFRED BAKER, Esq., F.R.C.S., Senior Surgeon to the General Hospital, Birmingham.

An *Address in Medicine* will be delivered by SAMUEL WILKS, M.D., F.R.S., Physician to and Lecturer on Medicine in Guy's Hospital.

An *Address in Surgery* will be delivered by OLIVER PEMBERTON, Esq., Surgeon to the General Hospital, and Professor of Surgery in Queen's College, Birmingham.

The business of the Annual Meeting will be conducted in *five* Sections, viz.:—

SECTION A. MEDICINE.—*President:* Dr. Bell Fletcher, Birmingham. *Vice-Presidents:* Dr. J. W. Ogle, London; Dr. Wade, Birmingham. *Secretaries:* Dr. Sutton, 9, Finsbury Square, London; Dr. Johnston, 9, Easy Row, Birmingham.

SECTION B. SURGERY.—*President:* Sir William Fergusson, Bart., F.R.S., London. *Vice-Presidents:* George Southam, Esq., Manchester; J. Vose Solomon, Esq., Birmingham. *Secretaries:* Furneaux Jordan, Esq., 22, Colmore Row, Birmingham; T. Vincent Jackson, Esq., Darlington Street, Wolverhampton.

SECTION C. MIDWIFERY.—*President:* Dr. Evory Kennedy, Dublin. *Vice-Presidents:* Samuel Berry, Esq., Birmingham; Dr. J. Matthews Duncan, Edinburgh. *Secretaries:* Dr. Underhill, Summerfield, West Bromwich; Lawson Tait, Esq., Great Charles Street, Birmingham.

SECTION D. PUBLIC MEDICINE.—*President:* The Rev. Dr. Haughton, D.C.L., F.R.S., Dublin. *Vice-Presidents:* Dr. Birt Davies, Birmingham; Dr. T. P. Heslop, Birmingham. *Secretaries:* Dr. Arlidge, Newcastle-under-Lyme; Dr. Alfred Hill, Winson Green, Birmingham.

SECTION E. PSYCHOLOGY.—*President:* Dr. Maudsley, London. *Vice-Presidents:* Dr. J. Batty Tuke, Cupar, Fife; Dr. J. Crichton Browne, Wakefield. *Secretaries:* Dr. G. F. Bodington, Sutton Coldfield; Dr. J. Thompson Dickson, 59, Queen Anne Street, Cavendish Square, London.

All the meetings in connection with the Annual Meeting will be held at King Edward's School, New Street.

The five Sections will be held—A. *Medicine:* Governors' Room, King Edward's School. B. *Surgery:* Lecture Room, King Edward's School. C. *Midwifery:* Upper Class Room School House, King Edward's School. D. *Public Medicine:* Classical School Room, King Edward's School. E. *Psychology:* Lower Class Room School House, King Edward's School.

The General Meetings and the Addresses in Medicine and Surgery in the Classical School Room.

The Annual Museum will be held in the English School Room.

TUESDAY, *August 6th.*

1 P.M.—MEETING OF COMMITTEE OF COUNCIL—Governors' Room.
3 P.M.—MEETING OF GENERAL COUNCIL—Governors' Room.
8 P.M.—FIRST GENERAL MEETING—Classical School Room.
Business—
President resigns Chair to President-elect.
Vote of thanks to Ex-President.
The President's Address.
REPORT OF COUNCIL and discussion thereon. Election of General Secretary; election of Auditors.

WEDNESDAY, *August 7th.*

9.30 A.M.—MEETING OF NEW COUNCIL—Governors' Room.
11 A.M.—SECOND GENERAL MEETING—Classical School Room.
Business—
Appoint place of meeting for 1873, and President-elect. Presentation of Hastings Medal.
11.30 A.M.—ADDRESS IN MEDICINE, by SAMUEL WILKS, M.D., F.R.C.P., F.R.S., Physician to Guy's Hospital.
1 P.M.—PUBLIC LUNCHEON (by invitation of the Birmingham and Midland Counties Branch)—Exchange Assembly Rooms.
2 P.M.—MEETINGS OF SECTIONS—King Edward's School. Adjourn at 5 P.M.
8 P.M.—PRESIDENT'S SOIRÉE—Town Hall.

THURSDAY, *August 8th.*

10 A.M.—THIRD GENERAL MEETING—Classical School Room. Reports of Committees.

11 A.M.—ADDRESS IN SURGERY, by Professor OLIVER PEMBERTON, Surgeon to the General Hospital.

1 P.M.—PUBLIC LUNCHEON (by invitation of the Birmingham and Midland Counties Branch)—Exchange Assembly Rooms.

2 P.M.—MEETINGS OF SECTIONS—King Edward's School.

6.30 P.M.—PUBLIC DINNER OF THE ASSOCIATION—Exchange Assembly Rooms.

FRIDAY, *August 9th.*

10 A.M.—MEETINGS OF SECTIONS.

1 P.M.—PUBLIC LUNCHEON (by invitation of the Birmingham and Midland Counties Branch)—Exchange Assembly Rooms.

2 P.M.—CONCLUDING GENERAL MEETING.

RECEPTION-ROOM.—The upper Corridor, King Edward's School, will be fitted up as a Reception-Room, and will be opened at 10 A.M. on Tuesday, August 6th, and on the following days at 8 A.M., for the issue of tickets to members and for supplying all necessary information.

Gentlemen are requested to register their names and addresses in the Reception-Room immediately after their arrival.

The Offices of the General Secretary, of the Editor of the JOURNAL, and of the Honorary Local Secretaries, will be found in connection with the Reception-Room.

EXCURSIONS.—*Friday.* I. Black Country Excursion. A special train will leave Birmingham for Dudley. The Earl of Dudley's Iron Works at Round Oak will be visited, and the manufacture of iron in all its details shown to the visitors. The Dudley Caverns will be illuminated by Lord Dudley for the visit of the Association. The Ruins of Dudley Castle will be visited; and, in the town of Dudley, the Geological Museum will be open for inspection.

Friday. II. Worcestershire Excursion. A special train will leave Birmingham for Stoke Prior, where Mr. Corbelt's Salt Works will be open to the members. The train will then return to Blackwell, where the site of the new Sanatorium will be visited. Thence the members will walk to the Lickey Hills, visiting, on the way, Hewell Grange (the seat of Baron Windsor), where the grounds and gardens will be open, by the kind permission of Lady Mary Windsor Clive.

Mr. Prosser of Bromsgrove invites all members of the Association who join this excursion to Luncheon at the Rose and Crown Hotel, Lickey, whence members will return by train to Birmingham.

Saturday. Warwickshire Excursion. Special trains will leave Birmingham early on Saturday, to enable members to visit (1) Leamington, Kenilworth Castle, and Warwick Castle; and (2) Stratford-on-Avon.

Further details will be given in next week's JOURNAL.

On Friday, a Flower Show will be held at the Botanical Gardens, Edgbaston, to which members of the Association will be admitted on presenting their cards.

GENERAL ARRANGEMENTS.—*Reception-Room.*—Provision will be made for the receipt and postage of letters, and for the care of parcels, etc. A writing-room and lavatories will be provided.

The General Post Office is in New Street, and the Postal Telegraph Office is in Cannon Street, near King Edward's School.

Gentlemen intending to visit Birmingham during the meeting are requested to send their names as soon as possible to the Secretaries of the Visitors' Committee—Dr. Mackey, Newhall Street; and Mr. Lloyd Owen, Newhall Street.

Members requiring Private Lodgings are also requested to apply at once to either of the Secretaries of the Visitors' Committee.

HOTELS.—The following are the chief hotels: "The Hen and Chickens", New Street; "The Queen's", attached to the London and North-Western and Midland Railway Station; "The Great Western", attached to the Great Western Railway Station; "The Union", Union Street; "The Stork", Old Square; "The Swan", New Street; "The Royal Hotel", Temple Row; and at Edgbaston, "The Plough and Harrow".

The new Club Masonic Hall, New Street, will (by the kindness of the Committee) be open to members of the Association during the meeting.

During the meeting, the following institutions and manufactories will be open to the members of the Association on presenting their cards of membership:—The Free Library, the Shakespeare Library, and the Art Gallery, Ratcliff Place.—The Midland Institute News Room and Museum, Ratcliff Place.—The Old Library News Room, Union Street.—The Deaf and Dumb Asylum and the Blind Asylum, Church Road, Edgbaston.—Mr. Mason's Orphanage, Erdington.—Messrs. Winfield's Brass Foundry, Cambridge Street; Messrs. F. and C. Osler's Glass Chandelier Factory, Broad Street; Messrs. McCallum and Hodson's Papier Mâché Works, Summer Row; Messrs. Edelsten and Williams's Pin Factory, George Street; Messrs. Hardman and Co.'s Stained Glass Mediæval Furniture Manufactory, Newhall Hill; Messrs. Gillott's Steel Pen Works, Graham Street; Messrs. Bragg's, Jewellers, Vittoria Street; Messrs. Hammond, Turner, and Sons' Button Manufactory, Snow Hill; Messrs. Stone, Fawdry, and Stone's Glass Works, Dartmouth Street; Messrs. Tonks and Sons' Brass Foundry, Mosely Street; Messrs. Blews and Sons' Bell Foundry, Bartholomew Street; Messrs. J. and E. Wright's Wire Rope Works, Garrison Lane; the Stephenson Tube Works, Liverpool Street; the Proof House (10 A.M. to 12, and 3 to 5 P.M.), Banbury Street; the Small Arms Factory (9 A.M. to 12, and 1 to 6 P.M.), Small Heath; the Borough Gaol; the Borough Lunatic Asylum; and all the Medical Charities.

The Honorary Local Secretaries regret that up to the present the railway companies have refused to grant any extra accommodation to the members of the Association visiting Birmingham.

The Honorary Local Secretaries are—

T. H. BARTLEET, Esq., 8, Old Square.
Dr. BALTHAZAR FOSTER, 16, Temple Row.
J. F. WEST, Esq., Bingley House, Broad Street.

THE ANNUAL MUSEUM.—The Committee invite contributions of the following articles.

1. New or improved Surgical Instruments or Apparatus.
2. New Drugs or Pharmaceutical Preparations.
3. New Articles of Diet for Invalids.
4. New Medical Works.
5. Pathological Specimens, wet or dry; and Casts, Photographs, Drawings, or Diagrams, illustrative of Pathological Conditions.
6. Preparations, etc., illustrative of Diseases of the Organs of Circulation; and Instruments employed in their detection and treatment. It is the intention of the Committee to arrange these in a separate department of the Museum.

Contributors are requested to send a description of the matters which they propose to exhibit to the Honorary Secretaries before July 13th, as it is intended to issue a printed catalogue.

The Honorary Secretaries for the Annual Museum are—

CHARLES J. BRACEY, Esq., M.B., Old Square, Birmingham.
ROBERT JOLLY, Esq., M.D., Newhall Street, Birmingham.

NOTICE OF MOTION by DR. A. B. STEELE.

That the Treasurer be authorised to pay the travelling expenses of members attending the meetings of Committee of Council, and of its Subcommittees in all cases in which provision for such payment does not already exist.

ALTERATION OF LAWS.—Notice of Motion by Dr. A. B. STEELE.

That Laws 15 and 16 be so altered as to read as follows.

1. The subscription to the Association shall be one guinea *per annum*, which shall entitle each member to receive the publications of the Association for the current year. The subscription shall date and be considered due in advance on the 1st of January in each year, except in the case of a member admitted on or after the 1st July, when the subscription for such part of a year shall be half a guinea in advance.

2. Any member whose subscription shall not have been paid on or before the 31st December of the current year shall be suspended from all privileges of membership; and at the end of the succeeding year, if the arrears be still unpaid, he shall cease to be a member, and shall be ineligible for readmission until he shall have paid all arrears due at the period of his suspension.

3. Any member wishing to withdraw from the Association shall give written notice of his intention to the General Secretary on or before the 1st December of the current year; and neither withdrawal, suspension, nor erasure of a member's name from the books of the Association, shall be deemed either in honour or equity to relieve such member from his liabilities to the Association.

PAPERS.—The following papers have been promised:—

A. B. Steele, M.D. On the Treatment of Puerperal Eclampsia.

W. F. Teevan, Esq. 1. On the Treatment of the Impassable Stricture.—2. Clinical Remarks on Stone in the Bladder.—3. On Impotence.

W. Macdonald, M.D. Embryonic Circulation.

Reginald Harrison, Esq. On the Relative Value of Certain Methods of Treating Stricture in the Urethra.

A. E. Sansom, M.D. The Disinfection of Air.

Edward John Tilt, M.D. On Uterine Inflammation after the Change of Life.

Protheroe Smith, M.D. Fibroid Degeneration of the Uterus, and the Best Way of Treating it.

J. Althaus, M.D. On the Treatment of Rheumatic Gout by the constant Galvanic Current.

A. R. Simpson, M.D. On the Removal of Portions of Morbid Tissue in Cases of Carcinoma Uteri.

William Adams, F.R.C.S. Three Additional Cases of Subcutaneous Division of the Neck of the Thigh-bone: with Remarks.

James F. West, Esq. Syphilitic Constriction of the Œsophagus.

Lawson Tait, Esq. 1. Ovariotomy. 2. Intrauterine Therapeutics. 3. Statistics of Lying-in Institutions.

Alfred Wiltshire, M.D. On the plan of Treatment of Cancer proposed by Professor Simon of Heidelberg: with Cases.

Charles Warden, M.D. 1. On Polypus of the Ear and Perforation of the Membrani Tympani, and the Instruments used in the Diagnosis and Treatment of Diseases of the Ear, at the Ear and Throat Infirmary, Birmingham; also, upon a new form of Artificial Drum. 2. Spinal Curvature, Club-Feet, and other Deformities, and the Instruments used in their Treatment at the Birmingham Orthopædic Hospital.

W. Acton, F.R.C.S. Treatment of the advanced stages of Constitutional Syphilis.

Charles Steele, F.R.C.S. On Colotomy for Intestinal Obstruction.

William Stokes, M.D., F.R.C.S.I. Reduction of Dislocation by a modification of Jarvis's Adjustor.

Edward Lund, F.R.C.S. Removal of both Astragali in a Case of severe Double Talipes.

T. H. Bartleet, M.B. Two Cases in which the Femoral Artery was tied for unusual Pathological Conditions.

Balthazar Foster, M.D. 1. The Lactic Acid Treatment of Diabetes. 2. Notes on Diseases of the Heart.

J. W. Eastwood, M.D. The Use of Alcohol in Health and Disease.

Gentlemen desirous of reading papers, cases, or other communications, are requested to forward the titles to the General Secretary, or to one of the Secretaries of the Section in which the paper is to be read. All papers should be forwarded to one of the above named officers *on or before the 1st of August.*

No paper must exceed *twenty* minutes in reading; and no subsequent speech must exceed *ten* minutes.

All speeches at the General Meeting must not exceed *ten* minutes each.

FRANCIS FOWKE, *General Secretary.*

General Secretary's Office, 37, Great Queen Street, W.C.,
July 3rd, 1872.

NORTH WALES BRANCH: ANNUAL MEETING.

THE twenty-third annual meeting of this Branch was held in the County Hall, Bala, on Tuesday, July 2nd, under the presidency of R. CHAMBRES ROBERTS, Esq., F.R.C.S. There were twenty-one members of the Branch present, besides visitors; amongst the latter were Dr. Steele, Honorary Secretary of the Lancashire and Cheshire Branch; Dr. Harold Owen, Tue Brook Villa, Liverpool; and Dr. J. T. Jones, Brecon. After being hospitably entertained to an elegant luncheon provided by Dr. Richards, of Bala, business was proceeded with by the President delivering an eloquent address, for which a vote of thanks was unanimously accorded. Several letters and telegrams were received from members regretting their inability to attend from urgent professional engagements; amongst others, from Mr. Griffith (Wrexham), Dr. Turnour (Denbigh), Dr. Hughes (Mold), Mr. Williams (Northwich), and Mr. Owen (Beaumaris).

Report of Council.—Dr. WILLIAMS (Wrexham), on behalf of the Honorary Secretary (Mr. KENT JONES), read the following Report of Council. With the view of extending the influence and usefulness of the British Medical Association, it was deemed desirable to break new ground, and hold this the twenty-third annual meeting of the North Wales Branch in Bala; and thus bring into more friendly and social union the medical men of Merionethshire with their brethren of the northern counties. Doubtless, the extension of the railway had greatly facilitated this much-wished-for though long-delayed project; and your Council, therefore, confidently look forward to the prospect of spending here to-day a very pleasant and successful meeting. The intermediate meeting of this Branch was held in Wrexham, on February 27th last, and was well attended; several very interesting cases, etc., were related and discussed. The subject of the Government "Public Health Bill" was entered into; but, as the time was limited, a resolution was unanimously adopted authorising your Council to meet on some future day, and pursue whatever course they thought best on behalf of the members of the North Wales Branch. Accordingly the Council, having been previously very kindly invited by Mr. Griffith, of Wrexham, met at his hospitable house on March 26th last; and, after a careful consideration and discussion, they adopted and signed a petition to the House of Commons, embracing the amendments which were recommended by the Parliamentary Committee of our Association, and published in the BRITISH MEDICAL JOURNAL. Similar petitions were also forwarded for signature by the Honorary Secretary to several places in North Wales, and since then promise of support of some of the Welsh members of Parliament has been obtained. Other questions of medico-political interest have attracted the notice of your Council, but, in point of magnitude and vital importance, the "Public Health Bill" is one which imperatively calls for a scientifically exhaustive basis of settlement. The BRITISH MEDICAL JOURNAL continues to hold a leading place in medical literature, filling its columns with highly scientific subjects, and imparting to the busy practitioner in well selected articles a store of practical and useful knowledge which thus keeps him *au courant* with the latest researches and discoveries in medicine. Your Council cannot conclude this brief notice of the JOURNAL of the Association, without attributing much of its success to the talented editorship of Mr. Ernest Hart.

The Treasurer reports favourably upon the financial state of the Branch.

It was moved by Dr. RICHARDS (Bala), seconded by Mr. SHELTON JONES (Denbigh), and carried unanimously—"That the Report of Council now read be adopted, and entered in the minutes of this Branch."

Vote of Thanks to the Council of the Branch.—A vote of thanks, moved by Dr. HUGHES (Denbigh), and seconded by Mr. ROBERTS (Portmadoc), was rendered to the Council and retiring officers for their unremitting attention and valuable services.

President-elect and Council for 1873, *and Place of Meeting.*—It was moved by Dr. TURNER JONES, seconded by Dr. WILLIAMS (Wrexham), and carried—"That Robert Davies, Esq., of Llanfairtalhairn, be President-elect for 1873; and that Rhyl be the place of the annual meeting for that year."

Upon the motion of Mr. WALKER (Corwen), seconded by Dr. LL. WILLIAMS (Wrexham), the following members were elected upon the Council of the Branch for next year; viz., G. Harvey Williams, M.D., Rhyl; J. H. Wolstenholme, Esq., Rhyl; W. T. Girdlestone, Esq., Rhyl; R. Price Roberts, Esq., Rhyl; Ll. Lodge, Esq., St. Asaph; and J. R. Hughes, M.D., Denbigh.

It was moved by Dr. GRIFFITH (Portmadoc), and seconded by Mr. LLOYD WILLIAMS (Dolgelley), that the following members be elected upon the General Council of the Association; viz., R. Chambres Roberts, Esq., Ruabon; W. Williams, M.D., Mold; and G. Turner Jones, Esq., Denbigh.

Upon the motion of Mr. R. O. JONES (Bala), seconded by Mr. LEWIS JONES (Menai Bridge), Thomas Eyton Jones, Esq. (Wrexham) was re-elected representative of the Branch in the Parliamentary Committee.

Next Intermediate Meeting.—It was moved by Dr. JONES (Ruabon), seconded by Mr. WALKER, and carried—"That Ruabon be the place for holding the next intermediate general meeting."

Secretary and Treasurer.—Dr. WILLIAMS (Wrexham) moved, and the PRESIDENT seconded, the re-election of D. Kent Jones, Esq. (Beaumaris), as Secretary; and G. Turner Jones, Esq., Denbigh, was unanimously re-elected Treasurer.

New Members.—Richard Jones, Esq., of Llanbedr, Harlech, and John Roberts, M.D., of Talarvor, Criccieth, were elected.

Papers and Cases.—The following were read.

1. Excision of the Hip-joint in a man aged 29, who had suffered from diseased hip for twelve years. The diseased portion of bone, and a photograph of the patient in his recovered state, were exhibited. By R. O. Jones, Esq., Bala.

2. Lithotomy in a boy aged 14. The lateral operation was performed; and a rough stone, weighing nearly nine drachms, removed. Good recovery. By R. O. Jones, Esq., Bala.

3. Post Partum Hæmorrhage in a lady forty years of age, the mother of fourteen children, where the usual remedies—pressure, ergot, ice, etc.—failed, and which was successfully treated by the injection of the perchloride of iron after Dr. Barnes's plan, producing instantaneous suppression of the discharge and contraction of the uterus. The patient made a rapid recovery. By Edward Williams, M.D., Wrexham.

4. The Management of the Third Stage of Labour. By A. B. Steele, L.K.Q.C.P., Liverpool. The author recommended the plan suggested by Dr. Matthews Duncan, of non-interference in the natural mechanism of the expulsion of the placenta, by abstaining from traction on the cord, and relying solely upon uterine action excited by manual pressure on the abdomen. He also made a brief statement as to his experience in the use of strong Nitric Acid as an application to the in-

terior of the Uterus in Obstinate Uterine Leucorrhœa, as recommended by Dr. Atthill of Dublin, which he had found to be a perfectly safe, effectual, and almost painless mode of treatment in appropriate cases, and used with proper precaution.

5. Sewage-Contamination of Drinking Water, and its Influence in producing Typhoid Fever :—Also a paper upon Small-Pox, Protective Influence of Vaccination, and Revaccination. By J. R. Hughes, M.D., Denbigh.

6. Case of Pruritus Ani. By W. Williams, Esq., Mold.

7. Case of several hundred Cysts found in the Cavity of the Abdomen. By S. Griffith, M.D., Portmadoc.

8. Case of Puerperal Convulsion. By R. C. Roberts, Esq., Ruabon.

Dinner.—At the conclusion of the meeting, all those who were present, along with several guests—amongst them, Rev. D. Evans (Bala), Rev. Ll. Thomas (Ruabon), Rev. R. J. Leslie (Walton, Liverpool), R. J. Blackie, Esq. (Oswestry), E. Anwyl Owen, Esq. (Jersey), etc.—partook of an excellent dinner at the White Lion Royal Hotel. About thirty dined together ; and thus was brought to a close the first meeting of the North Wales Branch held in Merionethshire, which, it may fairly be said, was the largest and best attended one since the Branch was established. Every one seemed delighted and pleased with their visit and stay at Bala.

ABERDEEN, BANFF, AND KINCARDINE BRANCH : ANNUAL MEETING.

THE annual general meeting was held at Aberdeen on Saturday, July 6th, 1872. There were present twenty-nine members and two guests; Dr. DAVIDSON (Wartle), the President, in the Chair.

Instrument Exhibition.—An exhibition of the more noteworthy medical and surgical instruments, both ancient and modern, took place in the Imperial Hotel during the forenoon, the exhibitors being the members, and Messrs. Arnold of London, and Young of Edinburgh. About 1,200 instruments were thus displayed.

Business Meeting.—The Minutes of the Inverurie meeting on June 8th were read and sustained.

New Members.—James Inglis, M.B., Aberdeen; William Garden, M.R.C.S.Eng., Alford ; George W. Beattie, M.B., Ballater ; Alexander D. Keith, M.B., Aboyne ; and James Wilson, M.D., Old Meldrum, were admitted members of the Branch.

Report of Council.—The following report of the Council was read and approved. The Council have to report that, since the origination of the Branch on March 20th last, the number of those who have joined had raised the total of membership to sixty-eight ordinary and two associate members. They believe that this fact is the best demonstration of the necessity which existed for such an organisation, and of its having so far answered the purposes for which it was established. Owing to the circumstance that a financial year has not elapsed since they were elected to office, they postpone their statement of income and expenditure until the next annual meeting ; but in the meantime they see every reason to believe that the Branch can be carried on with thorough efficiency on the present moderate subscription. They would, however, suggest that the present is a favourable time for the entry of new members, since the Parent Association is prepared to admit members from July 1st onwards at half a guinea subscription for the coming six months, and they hope that individual members of the Branch will aid in extending its usefulness by endeavouring to increase its numbers.

President-elect.—Dr. GREIG, of Fyvie, was, on the motion of the PRESIDENT, seconded by Dr. TRAIL, named President-elect.

Representatives in the General Council.—Dr. Kinloch (Park), Dr. Dyce Davidson (Aberdeen), and the President were elected representatives in the Council of the British Medical Association.

Next Annual Meeting.—On the motion of Drs. WIGHT and KINLOCH, the place of the meeting for June 1873 was fixed for Stonehaven, Kincardineshire.

Associate Members.—Alfred Alexander de Lessert, Esq. (Aberdeen), Member of the Odontological Society of Great Britain, and William Williamson, L.D.S., of the Royal College of Surgeons (Aberdeen), were admitted Associate Members of the Branch.

University Committee.—The following motion by Dr. TRAIL, seconded by Dr. GEORGE, was unanimously adopted. "That a committee be appointed to watch over, take action in, and report to the Branch when necessary on, any transactions of the Aberdeen University Council which interest or affect the medical profession. The committee to consist of Drs. George, Wight, Forbes, the Treasurer, the Secretary, and Dr. Trail, convener."

Parliamentary Legislation.—The following motion by Dr. J. W. F. SMITH, seconded by Dr. FRAZER, was carried. "That a committee be appointed to observe such Parliamentary legislation as may affect the medical profession, and to communicate thereupon, when necessary, with the Branch. The committee to consist of Drs. Harvey, J. W. F. Smith, Greig, Jamieson, and Kinloch ; Dr. Smith, convener."

Affiliation with the North of Scotland Medical Society.—The recommendation of the Council concerning this matter was decided not to be taken up in the meantime, and was ordered to be laid on the table.

Epidemic Hospital for Aberdeen.—After considerable discussion, this matter was remitted to the Branch Council, with instructions to do what circumstances might render necessary to keep the urgency of the question before the Local Authority and the public.

Unprofessional Conduct.—Dr. Paterson (Inverurie) brought a case of alleged unprofessional conduct before the meeting. An Aberdeen practitioner had, unknown to him, driven out from Aberdeen, and, accompanied by a neighbouring proprietor, sought to force his advice on a patient of Dr. Paterson's, using disparaging remarks, even after the patient had expressed reliance on Dr. Paterson, and declined the attendance of the Aberdeen practitioner. The meeting was of opinion that Dr. Paterson should seek an explanation in writing from the offender, as well as from the proprietor, if necessary, and, with everything reduced to writing, bring the matter before the profession should he still desire a deliverance upon it.

Dinner.—The members of the Branch afterwards dined together in the Imperial Hotel.

WEST SOMERSET BRANCH : ANNUAL MEETING.

THE twenty-ninth annual meeting of this Branch was held at the Railway Hotel, Taunton, on Thursday, July 11th, at 2.30 P.M., under the presidency of E. C. GARLAND, Esq. Sixteen members were present.

Mr. PRANKERD was voted to the Chair in the absence of the President, and introduced the President-elect, Dr. E. C. Garland.

Dr. GARLAND took the Chair, and delivered an address, in which he expressed his views on the Public Health Bill ; and he then advocated the formation of a Medico-ethical Council by a delegate being elected from each branch of the Association. A long and interesting discussion followed on several points suggested by the address, in which almost every member took part.

The Minutes of the last annual meeting were read and confirmed.

The SECRETARY produced letters of regret at their unavoidable absence from Mr. Winterbotham, Mr. Burt, Dr. Aldridge, Mr. Hugh Norris, and others.

Report of Council.—The following Report of Council was then read by the SECRETARY. Your Council, in presenting their report for the past year, are happy at being able to announce that the Branch continues to be maintained in a healthy and prosperous condition. Although it has lost several members by death and removal, it has still on its list the names of fifty medical men ; this number, as compared with former years, is no doubt satisfactory, but there is yet room for much improvement ; and the Council venture to assert that there are at this moment many medical men in the West Somerset district who, if they could be induced to join the Association and attend the meetings, would not only find pleasure and advantage to themselves in so doing, but would, at the same time, be promoting the good of the profession at large by strengthening the great body constituting the British Medical Association.

The report then referred to the removal of the President, Dr. W. H. Axford, who left Bridgewater in the beginning of the year to take up his residence at Southsea ; and to the deaths of Mr. Reynolds, of Wellington, and Dr. Carse, of Weston-Zoyland.

Intermediate meetings of the Branch took place on October 3rd, 1871, and March 21st, 1872, and in accordance with the resolution passed at the last annual meeting, the plan of having a subject settled beforehand, on which members should be asked to express their opinions, was acted upon with good and satisfactory results on both occasions. . . . The new rule answered well in two opposite directions; it drew out some members to speak who would have remained silent if not called upon for their answers, and it restrained others from speaking too long who might without such a check have found it difficult to confine their speech within the limit of five minutes.

Acting in concert with the main body of the Association, this Branch, at their meeting on March 21st last, agreed to a petition for amending the Public Health Bill in several important particulars. The petition was presented to the House of Commons by Mr. Barclay ; and, as many other petitions of a similar character were sent from other

branches, no doubt the powerful influence of the Association will have its due weight with the Government.

The Council explained that the meeting was held at Taunton instead of Langport (as agreed last year) in consequence of the inconvenient railway arrangements for returning from that town and from Yeovil. It was hoped, however, that one of the usual intermediate meetings should be held at Yeovil, during Dr. Garland's presidency, but that instead of being held in the evening, that the Branch should assemble and dine early in the afternoon.

It was moved by Mr. HURMAN, and seconded by Dr. CORDWENT, that the report be received and adopted, and that the best thanks of the meeting be given to the Council for their report, and for their services during the past year.

The Treasurer's Balance-Sheet and Accounts, audited by Mr. Nash, were laid before the meeting, and were received and adopted, with many thanks to the Treasurer.

Council, etc.—The members of Council going out by rotation being Messrs. Gillett, Prankerd, and Winterbotham, Mr. Nash and Mr. Randolph were elected to fill the vacancies created by the first two, and Mr. Winterbotham was re-elected. Dr. Garland and Mr. Cornish were elected as representatives of the Branch in the General Council of the Association for the ensuing year. Dr. W. M. Kelly was re-elected Secretary and Treasurer.

President-elect.—Mr. RANDOLPH proposed, and Mr. PRANKERD seconded, that Mr. George Gillett be President-elect; the place for the next annual meeting being left undecided.

Intermediate Meetings.—It was proposed by Mr. CORNISH, and seconded by Mr. PRANKERD, that intermediate autumnal and spring meetings be held under the direction of the Council during the ensuing year.

Small-pox.—Mr. GILLETT read a statistical account of the cases of small-pox which had occurred at Taunton during the recent epidemic.

Dinner: Presentation to the Secretary.—Fourteen members dined together at five o'clock. After dinner, the Honorary Secretary was presented with a very handsome and massive black marble timepiece, bearing the following inscription. "Presented by the Members of the West Somerset Branch of the British Medical Association to their Honorary Secretary, W. Marwood Kelly, M.D., in testimony of their esteem and regard, July 11th, 1872."

BATH AND BRISTOL BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Bath Mineral Water Hospital on Thursday, July 11th. CROSBY LEONARD, Esq., President, took the Chair, and there were thirty-three members present.

The minutes of the last meeting were confirmed; and, after a few remarks, Mr. Leonard resigned the Chair to T. G. STOCKWELL, Esq., the President-elect, who read a most interesting address on the Progress of Surgery during the past year.

Mr. BARTRUM proposed, and Mr. PRICHARD seconded, a vote of thanks to Mr. Stockwell for his able paper.

Report of Council.—Mr. FOWLER, Bath Secretary, then read the following Report. Your Council, in presenting the thirty-first report, has much pleasure in informing you that the Branch has received a considerable accession to its numbers during the past year; no fewer than 23 new members having been elected, while the losses from death, resignation, or change of residence, only amount to nine, thus making a numerical increase of 14 members, and raising the strength of the Branch to 190. The Branch has now the right of sending nine representative members to the General Council of the Association. It is the duty of your Council to report the death of two members, Messrs. Ralph Bernard and William Sugden, both of Bristol. The painful circumstances attending the death of the former must still be fresh in the memory of most members. The Bristol Infirmary has lost a most energetic surgeon, and our profession a most enthusiastic member. For some time past Mr. Bernard had been a constant attendant at our meetings, and had taken part in the various discussions.

The attendance at the meetings during the past session has been unusually numerous. Nineteen papers have been read, and have afforded much interesting discussion. The financial position of the Branch is most satisfactory, showing a balance in hand of £24:2:1. Your Council recommend that the subscription of three guineas to the Medical Benevolent Fund be repeated as heretofore.

In accordance with the recommendation of the Parliamentary Bills Committee of the Association, the petition to the House of Commons suggesting several important alterations in the Public Health Act, 1872, was adopted by this Branch, and very numerously signed.

The scrutineers appointed to examine the voting papers announced that the following gentlemen were elected to fill the vacancies in the local Councils; for Bath, Messrs. Bartrum, Bleeck, Hensley, and Davies; for Bristol, Dr. Swayne, Mr. Coe, Dr. Davey, and Mr. Green.

Dr. GOODRIDGE proposed, and Mr. DAVIS seconded, "That the report now read be adopted."

An amendment to increase the subscription to the Medical Benevolent Fund was proposed by Dr. MARSHALL, and seconded by Dr. SPENDER, but was negatived by a small majority; and the original resolution was carried.

President-elect.—Dr. DAVEY proposed, and Mr. M. CLARKE seconded, "That Edward Long Fox, M.D., be the President-elect." This was carried by acclamation.

Votes of Thanks.—Mr. CHADWICK proposed, and Mr. LANSDOWNE seconded, "That the best thanks of the Branch are due, and are hereby tendered to, Crosby Leonard, Esq., the retiring President, and to the Council of the Branch, for their admirable arrangements during the past year." The motion was carried unanimously.

Mr. LEONARD proposed, and Mr. BARTRUM seconded, "That the best thanks of the Branch be tendered to the Secretaries, Messrs. Fowler and Board, for their services as Secretaries and Treasurers, and that they be requested to continue in office."

Representatives in the General Council.—The following gentlemen were elected to represent the Branch on the General Council of the Association: J. G. Davey, M.D.; E. L. Fox, M.D.; T. B. Goss, Esq.; H. Hensley, M.D.; H. Marshall, M.D.; F. Mason, Esq.; C. Steele, Esq.; T. G. Stockwell, Esq.; R. N. Stone, Esq.

Vote of Thanks.—The proceedings closed with a vote of thanks to the governors of the Mineral Water Hospital for the use of their hall.

Dinner.—The members afterwards dined together at the York House.

METROPOLITAN COUNTIES BRANCH: ANNUAL MEETING.

THE twentieth annual meeting of the Branch was held at the Crystal Palace on Friday, July 12th. The Chair was taken at 3 P.M. by Dr. RUSSELL REYNOLDS, M.D., F.R.S., the retiring president.

Report of Council.—Dr. HENRY, one of the honorary secretaries, read the following report.

Your Council have much pleasure in reporting that the official year now ending has been one of marked prosperity for the Branch. At the last annual meeting, the number of members was 366. Since that time, three members have died, and the names of fifteen others have been taken off the list in consequence of resignation or removal. Seventy-nine new members have been elected; making the total number at present 427. This increase is the result of measures which were decided on by your Council at the end of 1871, and carried out by the Secretaries. These consisted in the compilation of a historical summary of the proceedings of the Branch, from its establishment in the beginning of 1853 to the end of 1871, and the circulation of the same, together with letters of invitation, among members of the profession resident in the district who had not yet joined the Association, and also among members of the Association who were not yet enrolled in the Branch.

While the result of this proceeding has been very satisfactory, your Council feel that it falls short of what ought to be expected in so large a medical constituency as is comprised within the limits of the Branch; and they reiterate the opinion expressed by their predecessors last year, that the increase of the Association and of the Branch is to a large extent dependent on the personal exertions of individual members. They trust that every member of the Branch will feel it a duty to support, by his personal influence among his professional friends, the endeavours made by the Secretaries to increase its strength.

Your Council earnestly recommend the members resident in the rural portions of the Branch, to take into consideration the formation of District Societies, on the plan which has been for the last twelve years carried out with much success in the South Eastern Branch. They believe that the establishment of such District Societies, and the holding of periodical meetings in the principal towns of Middlesex, Essex, and Hertfordshire, would be productive of great benefit both to the Association and Branch, and to the members themselves.

At their first meeting after the vacation last year, your Council decided on summoning a general meeting of the Branch for the consideration of the alterations in the laws referred to in the last annual report. At the general meeting, which was held on November 14th, it was resolved that the number of ordinary members of Council should be

increased from twelve to eighteen, and that no ordinary member of Council, after having held office during three consecutive years, should be re-eligible until an interval of a year had expired. The election at the present meeting will be conducted in accordance with the new law.

Four ordinary meetings of the Branch have been held during the present year. At the first of these meetings, on January 31st, Mr. Ernest Hart read a paper on Sanitary Organisation. The subject thus seasonably brought forward just before the meeting of Parliament, has naturally attracted much attention, in consequence of the previous illness of the Prince of Wales, and the subsequent introduction of a Public Health Bill by the President of the Local Government Board. While the excellence of many of the provisions contained in the second part of the original Bill secured for them the hearty approval of the friends of an improved sanitary administration, the organising clauses were so defective and objectionable as to call forth a large amount of opposition. The proposals to appoint boards of guardians the rural sanitary authorities throughout the country, without any attempt so to modify their constitution as to secure the presence of men of large views and liberal education upon these too generally narrow and prejudiced bodies, and to compel the appointment, as principal medical officers of health, of thousands of medical practitioners who are dependent for their success in practice on the goodwill of their neighbours, seemed to be ingeniously contrived to defeat all hopes of a vigorous and enlightened execution of the laws. The attempt to remedy these radical and incurable defects in the local organisation by any amount of intermittent inspection from the central office at Whitehall, seemed, and still seems, to your Council, a task too gigantic and impracticable to warrant any reasonable expectation of success. A petition signed by a large number of the members of the Association residing in the metropolis, and praying that the Bill might be so amended in these and other respects as to make it an efficient measure for the protection of the public health, was accordingly presented to the House of Commons by Dr. Lyon Playfair. One redeeming feature in the organising portion of the Bill, was the protection afforded to all officers of health in rural districts, against the parsimony, the injustice, and the caprice of local boards. It was proposed to extend to them the same protection as is enjoyed by the medical officers of Poor-law unions, whose appointment, dismissal, qualifications, duties, and remuneration, are all subject to the approval of the Local Government Board. In the second edition of the Bill, now before the House of Commons, this and almost every other really valuable provision have disappeared; so that it appears morethan doubtful whether an union medical officer, if appointed an officer of health, could claim, in the faithful discharge of his sanitary functions, that support to which he is entitled as a Poor-law official. But, while leaving him helplessly and without appeal in the hands of the sanitary authority, the altered Bill leaves no doubt as to what, in the opinion of the Local Government Board, the social status of the officer of health ought to be, for it is now proposed to enact that he "may exercise any of the powers with which an inspector of nuisances is invested by the sanitary Acts or any of them." Your Council has no hesitation in recommending the Branch, and every individual member, to use every effort to procure the rejection by the legislature of so objectionable a measure.

On March 5th, the provident system of medical relief was ably handled from a national point of view by Donald Dalrymple, Esq., M.P.; and from a medical point of view by Dr. Ford Anderson. For his services on that evening, and for the judicious counsel and efficient help, which, in common with his distinguished friend, Dr. Lyon Playfair, he has given in reference to the Public Health Bill, your Council feel that Mr. Dalrymple has entitled himself to our warmest acknowledgments. During the past year, the progress made in the application of the provident principle to the medical relief of the working classes has been very striking. The Charity Organisation Society has continued to devote its attention and energies to the carrying out of the principles recommended by its medical subcommittee, appointed last year in consequence of Mr. Fairlie Clarke's able paper read at one of the ordinary meetings of this Branch, and the propriety of converting free into provident dispensaries is now being freely discussed by the committees and governors of free dispensaries. With Sir Charles Trevelyan and Mr. Alsager Hay still directing it, the success of this movement may now be considered certain.

On May 17th, Dr. Spencer Cobbold read to the Branch a valuable contribution to Helminthology, in the form of a paper on the development of Bilharzia Hæmatobia.

On June 5th, a paper on the Scientific Value of the Legal Tests of Insanity, was read by Dr. Russell Reynolds, President of the Branch. After the reading and discussion of this paper—at which several members of the bar were present by invitation—it was resolved: "That the Council of the Branch be authorised, in concert with the representative bodies of the legal societies, to form a Committee for the purpose of considering the questions brought forward in the paper now read, with a view to the amendment, if possible, of the existing law in reference to the responsibility of the insane." Your Council has accordingly commenced negotiations for the formation of such a Committee.

Mr. William Adams, of Henrietta Street, a member of the Branch, having laid before the Council a charge of unprofessional conduct against Mr. Brodhurst, also a member of the Branch, with reference to the proceedings at the meetings of Governors of the Royal Orthopædic Hospital, held on March 13th and April 8th, your Council have appointed a Committee, selected partly from their own body and partly from the Branch, to investigate the charge. The inquiry, which is one of some delicacy and difficulty, is still in the hands of the Committee; and the Council recommend that their appointment be confirmed, and that they be requested to continue their task which they have kindly undertaken, and to report to the new Council.

It was proposed by Mr. WM. MARTIN, and seconded by Dr. RAMSAY, and resolved: "That the report of Council now read be received, adopted, and entered on the minutes."

Treasurer's Report.—Mr. DUNN, the Treasurer, read the financial report for the year. The income, including a balance of £16 : 18 : 0 in 1871, amounted to £53 : 18 : 0; and the expenses to £39 : 7 : 9; leaving a balance of £14 : 10 : 3. On the motion of Dr. G. WEBSTER, seconded by Dr. RUGG, it was resolved: "That the treasurer's report be received and adopted."

Auditors.—On the proposal of Mr. HECKSTALL SMITH, Dr. Ramsay and Dr. Symes Thompson were appointed to audit the accounts at the next annual meeting.

Officers and Council.—A ballot having been taken, the following officers and Council were elected for the ensuing year. *President:* Sir William Fergusson, Bart, F.R.S. *President-Elect:* Richard Quain, M.D., F.R.S. *Vice-Presidents:* T. Heckstall Smith, Esq.; J. Russell Reynolds, M.D., F.R.S. *Treasurer:* Robert Dunn, Esq. *Secretaries:* A. P. Stewart, M.D.; Alexander Henry, M.D. *Ordinary Members of Council:* J. Ford Anderson, M.D.; Robert Barnes, M.D.; H. Charlton Bastian, M.D., F.R.S.; W. C. Begley, M.D. (Hanwell); Thomas Bridgwater, M.B. (Harrow); W. Fairlie Clarke, Esq.; Walter Dickson, M.D.; Charles Drage, M.D. (Hatfield); Stamford Felce, Esq.; G. A. Ibbetson, Esq.; George Johnson, M.D., F.R.S.; A. O'Brien Jones, Esq. (Epsom); J. C. Langmore, M.B.; George Lawson, Esq.; J. D. Rendle, M.D. (Clapham); George P. Rugg, M.D.; Edward H. Sieveking, M.D.; John Wood, Esq., F.R.S.

Sir WILLIAM FERGUSSON then took the Chair as President, and thanked the Branch for his election, expressing his confidence in their support during his tenure of office.

Representatives in the General Council.—The following gentlemen were chosen to represent the Branch in the General Council of the Association: W. C. Begley, M.D. (Hanwell); S. Day-Goss, M.D.; R. Dunn, Esq.; Sir W. Fergusson, Bart., F.R.S.; Wilson Fox, M.D., F.R.S.; C. H. Rogers Harrison, Esq.; Ernest Hart, Esq.; A. Henry, M.D.; Berkeley Hill, Esq.; W. Martin, Esq. (Hammersmith); H. Maudsley, M.D.; John W. Ogle, M.D.; R. Douglas Powell, M.D.; W. F. Ramsay, M.D.; G. P. Rugg, M.D.; J. Seaton, M.D. (Sunbury); C. Shrimpton, M.D.; E. J. Tilt, M.D.; Haynes Walton, Esq.; G. Webster, M.D. (Dulwich); John Wood, Esq., F.R.S.

The Public Health Bill.—Dr. STEWART called attention to the defects of the Public Health Bill in its present form, and proposed the adoption of a petition against it. Dr. G. WEBSTER seconded the motion, which, after some remarks from Mr. HECKSTALL SMITH and Mr. HOLLAND, was carried unanimously.

The petition was signed by the President and by most of the members who were present at the meeting.

Vote of Thanks to the Retiring President.—Mr. HECKSTALL SMITH proposed a vote of thanks to Dr. Russell Reynolds for his able and courteous conduct as President, and for the hospitality which he had shown to the Council, who had held most of their meetings at his house.

The motion, having been seconded by Dr. SEATON, was carried by acclamation.

Dinner.—At half-past five, P.M., the members dined together: Sir William Fergusson in the Chair. Dr. Carpenter, President, and Dr. Hetley, one of the Vice-Presidents, of the South Eastern Branch; the Rev. Dr. Reynolds; and Dr. Harkness of Sacramento, were among the guests.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.

WEDNESDAY, MAY 15TH, 1872.

THOMAS DARBY, Esq., in the Chair.

Morphia in Atropine Poisoning.—Dr. J. M. FINNY read a paper on a case illustrating the general physiological antagonism between atropia and morphia. The patient, a lady of nervous temperament, aged 25, was subject to neuralgia; and for this affection Dr. Finny had, on previous occasions, used a combination of atropia and morphia, with both anodyne and curative effects. When he was consulted by this lady, in October, 1871, he determined, as usual, to admininister the drugs at the patient's ordinary hour of repose. Instead of the usual dose of one-fiftieth of a grain of sulphate of atropia, at least double that quantity was injected hypodermically, in combination with a fourth of a grain of acetate of morphia. In about twenty minutes Dr. Finny found the patient complaining of great cold, with the tongue dried, parched, and rough; dryness of the throat; speech thick and inarticulate; dimness of vision; scintillation; the pupils much dilated; pulse small and rapid, 130; respirations shallow, 32. Ten minutes afterwards these symptoms had increased; there were great uneasiness and tossing about; delirium had also set in; the patient was grasping at imaginary objects in the air. Dr. Finny now resolved on using morphia as an antidote. With much difficulty, owing to the patient's perturbed state, he injected one-third of a grain of the acetate. In less than five minutes the restlessness and jactitation ceased, the skin became warm, respiration fell to 20, and the pulse came down below 100, and was fuller. In ten minutes from the time of the injection deep sleep had set in, and this continued through the night. Next day the lady had quite recovered, except for the still existent dilation of the pupils. The author then detailed the opinions of Dr. John Harley, Mr. Benjamin Bell, and others, on the subject of the antagonism between atropia and morphia, and of the toxical doses and effects of the former.—Dr. MAC SWINEY said that at 3.30 P.M., on the 14th of last February, thirty minims of liquor atropiæ had been given to a man, aged 40, in mistake for the same quantity of Battley's solution of opium. At 4 P.M. an emetic which had been administered acted, and stimulant treatment was commenced. At 7 P.M. the man was quite insensible, anæsthetic, with eyes open and pupils enormously dilated; pulse very rapid and small; respirations slow; surface cold, and bathed in clammy perspiration. Thirty minims of liquor morphiæ hydrochloratis were now given, and the dose was repeated until three drachms in all of the solution had been taken. Consciousness returned at midnight, when the patient complained that he could not see. He recovered perfectly.—Dr. HAYDEN reported a case of poisoning by belladonna berries in a boy. The leading symptoms were vomiting, unmeaning laughter, and strange staggering gait. Dover's powder was given, and the patient recovered; but the pupils did not resume their normal appearance for two or three days.—Dr. HAWTREY BENSON in November, 1869, treated a child, aged 4, for toxical symptoms, consequent on eating belladonna berries. The little patient was quite insensible, with jactitation and floccitatio. The face was flushed, the pupils were dilated, and dysphagia and thirst were present. Control over the bladder also was lost. The treatment was by tincture of opium given in three-minim doses every second hour. This child completely recovered, having taken fifty-four minims of laudanum within thirty-six hours.

Incubation of Measles.—Mr. JOLIFFE TUFNELL read a paper on this subject. On May 16th, 1871, a soldier was removed to a solitary cell in a military prison. On June 28th, he was seized with symptoms of coryza, and three days later (on July 1st) he was covered with an eruption of measles. Was it to be supposed that in this case the period of incubation of the disease was prolonged at least forty-five days? Or, did the disease arise spontaneously?—Dr. CHURCHILL believed that the incubation stage of measles might be as short as ten days, or as protracted as thirty days.—Dr. HENRY KENNEDY mentioned a case in which the use of musty linseed-meal gave rise to a morbilliform affection. He also instanced observations which had been made by military surgeons in America, and by physicians elsewhere, as to the production of a morbilliform affection in persons who had slept on musty straw.

Disinfection in connection with Small-pox.—Mr. C. R. TICHBORNE, in bringing forward this question, dwelt briefly on the germ-theory of disease. Of the exact nature and appearance of most contagious germs the biologist, physicist, and chemist, were probably as yet all equally ignorant. We were not yet armed with instruments powerful enough to investigate or to aid in classifying the "milky way of minute organisms," as Ehrenberg termed it. The author was himself disposed to attach great importance to the mechanical action of atmospherical dust in conveying infection. This he would call the "raft theory" of disease. The word "raft" had been used by Professor Tyndall, to explain how a non-volatile salt, chloride of sodium, was always found in the air; it was, in fact, borne on minute particles of dust. Now, as the virus of small-pox might be be dried without impairing its activity, it might be supposed to be disseminated through the air on dust-rafts. Again, contagious diseases might be inoculated directly or indirectly. If this "raft theory" of contagion were true, volatile disinfectants were powerful agents for good. Fresh air was one of the best disinfectants. When this was not to be had, as often occurred in large cities, chlorinated lime was employed, by the use of which the air was charged with nascent oxygen. As a disinfectant fluid Condy's solution of permanganate of potash was invaluable for certain purposes; but a weak and bright solution of chlorinated lime (half a pound to a gallon of water) was probably the cheapest and most efficacious oxidiser. A case illustrating the superior advantages of volatile disinfection in the treatment of local outbreaks of epidemical disease, was cited. In the dormitories of a large mercantile establishment in Dublin there were two hundred beds. Small-pox broke out. A well-known non-volatile disinfectant was immediately freely used; but, during the next two months, eleven cases occurred. On January 11th a new plan was commenced. A few drops of carbolic acid were added to the contents of each water-jug every morning; at 3 P.M. a weak solution of chlorinated lime was freely sprinkled over the floors of each dormitory, and the windows were left wide open until the evening. By this time the floors had dried, and no trace of the smell of chlorinated lime could be perceived. No case of small-pox occurred in the dormitories after January 11th. The remainder of the paper was devoted to the consideration of the antiseptic treatment of disease, by the action of remedies on the blood—such as xylol, the sulphocarbolates, and sulphites. The author suggested that possibly a real blood disinfectant would be found in such a substance as salicylic acid, in which the residual molecules, after limited oxidation, would still possess disinfectant properties. For example, the residual molecule of salicylic acid, after oxidation in the blood, would be phenol.—Dr. CAMERON thought that scarlatina, lingering in rooms where ventilation was fully carried out, went to prove the inadequacy of mere gaseous disinfection. In 1866, Leipsic was visited by cholera, and over this disease gaseous disinfection appeared to have no control. Scraping, whitewashing, papering, and painting were, in his opinion, more trustworthy means of disinfection.—After some remarks from Dr. HAYDEN and Dr. CHAS. F. MOORE, the meeting separated.

CORRESPONDENCE.

HÆMORRHAGE AFTER OVARIOTOMY.

SIR,—In your hospital reports in last week's number, after describing an operation which, I am glad to say, has led to the recovery of the patient, your reporter says: "Mr. Wells was particularly careful to tie a number of small omental arteries that had been cut in the operation; and stated that the importance of this could not be overestimated, as he had put back the omentum with but little apparent hæmorrhage or none, and had afterwards seen profuse bleeding and death as the result." Will you allow me to say that I was misunderstood on this point? I meant to say that cases were on record where death had been caused by bleeding from omental vessels which had been returned without ligature into the peritoneal cavity; but that I had always avoided this source of danger by extreme care in securing even small vessels. It is a singular fact that, out of five hundred and one cases of completed ovariotomy, I have not had more than two where either primary or secondary hæmorrhage has had any considerable share in leading to an unsuccessful result.

I am, etc.,
T. SPENCER WELLS.

3, Upper Grosvenor Street, July 15th, 1872.

DR. BENEKE ON ENGLISH CLIMATOLOGY.

SIR,—Dr. Beneke might have gained some information at Brighton about its climatic condition, etc., had he sought for it in likely quarters. He is not the first who has come down here and made insufficient inquiries, and then published results accordingly. It seems he was told the meteorological observations made in the place "were not to be depended on." I can only say that a great deal of careful and able meteorological work has been done in Brighton; that there now lies before me a pamphlet by three members of the Meteorological Society, giving a summary of the results up to the end of 1870; that other ob-

servers have also employed themselves about it; and that several works on the climate of Brighton are to be met with. It is not well done to discredit other men's work, unless good reason be shown for so doing.

Brighton, St. Swithin's Day, 1872. I am, etc., NEMO.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 11th, 1872.

Barber, Oliver, Sheffield
Forder, Joshua Lewis William, Mauritius
Low, Robert Bruce, Edinburgh
Reid, Frank, Torrington Square
Riley, Francis. Leigh, Sydney, New South Wales
Sculthorpe, Alfred Milward, Tamworth

The following gentlemen also on the same day passed their primary professional examination.

Bingham, Samuel, Guy's Hospital
Jelley, Richard, University College
Lindsay, William V., St. Mary's Hospital
Llewellyn, Rees Ralph, London Hospital
Talbot, Russell Main, Guy's Hospital

As an Assistant in compounding and dispensing medicines.

Baynes, James, Hull

UNIVERSITY OF DUBLIN.—Degrees granted, June 26th.

Doctor in Law (honorary).—Sir Alexander Armstrong, K.C.B.

Bachelors in Medicine.—James Henry Allen, Robert S. Archer, Charles N. Ball, John Chartres, Thomas F. Fleetwood, George Goode, Alfred Grandison, Wm. L. Gubbins, James C. Hamilton, William F. Hingston, Elias W. Kerr, Wm. L. Mackesy, Frederick P. MacLaughlin, Charles G. W. Marsden, Charles A. M'Munn, Matthew D. Moriarty, Thomas P. O'Meara, Frederick A. Pope, Richard D. Purefoy, William J. Smyly, and Arthur W. Wade.

Masters in Surgery.—Robert S. Archer, Charles B. Ball, William F. Hingston, and Frederick P. MacLaughlin.

Doctors in Medicine.—Francis T. Butler, Edward J. Cooke, and J. F. Cranny.

QUEEN'S UNIVERSITY IN IRELAND.—The following degrees were conferred at a meeting of the University on June 19th.

Doctors of Medicine and Masters in Surgery.—John G. Adamson and Archibald Adams, Queen's College, Belfast; Robert Evans Burges, B.A., Queen's College, Cork; Richard Davis, Queen's College, Belfast; Henry A. Fogarty, Queen's College, Cork; James Graham, Queen's College, Belfast; John Hegarty and William Hickman, Queen's College, Galway; Francis B. Kane and John R. Leech, Queen's College, Cork; Peter J. M'Quaid, Queen's College, Galway; Timothy Molony, Bartholomew O'Brien, and Patrick O'Connell, Queen's College, Cork; Thomas Patterson, B.A., and Richard Read, Queen's College, Belfast; James Ring, Queen's College, Cork; J. M. J. Scott, Queen's College, Belfast; William F. Spencer and William Thomson, B.A., Queen's College, Galway; Hugh Charles Wilson, Queen's College, Belfast.

Doctors in Medicine.—James B. Bailey, Queen's College, Belfast; John G. Collis and H. Maturin Johnson, Queen's College, Cork; Samuel M'Cutcheon, Queen's College, Belfast; Denis Peter Macdonald and Henry Madden, Queen's College, Cork; John A. Malcomson, Queen's College, Belfast; W. E. Bonsall Moynan, Queen's College, Galway; Bernard O'Connor, B.A., Queen's College, Galway; Simon Holgate Owen, Queen's College, Belfast; J. Nachville Ryan, Queen's College, Belfast; Thomas F. Sparrow, Queen's College, Cork; William Thompson, B.A., Queen's College, Galway; Hugh Charles Wilson, Queen's College, Belfast.

Master in Surgery.—Moses Black, M.D., Queen's College, Belfast; William Fleming, M.D., Queen's College, Galway; J. M. Scott and William F. Spencer, Queen's College, Belfast.

Diploma in Midwifery.—J. M'Mahon Brown, M.D., Queen's College, Cork; Ebenezer E. Sloane, M.D., J. King Kerr, M.D., Alexander Young, M.D., M. Black, M.D., John Knox, M.D., and John G. Adamson, Queen's College, Belfast; R. E. Burges, B.A., J. G. Collis, and H. A. Fogerty, Queen's College, Cork; James Graham, Queen's College, Belfast; H. Madders, Queen's College, Cork; J. A. Malcomson, Queen's College, Belfast; W. E. B. Moynan, Queen's College, Galway; B. O'Connor, B.A., and Patrick O'Connell, Queen's College, Cork; S. H. Owen, Queen's College, Belfast; Thomas Patterson, B.A., and J. Ring, Queen's College, Cork; J. M. J. Scott, Queen's College, Belfast; W. Thompson, B.A., Queen's College, Galway.

The following candidates have passed the first University examination in Medicine, viz.:

R. C. Burke, M. F. Cleary, and Ludlow T. Colthurst, B.A., Queen's College, Cork; William Cranston, Queen's College, Belfast; Maurice Cremen, M. de Courcy Curtin, and Maurice Daly, B.A., Queen's College, Cork; Francis Davison, Alexander Dempsey, and George Dougan, Queen's College, Galway; J. E. Vaughan Foss, Queen's College, Cork; Patrick C. Gorham and George R. Gowland, Queen's College, Galway; James C. Gray and Henry Grier, Queen's College, Belfast; Christopher Gunn, Queen's College, Cork; John Wilson Hamill, Joseph Henry, Edmund Hemsted, and Edwin Hemsted, Queen's College, Belfast; Wm. R. Huggard and William C. Jeffries, Queen's College, Galway; Edward H. Kelly, William M'Iver, and Horace M. Maybury, Queen's College, Belfast; W. H. Millward and Jarlath J. Mullen, Queen's College, Galway; Michael T. Munro, Queen's College, Belfast; John O'Callaghan, B.A., Queen's College, Galway; Simeon Holgate Owen, Queen's College, Belfast; Joseph Parker, Queen's College, Galway; Norman Pollock, Queen's College, Belfast; Caleb K. Powell, Michael Ronan, and D. J. Ross, Queen's College, Cork; Charles E. Sharpe, Queen's College, Belfast; Edward Shipsey, Queen's College, Cork; Edward Smyth, Queen's College, Belfast; Michael Sweetman, Queen's College, Cork; Charles Wadsworth, Queen's College, Belfast; William E. Warren and Michael White, Queen's College, Galway.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALFORD, Lincolnshire—Admiralty Surgeon and Agent.
ALSTON UNION, Cumberland—Medical Officer for District No. 2.
ABERAYRON UNION, Cardiganshire—Medical Officer for the Llansantfraid District and the Workhouse: £45 per annum.
BERKSHIRE LUNATIC ASYLUM, Wallingford—Assistant Medical Officer: £80 per annum, board and lodging.
BLACKBURN AND EAST LANCASHIRE INFIRMARY—Resident House-Surgeon: £90 per annum, rooms, board, and washing.
BOLTON, Lancashire—Medical Officer of Health: £300 per annum.
BRADFORD INFIRMARY—Junior House-Surgeon: £50 per annum, board, and residence.
BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.
CALLAN UNION, co. Kilkenny—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kilmoganny Dispensary District: £100 per annum, and fees.
CORK UNION—Medical Officer for the Blarney Dispensary District: £120 per annum.
DEVONSHIRE HOSPITAL, Buxton—House-Surgeon: £100 per annum, board and residence.
DORSET COUNTY HOSPITAL, Dorchester—Honorary Physician.
DUNDEE ROYAL INFIRMARY—Dispenser: £35 per annum, bed, board, and washing.
EAST LONDON HOSPITAL FOR CHILDREN and DISPENSARY FOR WOMEN, Ratcliff Cross—Resident Medical Officer: £60 per annum, residence, board, and washing.
EDINBURGH ROYAL MATERNITY HOSPITAL—House-Surgeons.
ENNISCORTHY UNION, co. Wexford—Medical Officer and Public Vaccinator for the Killan Dispensary District: £90 per annum, and fees.
FETTERCAIRN, Kincardineshire—Parochial Medical Officer: £18 per annum.
GENERAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN, Manchester—Resident Medical Officer: £100 per annum, residence and board.—Dispenser: £70 per annum.
GORTIN UNION, co. Tyrone—Medical Officer to the Workhouse and Fever Infirmary: £50 per annum.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Gortin Dispensary District: £100 per annum, and fees.
HARRIS, Inverness-shire—Parochial Medical Officer.
HEREFORD COUNTY AND CITY LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, furnished apartments, rations, fire, light, attendance, and washing.
HEXHAM UNION, Northumberland—Medical Officer for the Western Division of District No. 3.
LAMBETH—Resident Medical Officer and Dispenser to the Workhouse: £100 per annum, board, apartments, and washing.
LINCOLNSHIRE SEA-SIDE CONVALESCENT HOME, Mablethorpe—Medical Officer.
LIVERPOOL DISPENSARIES—Hon. Medical Officer to the South Dispensary.
LOCHCARRON, Ross-shire—Parochial Medical Officer: £115 per annum, and various perquisites.
MANCHESTER ROYAL INFIRMARY—In-door Physician's Assistant: 80 guineas per annum, with board and residence.
MANCHESTER WORKHOUSE HOSPITAL—Junior Assistant Medical Officer.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Two Entrance Scholarships: £25 and £20 per annum, for two years.
MIDDLESEX LUNATIC ASYLUM, Hanwell—Assistant Medical Officer to the Female Department.
MONAGHAN COUNTY INFIRMARY—Physician: £50 per annum.
NEWBURGH, Fifeshire—Parochial Medical Officer.
NEW ROSS UNION, co. Wexford—Medical Officer for the Templeudigan Dispensary District: £50 per annum.
NEWTOWN AND LLANIDLOES UNION, Montgomeryshire—Medical Officer for the Newtown District: £80 per annum.
NORFOLK and NORWICH EYE INFIRMARY—Assistant-Surgeon.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Physician.
ROYAL ISLE OF WIGHT INFIRMARY, Ryde—House-Surgeon: £40 per annum, board, lodging, and washing.
ST. MARY'S HOSPITAL MEDICAL SCHOOL—Scholarship: £40 per annum for three years.—Exhibition: £20 for one year.
SAMARITAN FREE HOSPITAL, Lower Seymour Street—Surgeon to the Out-Department.
SKIRLAUGH UNION, Yorkshire—Medical Officer and Public Vaccinator for the Aldborough District: £32 per annum, and extra fees.
STOCKPORT INFIRMARY—Assistant to the House-Surgeon.
STOURBRIDGE DISPENSARY—House Surgeon and Secretary: £120 per annum, furnished rooms, coal, and gas.
SUFFOLK GENERAL HOSPITAL, Bury St. Edmund's—Physician.
TARBOLTON, Ayrshire—Parochial Medical Officer: £50 per annum.
TOXTETH PARK GIRLS' INDUSTRIAL SCHOOL, Liverpool—Honorary Surgeon.
TOXTETH PARK LYING-IN CHARITY, Liverpool—Surgeon-Accoucheur.
TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.
WARNEFORD LUNATIC ASYLUM—Resident Medical Superintendent: £260 per annum, with board, furnished apartments, etc.
WEST LONDON HOSPITAL, Hammersmith Road—Surgeon.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*DOBSON, Nelson C., Esq., Surgeon to the Bristol General Hospital, appointed Lecturer on Anatomy at the Bristol Medical School, *vice* *F. P. Lansdown, Esq., resigned.

*SAVAGE, George H., M.D., elected Assistant Medical Officer to Bethlem Hospital.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY.—Quekett Microscopical Club (University College, Gower Street), 8 P.M. Annual Meeting and Election of Officers. The Presidential Address by Dr. L. S. Beale, F.R.S.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

SIR,—Some years ago, there appeared in a continental journal some experiments bearing on the question whether the size of the fœtus could be diminished by the administration of iodide of potassium during pregnancy. I am unable to lay my hands on the paper; and would be very glad if any of your readers could supply me with the information as to where it appeared. I am, etc.,

M.D.

July 12th, 1872.

C. D. (Shields).—1 and 2. Yes.

DR. HUNTER (Matlock) will obtain the particulars from Mr. Heather Bigg, Wimpole Street.

DR. WHITE (Rochester).—As far as we know.

DR. HARRIS (Redruth).—It is not permitted by the Post Office to carry out our correspondent's wish.

THE CONTAGIOUS DISEASES ACTS.

SIR,—In a communication on the above subject in the JOURNAL of July 13th, Mr. P. H. Holland writes, "That because we cannot remove, we may not try to diminish an evil, can only be seriously urged either by a fool or a fanatic." As an abstract proposition, most people will concur in this. The fallacy that underlies it in its application to the Contagious Diseases Acts' controversy, consists in the assumption that one party alone is earnest in its endeavours to diminish syphilis, while the other is either indifferent or hostile to any such attempt being made. The truth, however, is, that both desire to see the evil mitigated, but that they differ most materially as to the means to be employed; and we, who conscientiously oppose the Acts in question, consider that we are both less foolish and less fanatical in doing so, than we should be if we persistently urged the application of a supposed remedy, which nearly a century's experience in France has proved to have miserably failed to suppress syphilis, but not to have been inconsistent with the introduction, even if it have not been the necessary promoter, of moral evils of the worst description. This statement is in direct opposition to Mr. Holland's assertion that regulating acts have not failed greatly to diminish disease in Paris and elsewhere; but it is not given without careful consideration, and what I think to be conclusive evidence as to its correctness. This evidence is obtained from the published statements by MM. Le Cour and Le Fort in various British medical journals; the edition of Parent Duchatelet's work by MM. Trebuchet and Duval; the statistics contained in the Appendix to the Eleventh Annual Report of the Medical Officer of the Privy Council; and the tables appended to the Report of the Venereal Commission.

Another assertion by Mr. Holland is, that the French Acts differ essentially from those of this country. One assertion is perhaps as good as another. I therefore, after a most careful study of the French system, will assert that essentially it resembles our own, although in matters of detail the two differ from each other. In effect, they are both systems of certification and registration of a recognised class for the pursuit of a recognised traffic.

I am aware that Mr. Holland charges with the utterance of a known falsehood those who state that the "women are licensed to pursue a shameful trade, and that under its" (the Act's) "authority they are certified as safe to use;" and that he adds, "that the Act does not do the first, and forbids the second being done under its authority." In the face of this charge, I venture to assert that the women are in effect, though not in words, licensed; that it is abundantly clear, from evidence given before the Royal Commission, that they do consider themselves to be a class of legitimate traffickers; and that they systematically employ the orders for reappearing for examination in the same way as they used to employ the certificates of health—viz., to prove that they are "safe to use". And for any one to assert that these most natural and clearly demonstrated effects of the Acts cannot exist under their authority, because, by the presence of a few inefficacious words, such authority is denied, is, to use Mr. Holland's own words, "mere twaddle".

The statement is reiterated, that the opposition to the Acts is fictitious: and that it consists of "a fanatical crusade, preached chiefly among the least educated classes by unscrupulous arts of agitation." The word fictitious was never so misapplied. If ever an opposition was real, it is this one; and, to show that other classes beside the least educated participate in it, permit me once more briefly to refer to what was done in this town. It having been asserted again and again that medical men all but universally approved of the Acts, I attempted a short time ago to see how far the statement applied to Liverpool. The subject had been warmly debated on three several occasions at the largest meetings ever held in its Medical Institution, so that there was little probability of any such widespread ignorance concerning it as those who sign petitions are sometimes charged with possessing. A form of petition, strongly condemnatory of the Acts, was written out by myself, and, with the aid of a few friends, brought under the notice of many (though, from want of time, by no means all) of the resident medical men. No one was urged to sign; and, if any hesitated, no pressure was brought to bear. Yet, in a few days, one hundred and eight (not one hundred and six, as my friend Dr. Burrows thought) signatures were obtained—*i. e.*, those of about one-third of the entire body. But what makes this expression of opinion more decisive is, that it was obtained at a time when earnest efforts were being made by a number of gentlemen to procure medical signatures to the petition in favour of the Acts known as the "London Memorial"—efforts which resulted in twenty-nine signatures only. And, to show that something more than the mere reasonableness of the terms of the memorial was relied upon by its supporters, I may mention what occurred between myself and one of the oldest honorary hospital surgeons here. On showing him my petition, he told me that he had just been urged to sign the memorial to Mr. Bruce; and, on his hesitating, had been pressed to do so, with the assurance that he would be in good company if he did; the names of not a few medical baronets, etc., being then read to him. He replied that he preferred good principles to good company, and refused to sign.

I am, etc.,
WILLIAM CARTER, M.B., M.R.C.P.,
Honorary Physician to the Liverpool Southern Hospital.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, July 13th; The Northern Star, July 11th; The Lincolnshire Chronicle, July 12th; July 13th; The Royal Cornwall Gazette, July 13th; The Edinburgh Courant, July 8th; The Merthyr Express, July 13th; The Northern Whig, July 12th; The Aberdeen Herald, July 13th; The Birmingham Daily Gazette, July 16th; The Belfast Morning News, July 17th; The Scotsman, July 16th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—
Dr. G. M. Humphry, Cambridge; Dr. Murchison, London; Mr. James R. Lane, London; Dr. J. W. Langmore, London; Mr. Maunder, London; Dr. P. B. Smith, Aberdeen; Dr. W. M. Kelly, Taunton; Dr. Ogston, Aberdeen; Dr. A. B. Steele, Liverpool; Mr. Oliver, Newcastle-upon-Tyne; Dr. W. Carter, Liverpool; Dr. Peacock, London; Dr. T. J. Maclagan, Dundee; Dr. J. Hughlings Jackson, London; Mr. T. H. Bartleet, Birmingham; Mr. Soutter, London; An Associate; Dr. Foster, Birmingham; Mr. T. C. White, London; Dr. Parsons Dover; Mr. A. T. Norton, London; Mr. T. B. Spencer, Preston; Our Dublin Correspondent; Dr. Cobbold, London; M.D.; Dr. Joseph Bell, Edinburgh; A Correspondent; Mr. T. Spencer Wells, London; Dr. Tilt, London; Mr. Lawson Tait, Birmingham; Dr. White, Rochester; Dr. Hyslop, Stretton; Dr. Garland, Yeovil; Dr. J. Mitchell, Barnard Castle; Dr. Corfield, London; Dr. Rumsey, Cheltenham; Mr. J. F. Nicholson, Stratford Green; Dr. D. T. T. Maunsell, Dublin; Mr. J. H. Wathen, Fishguard; Dr. Aveling, London; Dr. Thorburn, Manchester; Mr. Wood, London; Mr. Dewar, London; Mr. Mash, Northampton; Dr. Stern, Jamaica; Dr. Morgan, Southsea; Dr. Hunter, Matlock; The Medical Officers of the Charing Cross Hospital; Mr. Tweedy, London; Mr. Henry R. Reeves, London; Dr. R. Thorne Thorne, London; Miss Jex-Blake, Edinburgh; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. J. M. Bryan, Northampton; Dr. Grainger Stewart, Edinburgh; Mr. Wanklyn, London; Mr. R. S. Fowler, Bath; Dr. Simpson, Braemar; Dr. Creighton, Peterhead; Mr. T. Worth, Nottingham; Mr. Standish, Cradley Heath; etc.

BOOKS, ETC., RECEIVED.

Practical Notes on the New American Remedies. By R. Tuthill Massy, M.D. London: 1872.

On the Origin and Prevention of Zymotic Diseases. By George S. Brady. Newcastle-upon-Tyne: 1872.

Suggestions as to the Reorganisation of the Army Medical Department. By a Staff Surgeon-Major. Glasgow: 1872.

Lisdoonvarina Spas and Sea-side Places of Clare. By E. D. Mapother, M.D. Second Edition. Dublin: 1872.

LECTURES ON HUMAN MYOLOGY.

Delivered at the Royal College of Surgeons of England.

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LECTURE III.—*June 21st*, 1872.—(*Concluded.*)

THE dorsal or supinato-extensor mass in the lower limb, if we except the covering fascia, is quite cut off from the upper segment of the limb. In many of the lower animals, however, it takes an origin from the femur. In some, it is extensively connected with the femur and with the thigh-muscles, and is extensively inserted into the leg-bones, so as to form an important adjunct to the extensors of the leg. A similar disposition to this is retained in the upper limb, forasmuch as a considerable part of the supinato-extensor mass arises from the humerus, and some part of it is inserted into the radius. It has to be observed, that this origin is confined to the radial or pre-axial condyle, because the uprising of the olecranon cuts off the mass from the middle and the post-axial parts of the end of the humerus.

The radial sector of the superficial stratum in the upper limb arises entirely from the upper segment of the limb; and a portion of it—in some of the lower animals, the whole of it—is inserted into the radius, constituting the supinator radii longus. This muscle is so situated as to have a flexor action upon the elbow; and, in some instances of contraction of the joint, it presents a formidable obstacle to extension. A portion of the sector runs on at a deep level beneath the elements of the deep stratum which cross it, over the carpus to the metacarpus, constituting the extensores carpi radiales.

The corresponding or tibial sector in the lower limb forms the tibialis anticus, and passes from the leg-bones entirely over the ankle to the tarsus and metatarsus, there being no subdivision of it; so that the tibialis anticus contains the blended serial representatives of the supinator longus and the extensores carpi radiales, besides, as presently to be mentioned, in part at least, those of the upper two extensors of the pollex. In the inturned position of the foot, the tibialis anticus becomes associated with the flexors in maintaining and increasing that inclination. Hence it commonly is necessary to divide it, as well as the tendo Achillis and the tibialis posticus, in the operation for the cure of talipes varus.

The ulnar sector—the extensor carpi ulnaris—arises partly from the humerus and partly from the ulna; the ulnar fibres, which in some animals serve as an insertion, here constituting an origin. It is continued in its entire thickness to the metacarpus.

The fibular sector, which is the homologue of the ulnar sector, is disposed in a rather remarkable manner. It is divided into the three peronei. Of these, one—the peroneus tertius—passes to the fibular metatarsal, and so corresponds more closely than either of the other divisions, in function as well as position, with the extensor carpi ulnaris. A second part of the sector, forming the peroneus brevis, passes to the same metatarsal; but, in consequence of its travelling behind the malleolus, instead of in front, it becomes, although supplied by a branch of the same nerve, an antagonist to the former portion and a flexor of the ankle. In this it resembles the extensor carpi ulnaris of Birds, which, though supplied by the radial nerve, lies on the flexor aspect of the carpus, and so acquires a flexor action. The course of the third portion—the peroneus longus—which passes from a comparatively superficial position on the fibular side of the extensor aspect of the leg, through the deepest level in the sole, to the metatarsal bone on the tibial side of the foot, is very peculiar. It is not paralleled by anything in the hand; and it is a very general mammalian feature, but is not, I believe, met with in animals below Mammals, and in these it not unfrequently detaches tendons to the fifth and other metatarsal bones. Its spiral course reminds us of that of the internal rectus in the Bird's leg, which passes from the fore part of the pelvis just above the hip, outwards, athwart the front of the knee, into the flexor of the digits. It is a very important agent in supporting the arch of the foot, and throwing the weight of the body forwards over the ball of the great toe.

The peronei are a good illustration of the manner in which, as just alluded to in the case of the supinator radii longus, a difference of direction and position will separate and give antagonistic action to members of the same group of muscles which are supplied by the same trunk-nerve—showing that it is position, rather than similarity of nerve-supply, which determines the harmonous action of muscles. The peroneus brevis and longus are, by virtue of their position, combined with the tibialis posticus, and serve, with it, to maintain the arch of the foot and brace the ankle during the period in which the force of the gastrocnemius and soleus is exerted upon one extremity of the arch, and the whole weight of the body is thrown upon its centre. The attachment of the peroneus brevis to the laterally projecting process of the fifth metatarsal bone enables it to spread out, to some extent, the balls of the toes, and also to brace the lateral arch of the foot, which has a tendency to bulge at this point.

The intermediate sector on the dorsal aspect forms the extensor digitorum longus, better called sublimis, in both limbs. It presents very little difference in the two limbs, beyond the point already alluded to in speaking of the supinato-extensor masses, that, in common with the other components of this stratum in the upper limb, it arises from the proximal segment of the limb; whereas in the lower limb it does not, in Man at least, extend above the knee. In each limb, it is more closely connected with the post-axial (ulnar or fibular) than with the pre-axial sector; and, like the corresponding, or rather the antagonistic, sector on the flexor aspect—the flexor sublimis digitorum—it omits to supply the first or pre-axial digit.

The fibres of the deep stratum of the supinato-extensor mass have an oblique direction from the post-axial to the pre-axial side, as well as downwards; and in each limb they omit to supply one or more of the post-axial digits. Thus digit I is supplied by the deep stratum only; digit V is supplied by the superficial stratum only; and the other digits in the foot, and some of them in the hand, are supplied by both strata.

In the upper limb, this deep stratum has an attachment to the humerus; and the uppermost portion of it, so arising, forms the supinator radii brevis. The next portion, arising from the ulna and the radius, forms the muscle which is usually called the extensor ossis metacarpi pollicis, but which, comparative anatomy tells, should be called supinator manûs, forasmuch as the mobility of this metacarpal is exceptional, whereas the muscle is very commonly present, and is very often attached to the carpus, or to the carpus and the metacarpus; and this is commonly the case even in Man. The presence of these two deep supinators as separate muscles in the upper limb has relation to the power of supinating the radius upon the humerus and the ulna; and there are no separate representatives of them in the hind limb. The supinator brevis cannot be said to have any representative at all; and the representative factors of the supinator manûs are blended with the deeper part of the tibialis anticus. In the hind limb of the higher Apes, where the metatarsal is free to move, these factors form a muscle more or less separate from the tibialis anticus, and corresponding almost precisely with the supinator manûs in Man.

Immediately below the supinator manûs in the fore limb, travelling with it, and apparently a derivative or segment from it, is the extensor primi internodii pollicis. It is very rarely met with in any animal except Man, and in him is not unfrequently wanting, or is scarcely segmented from the supinator manûs. In the lower limb, it, like the last named muscle, is represented only by some of the deeper fibres of the tibialis anticus.

The remaining muscles of the deep stratum in the two limbs appear at first a little difficult to throw into harmonious grouping. They all pass upon the digits, and are extensors of them. Uppermost is the extensor secundi internodii pollicis, which corresponds sufficiently closely to the extensor hallucis. Near to it is the extensor indicis, which has no apparent homologue in the lower limb; and in that limb the extensor brevis digitorum is a very regular muscle, which has no apparent homologue in the upper limb. These two muscles in the two limbs—the extensor indicis and the extensor brevis digitorum—lie at somewhat different levels; still both are intermediate between the extensor digitorum longus, or sublimis, and the interossei, and are more or less blended with these. Taking them all together, and seeing that they are all segments of the common supinato-extensor masses, we learn that these masses in each limb have, as regards their disposition upon the digits, a tendency to resolve into three, or, if we include the interossei, into four, layers superimposed upon each other. Of these, the superficial layer forms the extensor digitorum sublimis, of which I need only say, in addition to what has been already stated, that, unlike what occurs in the primitive disposition of parts, it has the least peripheral extent of the three, stopping in ourselves, in great measure, at the second phalanges; and in some animals, like the radial and ulnar sectors, not extending beyond the metatarsus or the metacarpus.

The next or intermediate stratum, attached above to the fibula or the ulna, is represented in the lower limb by the extensor hallucis, and in the upper limb by the extensor tertii internodii pollicis and the extensor indicis, and not unfrequently by an extensor tertii and even quarti digiti. The third or deep stratum is formed in the lower limb by the extensor brevis, better named profundus, digitorum; but has usually, in Man and most Mammals, no representative in the upper limb, which is probably partly in consequence of the limited area for the origin of such a muscle which the carpus presents, in comparison with the tarsus, as well of the close apposition to the carpus of the tendons passing over it. The members of the three strata are blended, and are blended with the interossei and the lumbricales, in the common extensor tendons; the elements of the deeper strata extending beyond those of the superficial stratum, or carrying the marginal fibres of the latter on with them to the terminal phalanges. Such is the ordinary disposition in the two limbs in Man. We find, however, in other animals, and not unfrequently in Man, various additional gradational evidences of these muscles blending in, or of their more or less imperfect segmentation from, the common mass, and of their homologous nature in the two limbs.

Thus an intermediate extensor of the fifth or smallest digit is derived in Man, not from the intermediate, but from the superficial stratum, in the form of the extensor minimi digiti, in the fore limb, and of the offset from the peroneus brevis to the extensor tendon of the fifth toe in the hind limb. We know also that, in lower mammals, accessions to the extensors of the other digits are not unfrequently supplied from the same source as the extensor minimi digiti in the fore limb, and from the peronei in the hind limb; and these accessions hold the same relation to the tendons of the extensor sublimis as do the elements of the intermediate stratum when present. In fact, it is evident that one set are the substitute for, or the near homologues of, the other set.* Interesting illustrations of this are furnished by the Orang and some other of the Apes, in which the extensor indicis† has often been found to supply the third finger, and the extensor minimi digiti to supply the fourth finger; so that in this animal a second, or additional, or deep extensor is furnished to each of the digits—all showing, as was remarked by Professor Huxley in this place, that the extensores indicis and minimi digiti are not especially developed, as is sometimes stated, in the hand of Man, but are fragments of a more extensive system of deep muscles found in lower animals. Again, the extensor profundus digitorum pedis in some Reptiles and Mammals is inseparably united with the interossei; and in most animals, as well as Man, it blends with the extensor sublimis upon the digits. An extensor profundus in the fore limb, closely answering to that in the hind limb, is found in the Cryptobranch,‡ and in many Batrachians and Reptiles, and not uncommonly in Mammals.§ Occasionally even it puts in an appearance as a variety in Man. It sometimes extends upon the ulna; and it appears usually in the fore limb, to take the place of, or prove a substitute for, the members of the intermediate stratum, as it for the most part does in the hind limb. Still, the two strata have been found associated in the human hand.

The interossei and the other short muscles of the distal segments are the intrinsic muscles of the segment. They are variously disposed, and are in various ways connected with the carpus and the phalanges, and with the flexor and extensor tendons, in different animals and in different parts of the same limb. Some pass from the carpus or the tarsus to the metacarpus or the metatarsus, forming carpo-metacarpals or tarso-metatarsals. These are present in each digit of the Cryptobranch; but they are confined to digits I and V in ourselves, and constitute the opponens muscle of each of those digits. Others pass from the carpus and the metacarpus, or from the tarsus and the metatarsus, to the phalanges. They are in ourselves limited to digits I and V, and constitute the abductores, adductores, and flexores breves, of those digits. Some of these—the adductors of digit I more particularly in each limb—extend their range of origin upon adjacent metacarpals and metatarsals, and so acquire a more transverse direction. In the foot, a portion of this series, ranging more widely than the rest, and taking origin from the distal ends of the metatarsals, and segmented from the rest, constitutes the transversus pedis.

In the case of the other digits, these muscles form what are called interossei, and pass into the sides of the extensor tendons, as well as to the sides of the phalanges. This is because the lateral inclination of the fingers which they effect is always associated with extension. In flexion, the fingers are simply drawn towards one another and towards the palm; and we cannot, without difficulty and practice, give to them a lateral inclination during this movement; whereas during extension we can separate them and incline them either way. As is well known, it is these marginal parts of the extensor tendons, thus reinforced by the interossei, which run on to the terminal phalanges; while the middle parts, comprising the chief of the factors of the extensor digitorum sublimis, are inserted into the second phalanges. This disposition, which differs, it may be remarked, from that on the flexor aspect, where the lateral tendons are arrested at the second phalanges, while the middle or perforating tendons pass on to the terminal phalanges, does not seem to depend altogether upon the accessions from the interossei, forasmuch as it occurs in some animals in which these accessions are not present. It occurs also in the foot, where, in accordance with the more limited lateral movements of the toes, the interossei have less connexion with the extensor tendons than in the hand. The flexor and extensor tendons are, however, alike in the fact that the deeper elements have the more distal range, and reach to the terminal phalanges. This is a deviation from the simple disposition in the Cryptobranch, where the superficial fibres extend the farthest.

Although I have said that the movement of inclination of the digits from side to side is associated with extension of them, and that, therefore, the interossei are connected with the extensor tendons, yet it will be observed that during flexion from the expanded condition, the fingers are drawn or inclined towards the middle one. The three interossei which effect this are situated nearer the palmar aspect, and are called "palmar interossei"; and they are thrown more into relation with the flexor muscles than are the dorsal interossei. They range upon the palmar aspect of the carpus and metacarpus to a variable extent in different animals; and they are in some, as the Hippopotamus, supplemented by an additional more superficial set, which act as still more powerful adductors of the marginal digits.

In the foot, the strong and comparatively fixed hallux acts as a barrier to inclination of the toes in that direction, and causes the spreading out of the toes to be limited almost exclusively to and from the fibular side of the foot. Here, therefore, the arrangement of the interossei is somewhat different from that in the hand, the three plantar muscles adducting to the second toe instead of to the third. The view I take, that the immobility of the hallux is the cause of the disposition of the interossei in the foot differing from that in the hand, derives some countenance from the fact that in the Apes, where the hallux is as movable as the pollex, the interossei are disposed as in the hand—that is, they adduct to and abduct from a line drawn through the third digit.

I may mention that in Man the interspaces between the metacarpals and metatarsals, especially the former, are relatively wider than in other animals; and the interossei have, accordingly, more space between them, and extend, or rather present, more upon the dorsal aspect, in him than they do in other animals. This has relation to the free lateral movements or spreading of the digits, which is conspicuous, espécially in the hand of Man, and to which, as I have just said, the interosseal muscles minister.

While speaking of the interosseous muscles as "dorsal" and "plantar", I should add that in the primitive state this distinction does not exist. They then form, as seen in the Cryptobranch, a mere simple sheet of fibres, stretching transversely between the several metacarpals or the metatarsals, with an inclination towards the several phalanges, which gives a curved line to the distal edge of each. By a deepening of this curve into each interosseal space, and an extension of the muscle upon the phalanges and the extensor tendons on each side, each interosseous muscle is divided into two muscles appended to the approximated sides of the two digits bordering upon the space. In this way, one interosseus is provided to each side of each digit, passing from the side of the metacarpal or the metatarsal to the side of the digit, which is the proper complement of these muscles. The division, however, does not in each instance take place so as to divide the muscle into two equal parts; that is to say, the division does not exactly follow the middle line of the interosseous space so as to restrict each muscle to its own metacarpal or metatarsal. On the contrary, one muscle in an interspace sometimes retains a hold of both the bones bounding the interspace, so dwarfing and concealing the other or twin muscle. Thus, in the hand, the interosseus, passing upon the radial side of the third or middle finger, not only rises from that side of the

* This is well illustrated in the dissection of the Seal and the Orycteropus (*Journal of Anatomy*, ii, 307). I have there applied the term "extensor secundus" to the series of muscles in the Seal. The term "extensor intermedius" would have better indicated their relation to the extensor sublimis on the one side, and to the extensor profundus on the other.

† In the Chimpanzee also I found that the extensor indicis sent a slip to the middle finger (*Journal of Anatomy*, i, 267), This is not always so. Indeed, the muscles in question are subject to a good deal of variety in these animals, as well as in Man.

‡ *Journal of Anatomy*, vi, 42; *Observations in Myology*, p. 42.

§ *Journal of Anatomy*, iv, 47. I there intimate that the smaller and deeper portions of the extensor digitorum in the fore limb of the Manis are the representatives of the extensor digitorum brevis (profundus), which I found well developed in the fore limb of the Unau, Aï and Cyclothurus.

third metacarpal, but also retains a connexion with the ulnar side of the dorsal aspect of the second metacarpal. It thus to some extent dwarfs, and it conceals from view, dorsally, the interosseus which arises from the ulnar side of the metacarpal, and which passes to the ulnar side of the second or index finger. A similar encroachment in the case of the ulnar interossei of the third and fourth fingers, and of the radial interosseus of the index finger, gives a dorsal prominence to all these, and restricts the remaining interossei to the palmar aspect of their respective metacarpals. In the foot, the same thing occurs, with the exception that the muscle on the fibular side of the second toe, instead of being pushed out of the field dorsally by its neighbour on the tibial side of the third toe, as is the case with the corresponding muscle upon the index finger in the hand, grows into prominence, absorbs the fibres from the dorsal region of the third metatarsal, and so becomes a dorsal interosseus. Its suppressed neighbour on the tibial side of the third toe appears, accordingly, only on the plantar aspect, and is relegated to the plantar series by this difference in the two limbs ; a certain number of fibres, which in the hand serve to adduct the middle finger to the pollex, are in the foot made subservient to the abduction of the second toe from the hallux. This transfer of fibres from adductor to abductor function is, as I have just said, probably to be associated with the immobility of the hallux, and the consequently lessened range of adduction permitted to the several toes, in comparison with the fingers.

The lumbricales are curious and interesting and rather puzzling features in myology. They are very commonly present in lower animals, as well as in Man. They arise from the deep or the superficial aspects of the deep flexor tendon, or from both aspects ; and their origin may extend into the clefts between the divisions of the tendon. They may be divided, so as to exist upon both sides of each digit ; or the fibres may be combined and pass to one side only. When they are thus confined to one side, that side is usually, as in ourselves, the pre-axial side. They may be inserted into the proximal phalanges, or into the margins of the extensor tendons. They are to be regarded as derivatives from strata which in some instances are superficial to, and in others are deeper than, the flexor tendons. Accordingly, in those animals in which they lie upon the superficial aspect of the deep flexor tendons, they associate themselves rather with the flexor sublimis ; and, when they lie upon the deeper aspect, they associate themselves rather with the interosseal or the short flexor group.* Their limitation to the pre-axial side may be for the purpose of counterbalancing the effect of the deep extensors, which, including the intermediate extensors, are usually connected with the post-axial side of the extensor tendons. Their passage directly from the flexor to the extensor tendons is remarkable, and seems to indicate that one of their functions, at any rate, is to harmonise or balance more nicely than could otherwise be done the antagonistic action of the flexors and extensors of the digits, as well as to brace more particularly the extensor tendons during the sudden and rapid action of the flexor muscles. To them we are probably in part indebted for the rapid yet steady and exact movement of the digits which we possess, and which is so essential a feature in delicate manipulation.

The vincula tendinum are probably the representatives of the intrinsic muscles of the phalanges—the phalangeal muscles of Batrachians—which have retained a connexion with the phalanges at one end only, and have become connected with the flexor tendons at the other end. In the Bird's foot, they are elastic. They seem in them to serve the purpose of assisting to draw the flexor tendons towards the phalanges, and of keeping them in contact with the phalanges during the extension of the digits.

In the following attempt at a plan of the superficial and deep muscles, the names of the corresponding muscles of the upper and of the lower limbs are placed in juxtaposition ; and those of the lower limb are in italics. In some instances, as in the case of the accessorius, no equivalent to the muscles in the one limb can be indicated in the other.

MUSCLES OF LIMBS.

Superficial.

Palmar and *Plantar*	Pectoralis = *Gracilis*	Biceps (Glenoid) = *Semimembran.*	Pronator teres (superficial part), Palmaris longus, Flex. carpi rad., ,, ,, uln., ,, dig. subl. = *Gastrocnemius* (inner head), *Soleus*, *Plantaris*, *Gastrocnemius* (inner head).
	,, minor	,, (Coracoid) = *Semitendin.*	
Dorsal	Deltoid = *Sartorius*, *Tensor vag. femor.*	Triceps (Scapular part) = *Rectus femoris*	Supinator longus, Ext. carpi rad., ,, digit. sublimis, ,, carpi uln. = *Tibialis ant.* (superficial part), *Ext. dig. subl.*, *Peronei.*
	Latissimus d. = *Gluteus max.*		

Deep.

Palmar and *Plantar*	Supraspinatus = *Iliacus* Subscapularis = *Obturator int.* Coraco-brachialis = *Adductor long.*, ,, *med.*, ,, *brev.*, *Pectineus*, *Gemelli*, *Quadratus fem.*	Brachialis ant. = *Biceps* (fem. part)	Pronator teres (deep part) = *Popliteus*. Flex. c. rad. tendon of Flex. dig. prof., ,, long. pollicis = *Tibialis post.*, *Flex. dig. prof.*, ,, *hallucis*.
Dorsal	Infraspinatus, Teres minor = *Gluteus med.*, ,, *min.*	Triceps (humeral part) = *Quadriceps* (femoral part)	*Accessorius.*
	Teres major = *Pyriformis*	*Biceps* (pelvic part)	Supinator brevis, Supinator manûs (*alias* ext. met. poll.), Ext. primi internod. poll. = *Tibialis ant.* (deep part). Ext. 2di. internod. poll. = *Ext. hallucis.* Ext. indicis, ,, minimi digiti = *Ext. prof.* (alias *brevis*) *dig.*

Finally, the question suggests itself as to the distinction to be drawn between a hand and a foot from a comparison of the muscles in the two.

In a paper reported in the *Proceedings of the Royal Society*, xviii, p. 359, Dr. Haughton endeavours to establish a difference between a hand and a foot, as shown by their flexor tendons. He argues that, as there is friction to be overcome at the wrist and the ankle, the tendons will be thicker, stronger, and heavier, in each instance, between the end at which the force is applied and the seat of the friction, than on the other side of the friction. He further maintains that, in the case of the hand, the flexor muscles of the forearm act upon the finger-tendons in a direction from the muscles towards the tendons ; and that, as the forces are diminished by friction at the wrist, we should expect the strength of the tendons above the wrist to be greater than below it. Conversely, in a proper foot, he conceives that the force is applied by the ground to the extremity of the tendons of the toes, and is transmitted to the muscles of the leg by means of the tendons of the inner ankle, which undergo friction in passing round that and the other joints of the foot. In this case, therefore, he says, we should expect the united strengths

* See account of these muscles in the Uromastix spinipes, in my *Observations on Myology*, p. 64.

of the flexor tendons of the toes to exceed the strength of the flexor tendons above the ankle. He adduces various observations in proof of these propositions. Without staying to question the correctness of the grounds upon which this difference is based, and of the view which conceives the force to be applied by the ground and transmitted through the tendons to the muscles in the leg, I may state that I have very carefully weighed equal portions of the tendons taken at the wrist, as well as above it in the forearm and beneath it in the hand, in the human subject, and found no difference whatever. The three portions weighed precisely alike. The same was the case with equal portions of the tendons taken at, above, and beneath the ankle. If there was any difference, the balance was slightly against Dr. Haughton's view, as it gave a trifling preponderance to the portion of the flexor longus pollicis taken from above the ankle. I confess I should have been rather surprised if the experiment had corroborated this view of the mode of distinguishing between a hand and a foot.

In discussing this question, it is necessary to eliminate the features of difference usually observable between the distal parts of the fore and the hind limb; forasmuch as they relate to the distinction between the two limbs, and have no relation to the distinction between a hand and a foot as applied to either of the limbs. This preliminary has not always been sufficiently attended to; and the comparison has therefore been made, as it appears to me, upon quite a false basis. Thus, the talented author of *Man's Place in Nature* observes that the foot of Man is distinguished from his hand by the following absolute anatomical differences: 1. By the arrangement of the tarsal bones; 2. By having a short flexor and a short extensor muscle of the digits‖; 3. By possessing the muscle termed peroneus longus. Making these the basis of comparison, Professor Huxley then argues that the termination of the hind limb of the Gorilla presenting these features of the foot, is to be regarded as a foot, and not as a hand. But it is evident that these are the characters, not of a foot as distinguished from a hand, but of the terminal part of the hind limb of a Mammal as distinguished from the terminal part of the fore limb; and they accordingly characterise the hind foot of most of the other Mammals, and distinguish it from the fore foot, as much as they do in Man or the Gorilla. They have, therefore, no especial relation to the question of discrimination between a foot and a hand, and should not enter into our computation in determining that question. We must first consider what features in the terminal part of a limb characterise the hand; and we may then apply the term to the part in which we find those features present, whether it be in a fore limb or a hind limb, quite irrespectively of any modification in the other features of the limb. The term is derived from Man; and we recognise at once that the great features of the hand are the mobility and relative length of the phalanges, and the mobility of the first digit upon the carpus. The carpus remains much as in other Mammals, and the muscles show very little difference. The chief differences in them are, first, that the flexor longus pollicis is segmented from the flexor digitorum. This, however, be it remarked, is found in the most perfect hand of Man only, and not in the hand of the higher Apes; and, indeed, the segmentation is not unfrequently incomplete in Man. Secondly, the supinator manûs becomes, by its more or less séparate attachment to the movable metacarpal bone of the pollex, an extensor ossis metacarpi pollicis, and an extensor primi internodii pollicis is present. This latter is not found, or is but rarely found, in the Apes;* and it is occasionally wanting in man. Thirdly, the opponens pollicis and the opponens minimi digiti are distinctly segmented muscles. Fourthly, the interossei adduct and abduct to and from the middle digit. A corresponding modification in the terminal part of the hind limb would in like manner constitute a hand. In none of these points does that part in Man present such a claim. But if we examine it in the Chimpanzee, we find that the requisite modifications, or many of them, are present. The phalanges are relatively long, though they are somewhat less freely movable than in the hand of Man. Digit 1 is set off from the others, and is freely movable upon the tarsus. The tarsus retains the ordinary mammalian tarsal features, just as the carpus in Man retains the ordinary mammalian carpal features. With regard to the muscles, the flexor hallucis is nearly, and in other Apes quite, as free from the flexor digitorum as is the corresponding muscle in the fore limb of the same animal. The extensor ossis metatarsi is a distinctly segmented muscle, acting upon the hallux in the same manner as its homologue acts upon the pollex; that is to say, its individuality, or separateness as a muscle, is correlated with the mobility of the metatarsal bone, much as the attachment of its serial homologue to the metacarpal is correlated with the mobility of that bone in the upper limb. The opponens minimi digiti is, in some instances at any rate,† a distinct muscle. Even an opponens hallucis is described in the Gorilla and Macaque by Duvernoy and Halford,* and in the Orang by Huxley,† though in most of the Apes it appears not to be present. Its absence can be no cause of surprise, forasmuch as the movement it is calculated to effect, and which is performed by the corresponding muscle in the fore limb, is in the hind limb more effectually performed by the peroneus longus; and this muscle is, as it were, ready made for the purpose in the ordinary hind limb, and requires no alteration for its special manual functions. The interossei adduct and abduct to and from the third digit, as in the hand, and not, as in the ordinary mammalian foot, to and from the second digit; and this appears to be generally the case in the Apes. It is in addition worthy of remark, that an extension of the adductor hallucis, and the separation of a portion of it, forming the transversus pedis, as in the foot of Man, does not usually take place in the hind limb of the Ape;‡ moreover, the flexor accessorius is often absent. The two last named muscles, however, are perhaps rather appurtenances of the hind limb than of either the foot or the hand. To require that the other muscles—viz., the short, or rather superficial flexors and extensors of the digits, as well as the peroneus longus, and also the tarsal bones—should be modified into accordance with similar parts in the human hand, would be to require modifications much greater than those which the human hand itself presents, if it be compared with the corresponding part in the ordinary mammalian fore limb.

Judged by the test I have given, and which I think is the true one, the muscular structures agree with the other structures in proving that the terminal part of the hind limb of the Chimpanzee has quite as strong a claim to be defined a hand as has the terminal part of the fore limb of the same animal. Other reasons than have yet been adduced must be forthcoming before we can relinquish the appellative "quadrumanous" as correctly belonging to this animal and its allies, and before we need deny to Man the prerogative of special subdivision of labour in the parts of his frame, and of consequent high organisation, which is significantly implied by the term "bimanous".

* It is said to have been found by Rolleston in a Chimpanzee (*Journal of Anatomy*, vi, 184).

† Champneys, *Journal of Anatomy*, vi, 206.

* *Lines of Demarcation between Man, Gorilla, and Macaque*, p. 20.

† *Medical Times and Gazette*, xxviii, 59. It has not, I believe, been found in the Chimpanzee.

‡ The transversus pedis was found in the Chimpanzee and Gorilla by Huxley and Flower (*Medical Times and Gazette*, xxviii, 428, 538).

USES OF CHLORIDE OF AMMONIUM.

THE chloride of ammonium I consider to be a very useful remedy; but, because of its very disagreeable taste, as well, perhaps, as on account of its being an old (and therefore apt to be forgotten) drug, it has not been used internally so much as its usefulness would seem to indicate. Its diaphoretic action is equal to its diuretic. It has been for a long time used more or less, especially on the Continent, in ascites. But it appears to have a special action on serous membranes generally; and I have found it very valuable in effusion into the pleura, especially when its cause is of a subacute or chronic character. Some time ago, I recorded a case of chronic hydrothorax where the effusion was very abundant, and occurring in a delicate woman, who ultimately died of phthisis. Under the use of the drug, rapid absorption took place. Since then, I have tried it in one or two other cases of a similar nature—the effusion resulting from subacute pleurisy. One of the cases occurred in a scrofulous boy, the whole of whose left chest was filled with fluid, which rapidly disappeared after taking the chloride in fifteen-grain doses every four hours. It is necessary to give to adults from twenty to thirty grains every three or four hours, in order to get its full benefit. Its precise *modus operandi* has not been clearly ascertained. Aithough primarily not a stimulant, it may act on serous membranes by stimulating their power of absorption. Its diaphoretic action may account for its efficacy in muscular rheumatism, in which affection I have used it very extensively, and have found it to give more relief than any other remedy I have tried. I have had personal experience of its good in muscular rheumatism coming on after scarlet fever. In these cases, also, it requires to be given in half-drachm doses. I have not found it of much use in lumbago or articular rheumatism. Some bitter infusion is the best thing to disguise its taste. I tried it mixed with sugar; but that, though it disguises its salt taste, makes it rather nauseating. With Dr. Thomson, I think this drug is deserving of further trial in other diseases, as well as in those above-mentioned.

JNO. DEWAR, L.R.C.P.E., etc.

132, Sloane Street, S.W., July 15th, 1872.

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DEVELOPMENT OF THE CILIATED LARVA OF BILHARZIA HÆMATOBIA.

ON THE DEVELOPMENT OF BILHARZIA HÆMATOBIA:

TOGETHER WITH REMARKS ON THE OVA OF ANOTHER URINARY PARASITE (THE SO-CALLED TRICHINA CYSTICA OF DR. SALISBURY) OCCURRING IN A CASE OF HÆMATURIA FROM NATAL.*

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In my recently published *Lectures on Practical Helminthology*, I have recorded the case of a little girl whose parents sought my advice in the spring of 1870. She was suffering from the effects of an invasion by the African blood-fluke, a parasite now very generally recognised by the combined generic and specific title of *Bilharzia hæmatobia*.

As some misapprehension appears to exist on the subject, I may mention that I originally employed the generic title *Bilharzia* to designate a male specimen of the worm, which I found on the 4th of December, 1857, in the portal blood of a sooty monkey (*Cercopithecus fuliginosus*) that had died at the Zoological Society's Menagerie, Regent's Park.

It must be understood that the ordinary rules of zoological nomenclature rendered it imperative that the original title of *Distoma*, as applied to this entozoon by Bilharz and Griesinger, should not be allowed to remain. It was quite clear that its structural characters departed too strongly from those presented by the ordinary fluke-type to permit of its being zoologically associated with the Distomes properly so called; consequently, various helminthologists proposed new and more appropriate names. The late Dr. Carl Moritz Diesing of Vienna, Dr. D. F. Weinland of Frankfort, and Professor Moquin-Tandon of Paris, severally suggested the titles *Gynæcophorus*, *Thecosoma*, *Schistosoma*; but, when it was subsequently found that the title *Bilharzia* had been proposed by myself some six months before Diesing communicated his paper to the Vienna Academy, the choice of several systematists and others fell upon my title, which had the additional advantage of handing down the true discoverer's name to posterity. In a letter which I received from Dr. Weinland (dated September 6th, 1861), that able helminthologist willingly abandoned the claims of *Schistosoma*, remarking that "the generic term *Bilharzia* has the preference". On the other hand, Professor Leuckart, disregarding the remarkable structural divergences which he has himself so fully described, is content with the old generic name of *Distoma* (or, rather, *Distomum*); but, if this view were adopted and retained, it would altogether upset our notions of group-equivalency, and virtually relegate to a genus the wider functions of a family or sub-order.

The professional interest attaching to this entozoon is so considerable, that I am constrained to correct some other errors and misrepresentations which have crept into the literature of the subject. It is well known—and I have myself been at some pains to recognise the fact, both in my larger treatise on *Entozoa* and in the article "Helminthes", contributed to Dr. Gunther's *Zoological Record* for the year 1865—that Dr. John Harley was the first physician who recognised the existence of the Bilharzia disease as occurring in Southern Africa. In other words, he proved to demonstration that this parasite was the true cause of the endemic hæmaturia of the Cape of Good Hope. This discovery constituted a positive advance in our knowledge of the causation of urinary disease; and it likewise contributed materially to enlarge our ideas respecting the geographical distribution of a truly remarkable entozoon.

In the original memoir by Dr. John Harley, it was not unnatural, perhaps, to find that the author regarded the parasite to which the Cape ova and embryos were referable as a distinct species, especially as he was then, as now, by his own confession, totally unacquainted with the adult entozoon. A similar misinterpretation occurred to myself in respect of the *Bilharzia* which I found in the monkey; but I soon afterwards abandoned the position, when Leuckart disputed the grounds on which the determinations were based, and sent me some adult Egyptian specimens to compare with my so-called *Bilharzia magna*. Dr. John Harley, however, seems very reluctant to acknowledge the specific identity of the North and South African fluke-hæmatozoa. Thus, in his recently published third communication to the Royal Medical and Chirurgical Society, he says: "My position with regard to the question is pretty much the same as it was seven years ago. The difficulty lies, on the one hand, in my cases, in the almost complete concealment of the adult parasite—for as yet I have only seen fragments of the animal; and, on the other, in the imperfection and insufficiency of the published figures of *Distomum hæmatobium*, together with the fact that both Bilharz and Griesinger describe and figure two forms of egg, the one with a terminal, and the other with a lateral spine. In all my own cases, I can say positively that only one form of egg has existed, namely, that with a terminal spine. Variation in the size, length, and outline of the egg is often observable; but I have never seen any egg with even a tendency to the formation of a side spine. I even doubt whether this peculiar form exists in *Distomum hæmatobium* itself. To my mind, the objects represented appear to be escaped embryo masses, and not eggs. Griesinger himself speaks of them as eggs or cocoons. If these two talented observers yielded this point of difference in the ova of the Egyptian parasite, then I grant that I find no difference between *Distomum hæmatobium* and *Bilharzia capensis*."

It thus appears that Dr. John Harley would establish specific differentiation on slight, or, at all events, on more or less well marked variations of egg-contour. Further on, I hope to be able to convince Dr. Harley that it is not necessary to refer this question to the *savans* above named; and I almost doubt if he has, for himself, carefully looked into their writings, or to the abridged account of them given by Leuckart. So far from there being no good figures of the adult worm, it has always appeared to myself that Leuckart's various representations are remarkably accurate and complete. In his first memoir, moreover, Dr. Harley is singularly unhappy in his references to foreign authorities. Thus, in the *Transactions* for 1867, he says (page 62): "Bilharz and Griesinger, followed by Derseble [*sic*], Kückenmeister [*sic*], and Leuchart [*sic*], have described this parasite." Now, apart from the obvious misspelling of the names of Leuckart and Küchenmeister—a carelessness shared by some other writers—the word Derseble is introduced, and made to do duty for a separate substantive authority. This spurious title Derseble is a misrepresentation of the German pronoun *derselbe;* and, when the original reference is consulted, it will be seen that the pronoun (=*Idem*, or the same author) clearly refers to a second contribution by some previously quoted authority. The writer really quoted by Leuckart, whence Dr. Harley has borrowed his references (*Die Menschlichen Parasiten*, s. 617), is Bilharz, who had contributed a second paper to the *Wiener Medicinische Wochenschrift*. It is thus quite evident that this paper by Bilharz—one of the two foreign authors justly characterised by Dr. Harley as "talented observers"—is attributed by him to an altogether independent writer having the name of Derseble, which, as I have explained, should have been written *derselbe*. In the interests of truth and accuracy, it is necessary to correct these serious mistakes; but I may remark that, if it had only occurred to some one or other of the learned "Fellows of the Society appointed by the Council as referees of papers" to have drawn the author's attention to them before going to press, the *Transactions* of the Royal Medical and Chirurgical Society would have deserved none the less credit for bringing out and doing full justice to Dr. Harley's otherwise useful and valuable contributions.

When fully developed, the eggs of *Bilharzia hæmatobia* are more or less oval, commonly measuring from $\frac{1}{190}''$ to $\frac{1}{160}''$ in length, with an average transverse diameter of $\frac{1}{325}''$. Some few are a trifle larger, whilst many others are much smaller. Occasionally one encounters remarkably narrow specimens, and also aberrant forms presenting a decidedly obovate or pear-shaped outline (Fig. *a*). I have met with eggs not exceeding $\frac{1}{250}''$ in their long diameter, and $\frac{1}{600}''$ transversely, whose yelk-contents nevertheless had already arrived at an advanced stage of segmentation.

The shell is transparent, of a brown colour, and free from any markings, lines, or sculpturing. One pole of the shell is invariably narrower than the other, and usually presents a more or less pointed extremity. This narrow end commonly displays a sharp, projecting, beak-like spine (Figs. *a*, *c*, *d*, *j*, *k*). Very constantly the base of the spine rests upon the central point of the pole of the shell (Fig. *k*); but not unfrequently the process is eccentrically placed (Fig. *d*). In some few examples, the spine is removed to a little distance from the actual extremity of the shell; but even in these instances, so far as my observations go, its apex always projects beyond the level of the curved end of the pole. It is difficult to avoid the conclusion that the figures showing the markedly lateral disposition of the spine represented by Leuckart and Bilharz are not somewhat exaggerated; nevertheless, I have frequently witnessed an approach towards the extreme degree of side disposition which they describe. Sometimes the spine is altogether absent (Fig. *b*); and, when present, it is, as I have already hinted, very unequally developed. In size, it ranges from a mere

* Read before the Metropolitan Counties Branch, May 17th, 1872.

point having an extreme length of only $\frac{1}{8000}$", up to the comparatively large magnitude of $\frac{1}{2500}$" lengthways.

According to the evidences thus placed before us, in respect of the occasionally eccentric disposition of the spine, and considering also the possibility of the occurrence of more extreme departures than those which I have myself observed, I think Dr. John Harley will have to admit that there is no good ground for asserting the probability of any specific differentiation between the adult parasites coming from the Cape and Egypt respectively. And here I may remark that, in determining delicate questions of this kind, the lessons gained by a prolonged study over the whole field of parasitology materially aid one in arriving at the truth.

Taking a more extended view of the significance of these singular chorional outgrowths, I think it is possible to deduce conclusions of higher import than the particular one at which Dr. Harley appears to have arrived. I am not aware, indeed, that the ideas which I have for some time entertained on the subject have occurred to any other student of helminthology; but in these minute and frequently inconspicuous spines I clearly recognise the early efforts of Nature, so to speak, to form or evolve a special organ, which, in the eggs of certain other parasites, becomes capable of attaining a relatively prodigious degree of development. To me it seems that the little process in question is a kind of rudimentary holdfast; and, as such, it may be reckoned as the homologue of a variety of egg-appendages.

Eleven years ago, Mr. Edwin Canton discovered some curious ova attached to the conjunctiva of a turtle's eye; and, when he afterwards submitted specimens to my scrutiny, I had no hesitation in pronouncing them to be referable to some particular species of ectozoon or entozoon belonging to one or other of the allied genera *Polystoma*, *Tristoma*, *Octobothrium*, and *Dactylogyrus*. Now, it is particularly noteworthy, that these several genera belong to the same great group of flukes or trematodes as the *Bilharzia;* but whereas, in the case of the African human blood-fluke, the ova display only a solitary and imperfectly developed holdfast, placed at one end of the shell, the singular eggs described by Mr. Canton are found to develope organs of anchorage at both extremities. I may remark, moreover, as I also mentioned at the time, that parasitic ova exhibiting analogous processes, spines, and filamentary appendages at both poles, had already been observed by helminthologists in various species of parasite—as, for example, in *Monostoma verrucosum* infesting the fox, in *Tænia cyathiformis* infesting the swallow, in *Tænia variabilis* of the gambet, in *Octobothrium lanceolatum* attached to the gills of the common herring, and in *Polystoma appendiculata* from the branchiæ of various marine fishes. Characteristic examples of the eggs of parasites which, like *Bilharzia*, are furnished with a single appendage, may likewise be seen in the ova of different species of *Dactylogyrus* infesting the gills of the pike, and also in the eggs of *Diplozoon paradoxum*, where, morover, the variations of the degree of development of the holdfast are much more striking than anything we have seen in the eggs of *Bilharzia hæmatobia*. In the more strongly pronounced developments, it is easy to perceive how admirably adapted are these outgrowths of the egg for the various necessities of the different species of parasite to which they are severally referable; and, even in the case of *Bilharzia*, the trifling amount of anchorage furnished by a projecting point is not absolutely thrown away. The resistance will also be greater where the spine is situated a little on one side of the pole of the egg, which in many instances seems to need steadying during the violent struggles of the embryo to escape from its temporary abode.

When any considerable number of ova are removed from the urine, and examined together, it will be found that a large proportion of them contain embryos in a more or less advanced stage of larval growth. The structural appearances presented by the embryos whilst still in the egg are remarkably uniform; since, in all, the yelk appears to have resolved itself into a mass of rounded or oval sarcode-globules, one or two of these particles being conspicuously larger than the rest (Figs. *h*, *k*, *o*). At this stage, except at the cephalic division of the larva, no tendency to differentiation of the sarcodic contents is perceptible; but, some time after the embryo has escaped, one may notice elongated masses of sarcode formed by the coalescence of the globules. Whilst still in the egg, one end of the primitive embryonal mass becomes gradually narrowed, cilia at the same time making their appearance. This part becomes the future head, which eventually acquires a distinctly conical figure. Whatever form the body of the embryo may display after extrusion from the shell, the head retains its conical shape; the cone itself being narrowed or widened, as the case may be, only when the larva is subjected to abnormal conditions (Figs. *m*, *n*, *q*). Whilst the head is undergoing its development within the shell, one, two, or sometimes three, pyriform masses make their appearance within the cone; and, after the embryo has escaped the shell, these structures become more marked, being at all times readily distinguishable from the ordinary sarcodic elements of the body properly so called (Fig. *g*). The sarcode-globules refract light strongly; and, when the larva is not compressed in any way, they move freely within the somatic cavity. In well developed embryos, whilst still in the egg, the cilia are observed to clothe every part of the larva except the oral papilla. This minute nipple-like projection measures about the 1-3000th of an inch transversely, forming a very simple kind of unarmed proboscis. When the head of the free embryo is viewed from above, the proboscis looks like a central ring surrounded by a series of regular folds, which radiate outwards like the spokes of a wheel. The ridges thus formed support numerous cilia; these latter projecting at the circumferential margin of the cephalic cone in such a way as to present the figure of a star. Dr. Harley has given an admirable representation of this character, which is shared by many other parasitic larvæ. Throughout the greater part of the time, whilst the embryo is still resident within the egg, the broad neck or base of the cephalic cone forms a fixed point of resistance by its firm attachment to the inner wall of the shell; and this structural union, so long as it remains intact, enables the embryo to move not only its head and body from side to side synchronously, but also each part quite independently. When the time for final escape is drawing near, the vigorous movements of the cone-shaped head seem chiefly concerned in loosening the membranous connexion just referred to; and when, at length, the ciliated animalcule has succeeded in overcoming this first difficulty, it is almost ludicrous to witness its frantic efforts to find an opening in the shell. While thus partially liberated, it will rush to and fro from one pole of the egg to the other, performing a series of summersaults, and at the same time occasionally rolling itself over laterally. This activity becomes gradually more and more violent, until at length its apparent excitement seems to be worked up into a sort of frenzy. I have many times watched these remarkable performances, which, however, are only to be seen within those ova whose shells, for some reason or other, refuse to yield to the earlier and ordinary efforts of the prisoner. In all cases where these remarkable phenomena are witnessed, the eye readily detects a number of small free globules between the embryo and the inner wall of the shell (Fig. *k*). These minute particles are likewise tossed about tumultuously during the rapid rotatory movements of the imprisoned larva. Except as regards their size, these globules do not differ in character from the sarcodic contents of the animalcule. They are probably superfluous detachments from the primitive yelk-mass; but it is just possible that they may afford some aid in the final breaking up of the shell. Whilst the embryo remains fixed, its tail is usually directed towards the narrower or spine-bearing pole of the egg; but in a few instances I have seen this position reversed. In some excellent figures of the ova of *Bilharzia* sent to me by Mr. Pilcher, I find the same variations of position faithfully depicted. Under high magnifying powers, whilst the embryo lies perfectly quiescent, the hundreds of points at which the rigid cilia of the body impinge upon the inner wall of the shell collectively present, when viewed from above, a regular series of highly refracting specks. These minute specks or dots, in certain arrangements of the focus, have the aspect of so many rings, and suggest the notion of a finely sculptured surface, such as we see normally in the eggs of certain other parasites. The escape of the embryo, however, enables one to detect the purely optical character of the phenomenon, which is due to diffraction.

As regards the precise mode of emerging from the shell, and the time occupied by the larva in freeing itself, there are some other points of interest. Speaking generally, it may be said that, the purer the new medium into which the ova are transferred, whether accidentally or otherwise, the more rapid and perfect will be their movements and escape. To give an example of observed facts in relation to the rapidity of development, I may cite the following from my notebook. "On the 20th of August, 1870, I placed twelve eggs of *Bilharzia* under the field of the microscope. The medium in which they were immersed consisted of about eight parts of ordinary drinking water to one of urine. At the expiration of seventeen minutes, the first-born, so to speak, made its escape. In the course of another minute, two more emerged. In twenty-six minutes the fourth, in twenty-eight minutes the fifth, in thirty-two the sixth, in thirty-four the seventh, in thirty-seven the eighth, in thirty-eight the ninth, in forty the tenth, in forty-three the eleventh, and in forty-six minutes the twelfth, respectively made their appearance."

Now this rapid mode of birth or emergence from the shell is very much more striking in the case of eggs which are placed in perfectly pure water; for, whilst the eggs are still in the urine, there appears to be neither the power nor the inclination on the part of the embryo to escape; but, on isolating and placing them in more suitable conditions, their behaviour is even more remarkable. In a space of less than

two minutes, I have repeatedly seen the hitherto motionless embryo alter its shape by contractions, become violently agitated, and burst out of its shell in the condition of a free swimming animalcule. Moreover (as I have elsewhere observed in relation to the general question of the dispersion and vitality of the germs of entozoa), it is worthy of remark that the eggs and larvæ of *Bilharzia* soon perish in stale urine. "On the 16th of August, 1870, I placed about a thousand eggs in a quart of fountain-water, to which only a drachm or rather less of urine had been added. At the expiration of forty-eight hours, not a single living embryo could be found. In fact, I subsequently ascertained that I could not keep the embryos alive for twenty-four hours in any water in which I had accidentally or otherwise introduced the smallest trace of mucus, blood-corpuscles, urinary crystals, or decomposing matters of any kind. All sorts of reagents speedily killed the larvæ. Mere discoloration by carmine-solution, or by the addition of a drop of the permanganate of potash in the form of Condy's fluid, instantly caused them to assume grotesque and unnatural shapes (Figs. *n*, *q*); death sooner or later following, as a result of the disintegration and resolution of their delicate bodies into minute sarcode-masses (Fig. *m*). Still more rapidly poisonous effects were produced by the addition of a little sherry or alcohol, even in solutions where the amount of spirit did not exceed one part of the latter, proof strength, to fifty parts of water."

It is also noteworthy, that the development of the larva is equally well accomplished in distilled water, in well-water, and in brackish water; whereas in pure sea-water the process goes on somewhat less satisfactorily. It was found, indeed, that the addition of slightly saline water to ciliated embryos, which were on the point of expiring in fresh water, had the effect of reviving them for a time. These facts, as we shall see presently, have an important practical bearing; but in the meantime I have to observe that the actual mode of escape of the embryos is by no means the slow process that Bilharz has described. Almost invariably the shell bursts by a longitudinal slit extending over fully two-thirds of its long diameter; the first point of rupture being commonly situated midway between the spine and the centre of the shell. In normal births, so to speak, the head of the animalcule emerges first; but occasionally the animal escapes sideways (Fig. *k*), and I have even seen the embryo extricate itself tail foremost. Not unfrequently it has a difficulty in detaching itself from the shell, in which case the latter is whirled round and round by the half-freed prisoner. The lodgment of the beak against any foreign substance, under such circumstances, affords the necessary leverage for ensuring the embryo's ultimate success.

According to my observations, the larva never displays its proper elongated, spindle-shaped, or cylindro-conical figure, until some short time after its escape from the shell; and, as a consequence of this, its powers of locomotion are less marked at first than subsequently. At the time of extrusion, the larvæ are commonly more or less hour-glass shaped (Fig. *i*); this particular figure being sometimes retained for many minutes or even for an hour (Fig. *h*). Usually the larvæ have a tendency to acquire their normal shape immediately after quitting the shell; the oval, pear-shaped, and variously constructed forms gradually merging into the characteristic cone-shaped animalcule (Figs. *g*, *i*). In their fully developed condition, they exhibit the most lively movements; and to witness several hundreds of them rushing about with unceasing activity is certainly a curious sight. The phenomenon, moreover, loses none of its interest from the consideration that only a few hours, or it may have been minutes, previously, these now actively gyrating animalcules were lodged *in ovo* within the blood-vessels of their human host. From persons who are seriously infested, millions of these eggs of *Bilharzia* daily make their escape during the act of micturition; and, when this act is accomplished by the host out of doors, it is easy to perceive how readily the ova may be subjected to conditions eminently favourable to the further development of their contained larvæ. The direct passage of the urine into any considerable receptacle of natural or fresh waters would in a few minutes ensure the hatching of all the eggs; and, in the absence of any such direct aid to development, the accidental occurrence of a shower of rain would, in all localities where this disease is endemic, readily transfer the ova into ditches, ponds, rivers, lakes, and ultimately perhaps even into the sea itself. Under ordinary circumstances, it is true, the eggs would comparatively rarely gain access to the sea. Moreover, as I shall show immediately, pure sea-water seems to be an unsuitable medium for them.

The behaviour of the embryos under the action of reagents of various kinds is very remarkable. Thus, when, on the 5th of September, 1870, I placed some ova in brackish water, of the strength of two parts of fresh water to one of pure sea-water, their contents were readily developed, though the escaping embryos did not swim vigorously. When again I placed some other eggs in pure sea-water, their contained embryos became instantly transfixed, the vibratile cilia of the head at once becoming rigid and motionless. At first, I naturally concluded that the embryos were killed outright; but here, to my surprise, the shock passed away in about half an hour, when they revived, and were soon afterwards hatched. One of the larvæ thus set free carried off several of the loose intrachorional globules which had, during the period of transfixion, become firmly adherent to the ends of the caudal cilia. Here also I may remark upon a decided difference observable between the cilia of the head and body respectively. The former are at all times vibratile, active, and conspicuous; whilst the latter are more delicate, capable of comparatively little motion, and partaking more of the character of vibrissæ. In length, their general measurement varies from $\frac{1}{250}''$ to $\frac{1}{200}''$. The action of pure sea-water on the free animalcules, previously immersed in fresh or brackish water, was equally striking. All, without exception, immediately became paralysed and almost motionless; nevertheless, on again adding fresh water, several entirely recovered. It is worthy of notice, also, that in these cases the cephalic cilia furnished the first indications of returning viability. I was particularly struck with the behaviour of one embryo, which, under the stimulus of the sudden shock, retracted its cone-shaped head almost entirely within the general cavity of the body (Figs. *o*, *p*). In their moribund condition, whatever shape the embryos retained, I observed that the sarcodic contents gradually faded away; the outline of the creature, however, becoming, for a time at least, even more marked than was normally the case. Usually, the body of the animalcule became considerably elongated whilst expiring in sea-water. Under other circumstances, as we have seen, the embryo frequently bursts; the sarcodic contents escaping in the form of amœba-like bodies, and the cilia retaining their powers of movement long after all traces of the sarcode have disappeared.

There are other points of interest connected with the appearances and distribution of the cilia, especially as furnishing diagnostic characters. The larvæ of *Bilharzia* more closely resemble those of *Fasciola hepatica* than they do some of the more typical flukes. According to the recent observations of Dr. Willemoes-Suhm (*S. und K. Zeitsch.*, 1871, s. 181), the cilia of the embryos of the *Distoma megastoma*, which infests various sharks, are limited to the anterior pole of the body. This is also the arrangement, as Leuckart first pointed out, in *Distoma lanceolatum*. On the other hand, Pagenstecher has shown that the embryos of *Distoma cygnoides* and *Amphistoma* (*Diplodiscus*) *subclavatum* are ciliated all over—an observation which, as regards the latter species, has been amply confirmed by Wagner and others. Dr. Alex. Pagenstecher's original statement, to the effect that "intrachorional germs of trematodes offer no distinctive characters", must, therefore, in the present state of our knowledge, be accepted as a general conclusion admitting many exceptions.

As regards the intimate structure of the embryo, I have further to observe that, shortly after the extrusion of the larvæ from the shell, the hitherto loose globular particles of sarcode now coalesce, apparently as a preliminary step towards a subsequent differentiation into special organs, which are probably destined to become "nurses" (Figs. *g*, *i*). Within the head, we may sometimes notice two, and sometimes three, pedunculated bodies presenting various appearances; but, when three are present, one of them is constantly more conspicuous than the other two. This most prominent blind sac I suppose to represent the stomach of the larva in its future cercarian stage. Under the very perfect $\frac{1}{12}''$ objective glass—employed by Professor Stricker of Vienna when he was in this country—I had an opportunity of examining these structures exhaustively; and in the cavity of the central blind sac I distinctly recognised numerous highly refracting granules, the diameter of which averaged not more than $\frac{1}{1200}''$. The rudimentary stomach is often traceable whilst the larva is still within the egg. It measures about $\frac{1}{500}''$ in length, including the peduncle; and $\frac{1}{1400}''$ in breadth. The width of the narrow stalk does not exceed $\frac{1}{900}''$. The other two stalked bodies appeared to me to have the character of the so-called *lemnisci* of Dujardin and others, being also occasionally well seen whilst the embryo is still within the egg. The varying appearances presented by these stalked blind sacs rendered it difficult to interpret their morphological and physiological significance with precision. If Dr. Harley's observations be correct, two only of these bodies are constantly present, and communicate with the oral papilla by two distinct tubes and apertures. I regret that I have never had the good fortune to see these orifices; but I do not on that account doubt their presence. As regards the integument, it is easy to recognise two layers, especially when the epidermis is unnaturally raised by endosmosis and injury. In careful adjustments of the focus, the inner wall of the transparent dermis presents a beaded appearance. Moreover, these minute and regular markings do not undergo the slightest alteration during the contractions of the body of the larva. In advanced embryos, the

sarcodic masses also invariably retained their general characters during contraction of the body. But, without dwelling further on such comparatively uninteresting matters, it yet remains for me to assert the presence of a highly developed water-vascular system in these little animalcules. On many occasions I saw traces of this set of vessels; and in several instances I obtained the most satisfactory, not to say beautiful, views of the entire series. Anxious to receive confirmation of my discovery, I demonstrated the existence of these vessels to a skilled microscopist—Mr. J. G. Pilcher, of H.M. Indian Army—who expressed himself perfectly satisfied as to the correctness of my interpretation of their true character. In the briefest terms, it may be said that the water-vascular system of *Bilharzia*, in the larval condition, consists of two main stems, which pursue a tortuous passage from head to tail, and which, in the course of their windings, give off several anastomosing branches (Fig. *w*). As also obtains in the corresponding larvæ of *Diplodiscus subclavatus*, there is no excretory outlet visible at the caudal extremity.

Experiments.—Encouraged by the experiences and determinations of Pagenstecher and Wagner among the Trematoda, and also more particularly by the remarks of Leuckart in connexion with *Distoma lanceolatum*, and his success with the larvæ of *Echinorhynchus*, I naturally sought for the possible intermediary bearers of *Bilharzia* among fresh-water molluscs and small crustacea. Failing of success in these, and quite independently, it occurred to me that the larvæ of *Bilharzia* might normally reside in fluviatile or even in marine fishes. This latter idea seems also to have struck Dr. Aitken almost simultaneously. In an appendix to his Report to the Army Medical Department for 1868, dated from Netley, November 1869, Dr. Aitken gives a figure of a nurse-form, which he terms a cercaria, from the tail of a haddock—suggesting for *Bilharzia* some genetic relation of this sort, and also extending his views in reference to certain larval trematodes found in and extracted from the so-called Delhi boils and Lahore sores. Figures of the parasitic forms last referred to, and obtained from different persons, are given by Dr. Aitken, from drawings supplied by Dr. Joseph Fleming, of H.M. Indian Army, who had sent them from Meean Meer, in the Punjab, North India. In regard to the juvenile flukes from the haddock, I may say that I have thoroughly satisfied myself that these well known immature trematodes from the nerves of the cod-tribe can have no genetic relation with *Bilharzia;* and I think it due to Dr. Maddox to say that I accept his conclusion respecting them. In his admirable paper (*Microsc. Trans.*, vol. xv, 1867, p. 87), he offers strong proof to the effect that the so-called *Distoma neuronaii Monroii* of the haddock (*Morrhua æglefinus*) is neither more nor less than the juvenile condition of *Gasterostoma gracilescens* of the angler (*Lophius piscatorius*). After these indications, it is a sorry circumstance to have to state that all my experimental efforts yielded only negative results. I tried to induce the ciliated embryos to enter into the bodies of a great variety of animals, such as Gammari, Dipterous larvæ, Entomostraca, Lymnæi, Paludinæ, different species of Planorbis, and other fresh-water molluscs; but neither in them nor in Sticklebacks, Roach, Gudgeon, or Carp, did they seem inclined to take up their residence. These experiments, however, are by no means conclusive, since the conditions under which the experiments were made departed in several respects from those that are presumably essential to success in the ordinary course of nature. On what grounds, however, Dr. John Harley could possibly expect to rear *Bilharzia* by feeding dogs and rabbits with the ova, I am at a loss to understand; and his apparent suspicion that the parasites "may increase in the [human] body from the development of the eggs" in a direct manner, is to me a mere haphazard conception, and one which virtually sets at nought the well established experiences of every original experimenter whose name is known in connexion with the advancement of helminthology in its ontogenetic bearings. Throughout the whole of Dr. Harley's remarks on this head—and I confess to have had the greatest difficulty in comprehending the purport of many passages—the generally received opinion as to the necessity of an intermediary host amongst the Trematoda seems to me to have been altogether overlooked, and therefore to that extent utterly ignored. So far as Dr. Harley is concerned in this particular relation, the teachings of Leuckart, Pagenstecher, Guido Wagner, Siebold, Van Beneden, and especially Filippi, are altogether a dead letter.

Appendix.—A most interesting circumstance connected with this case of *Bilharzia*, lies in the fact that I obtained from the patient some other urinary parasites in the egg-condition. On five separate occasions, I obtained one or more specimens of the eggs or embryos of a minute nematode. In one instance, there were about fifty of these ova in the urine; their embryonic contents being well developed, and in a state of activity. Usually they were all in this advanced condition; but on the 25th of July, 1870, several were observed in much earlier stages of development. One of these was of a triangular form; its shape, granular contents, and fine limiting membrane, indicating separation from the ovarian tube without impregnation (Fig. *t*). Another early form was perfectly spherical, with a well marked chorional envelope and only a less marked double contour (Fig. *r*). These forms measured about $_{7\frac{1}{5}0}''$ in diameter. The fully grown eggs observed at the same time gave a longitudinal measurement of $_{5\frac{1}{0}0}$ by $_{1\frac{1}{0}0}''$ in breadth. On adding any stimulus to the ova, such as diluted sulphuric acid, the embryos moved themselves freely within the egg. After allowing the urine to stand for forty-eight hours, I found, on the 27th of July, that the shells of the ripe ova had dissolved, leaving the embryos dead, but still coiled within a fine transparent envelope (Fig. *v*). In this state, they were easily separated and examined, when they gave a measurement of $_{3\frac{1}{0}0}''$ in length, by $_{3\frac{1}{5}0}''$ in breadth. On two occasions, whilst engaged in rearing the larvæ of *Bilharzia* in water, I noticed single specimens of these embryos lying dead; and one of the examples thus observed had evidently grown since it was extruded from the shell, for it gave a length of $_{1\frac{1}{5}0}''$, by $_{3\frac{1}{0}0}''$ in breadth.

I have been thus particular in recording these facts, because future discoveries may enable us to identify the species of nematode to which these ova are referable. Putting aside the question of *Spiroptera hominis* (which the Berlin helminthologist Schneider determined to be only the well known *Filaria piscium* artificially introduced into the human bladder), I know only one set of observations on record which appear to refer to this same species of parasite. I allude to the statement of Dr. J. H. Salisbury, as given in Hay's *American Journal*, vol. lv, for 1868, p. 376. In his paper on the Parasitic Forms developed in Parent Epithelial Cells of the Urinary and Genital Organs, Dr. Salisbury refers certain nematode ova to a distinct and new species of entozoon, which, although he has evidently never seen the parasite in the adult condition, he has had the boldness to conjecture, must belong to the genus *Trichina*. Of course there are no adequate helminthic grounds for this generic allocation; but the facts recorded by Dr. Salisbury do not on that account lose their remarkable interest and value. So important do I deem them in relation to certain vexed questions connected with urinary parasitism in man, that I do not hesitate to quote his brief description, which runs as follows.

"*Trichina cystica* (Salisbury).—This is a small species which I have found in the human bladder. In all my examinations, I have met with this little entozoon in three cases only. In two of these, it was only occasionally met with in the urine. In the other, a Mrs. R. of Cleveland, it occurred in great numbers. Frequently from ten to fifteen ova were found in a single drop of urine."

Now it is important to remark that it does not appear that there was any hæmaturia in the last named case, which Dr. Salisbury describes as one of "cystinic rheumatism", or "severe cystinæmia associated with rheumatism and paralysis". The patient "had been insane for several years. Her urine was passed milky, with granular cystine, and was dense and scanty." It is likewise added: "No examination was made of the muscles after death to determine whether this species burrowed in the tissue, like the [*Trichina*] *spiralis*."

So much for the principal facts recorded by Dr. Salisbury. His paper is accompanied by two woodcut figures of the ova (× 300 diam.), and one representation of the embryo (× 1000 diam.) If these figures give the size correctly, the ova measure only about $_{8\frac{1}{0}0}''$ in length, by $_{1\frac{1}{5}0}''$ in breadth; whilst the embryo would be about $_{5\frac{1}{0}0}''$ from head to tail. However, notwithstanding these discrepancies as to size—and it is evident that Dr. Salisbury's figures do not make pretension to absolute accuracy in this respect—I am inclined to think that Dr. Salisbury and myself have been made acquainted with nematode eggs and embryos referable to one and the same species of parasite. At present, I do not care to speculate very freely as to the origin of these ova; but I may remark that, although I long ago gave in my adhesion to the determinations of Dr. Schneider in respect of the pseudhelminthic character of the so-called *Spiroptera hominis*, I am by no means certain that his position in this question may not be disturbed by fresh discoveries. It is not a little remarkable that the parents of my patient should have averred that she passed three small vermiform entozoa by the urethra; corresponding, to judge from their verbal statements, very closely with the ordinary appearances of *Filaria piscium*. It is likewise worthy of note, that this patient had also played the part of "host" to about a dozen large lumbrici, for the expulsion of which she had been successfully treated by Dr. Lyle, at Durban, Port Natal. Into the clinical bearings of the case, however, I have no need to enter, since I have already fully discussed this part of the subject in my newly issued work on *Practical Helminthology*.

PERINÆAL LACERATIONS.*

By JOSEPH G. SWAYNE, M.D.,
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Of all the accidents attending delivery, there is none more common than partial, and none more rare than complete, laceration of the perinæum. By partial laceration I mean a rupture extending beyond the fourchette without passing through the sphincter ani muscle; and I do not apply the term to that simple rupture of the fourchette which almost invariably takes place in a first labour. My observations, now, will be limited to these partial lacerations; and to show how common they are, I shall refer to my notes of the last 400 labours which I have myself attended. In all of these the condition of the perinæum after delivery was carefully observed. The result is, that there was one case of complete laceration and 31 cases of partial, 25 of which occurred, as might naturally be expected, in primiparæ and six in multiparæ. Now, as there were 101 primiparæ in the 400 cases, it follows that, in about a quarter of these, partial laceration of the perinæum took place. Such a result may at first appear startling; but I do not think it would surprise any one who is in the habit of making frequent examinations with the speculum; for it is remarkable how often one thus discovers the evidences of rather severe perinæal laceration. Yet these occurrences, although so common, are very apt to be overlooked. "Out of sight, out of mind" is the general rule in such cases; partly because the practitioner, from regard for the natural feelings of delicacy of his patient, is unwilling to expose the parts to view, and so does not see the laceration either at the time of its occurrence or afterwards; and partly because these accidents cause no very urgent symptoms, and therefore the patient does not direct attention to them. But, although they give rise to no very grave or urgent symptoms, yet they occasion minor inconveniences of different kinds, which it is just as well to prevent if possible. For instance, it is very common to find women complaining of great soreness of the vulva for two or three weeks after delivery, and, on examination, a severe laceration of the perinæum is discovered, which still continues in an unhealthy, irritable condition. When a sore of this kind heals after several dressings and applications of caustic, no union of the torn edges takes place, but the perinæum still remains in an incomplete condition. The result is, that an uncomfortable feeling of want of support is left; the parts remain too open, and there is a predisposition to prolapse of the uterus and vaginal walls. Although these consequences are not very grave, yet they are of sufficient importance to merit attention and inquiry as to the best means of prevention and cure. With regard to the former, my own experience leads me to endorse all that has been brought forward by various authors, especially by Dr. Graily Hewitt, in proof of the inefficiency of support for the prevention of laceration of the perinæum. I have supported the perinæum in many cases where rupture appeared imminent, and in many others of a similar character I have left that part without support; and the result from both plans has appeared to be much the same. There is seldom any great danger of rupture, until the head is protruded so far that the accoucheur can grasp the exposed portion with his thumb and fingers. When this can be done, the best plan is to press the head forwards as much as possible under the pubic arch, so as to prevent the *vis a tergo* from acting so directly downwards upon the perinæum. When there is any reason to apprehend laceration, it is always as well to have the part in view, so as to be able to give this kind of assistance at the right time; and if the patient be brought close to the edge of the bed, with the thighs well flexed upon the body, this may be managed with so little exposure that she is scarcely conscious of it. Besides, if laceration does occur, it is very difficult to estimate its nature and extent by the touch only, without having recourse to the sight; and that is the reason why many cases of ruptured perinæum are overlooked, until it is too late to obtain union of the wound by the first intention.

When in attendance on primiparæ, I generally, if possible, thus see what is going on, so that I can observe the nature and degree of the rupture just at the time when it takes place, and be able to treat it without loss of time. I have thus seen that, when rupture takes place, the rent usually commences at the fourchette, and extends backwards; but I have almost as frequently noticed it to begin near the centre of the perinæum, by two or three small lacerations, and extend forwards. These are generally the least favourable cases for union by the first intention. Almost the only case which I met with, in which the torn edges did not unite when brought together at once, was one of this description. The perinæum was, as it were, perforated in two places just in front of the sphincter ani, and from each perforation a rent extended forwards, until the two lacerations met at the fourchette, so as to enclose between them an angular piece of flesh, which subsequently partly sloughed.

With respect to the predisposing causes of laceration of the perinæum, one can readily understand why the accident should be common in primiparæ, especially in those in whom, from advancing age, that part has become unduly rigid; but the most frequent cause of all, especially in severe cases, is, according to my experience, an unusual breadth of the perinæum. When this is the natural conformation of that part, it will be better, when treating the rupture, not to make any endeavours to produce union of the anterior part of the wound. If the accoucheur does his work too well in this respect, he will very likely have the mortification at a subsequent confinement of witnessing a good deal of it undone by a fresh laceration.

I once met with a curious case in which I found an undue breadth of the perinæum in a woman whom I attended in her second confinement. Her first confinement was tolerably easy, and accompanied with very slight laceration of the perinæum. Whether, during the healing process after this, adhesion of the lower edges of the labia majora took place, I cannot say; but I found, when examining during the second labour, that the perinæum was of most unusual breadth. It for a long time resisted all the natural efforts, and became so tightly spread over the head that it appeared every moment in imminent danger of rupture, whilst the os externum still remained small and undilatable. On examining more carefully, I found a dimple-like depression some little distance from the anterior edge, which appeared to mark the proper situation of the fourchette. I accordingly divided the part in front of this on a director, and the head was born almost immediately without causing any rupture of the remaining portion.

Besides the causes above mentioned, the large size of the child's head and unfavourable presentations, especially those where the head is expelled with the forehead under the pubic arch, will predispose to perinæal laceration. In most of the six multiparæ, in whom I noticed perinæal laceration, there had been only one previous confinement, and the perinæum had then escaped laceration in consequence of the small size of the first child. In the same way an unfavourable presentation in a subsequent labour may cause rupture in a woman who has escaped the accident at several previous ones.

The treatment of partial laceration of the perinæum is, I think, most satisfactory, provided it be adopted immediately after the occurrence, or rather, I should say, immediately after the termination of the third stage of labour. The best method of treatment is to bring the torn parts together by two or three sutures of fine silver wire. I have generally found that the wound healed more kindly with these than with silk ligatures. An old-fashioned semicircular needle is the best for the purpose. The needle should enter the skin about a quarter of an inch from the edge of the wound, and the sutures should pass through the tissues at about two-thirds of their depth. The operation gives but little pain, as the parts seem to be partially benumbed, and their sensibility impaired by the long continued pressure to which they have been subjected. The number of sutures shouid be in proportion to the extent of the injury. I have never used more than three; most usually two are sufficient, but in slight cases I have been content with one. As a general rule, when the perinæum is not ruptured to half its extent, no treatment will be necessary. I generally remove the ligatures about six days after delivery. Dr. Graily Hewitt, however, removes them at the end of three days. I cannot help thinking that this time is too short, and that by removing them so soon we run a risk of separating the newly formed adhesions. I have never had cause to regret leaving them so long *in situ;* indeed, as I before remarked, cases treated in the way just mentioned terminate most satisfactorily, and I scarcely ever meet with one in which union did not take place by the first intention.

I have no time here to enter on the treatment of complete laceration of the perinæum. Unless it be attended to immediately after it occurs (which is always the best plan, just as in partial lacerations), the case will be one which will ultimately need the assistance of a surgeon rather than of an accoucheur. To show how rare such an occurrence is, I may mention that I have never met with more than one instance of it in my own practice, and it happened in the following manner. I was summoned in haste one evening to see a bad case of puerperal convulsions in consultation with another practitioner. He had previously endeavoured to turn, but had not been able to complete the operation, which was attended with more than usual difficulty owing to the violence of the fits. I succeeded in accomplishing delivery during one of them. After delivery, the fits became less violent, and ultimately ceased, but the patient remained in a state of partial insensibility for some days. Soon after she had fully regained consciousness, she complained to the nurse that she had lost the power of retaining her

* Read before the Bath and Bristol Branch.

fæces. On examination, we found that the perinæum had been completely ruptured, the rent extending through the external sphincter and into the rectum. Owing to the urgent nature of the case, we had not noticed the rupture at the time when it occurred, and I can only account for it by supposing that, from the violence of the convulsive attack just at the moment of delivery, one of the limbs of the child must have been forced through the perinæum. The patient was afterwards operated upon very successfully by my colleague Mr. Coe.

NOTES OF A CASE OF INFLAMMATORY BRIGHT'S DISEASE: FATAL IN THIRD STAGE.

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CONSIDERING the views still prevalent in this country and abroad, and the new opinions which have lately been advanced in regard to Bright's disease, I think it desirable to put on record from time to time any individual cases which appear to throw light upon obscure questions connected with the malady. The case which I propose to bring under notice is of value, as affording strong evidence of the occurrence of atrophy, or the granular condition, in the advanced stage of nephritis. The Society is doubtless well aware that the leading German authors regard all examples of atrophied kidney as results of inflammation, while many of the English authorities have gone to the other extreme, and asserted that disease of the tubules never can give rise to atrophy. Now I maintain that, while a large majority of examples of the true granular kidney are results of cirrhosis, some are certainly also results of inflammation of the tubules—indeed, that this result necessarily follows if the patient live, and the disease last long enough. This opinion is, I am glad to find, now shared by at least one excellent clinical observer among the Germans, Professor Bartels of Kiel,* whose recently published lecture I regard as an important contribution to the subject.

The case is that of a man who was for seven years under my observation, and was closely watched during the whole period. An account of it was given up to the date of their publication in both editions of my book on *Bright's Disease*;† and so crucial was the case in my opinion, that, had the *post mortem* revealed conditions other than those actually found, I should have felt myself under the necessity of altering my views in important respects. The part of the history already published I shall give only in outline, the later part and the necropsy a little more in detail.

Robert Pendreigh, originally a baker, afterwards a maltster, and ultimately a labourer in St. Margaret's Railway Works, was a perfectly healthy man until about the end of January 1865, and was then twenty-six years of age. At this date he became dropsical. The dropsy increased rapidly, and he observed that he had frequent calls to micturate, but passed little urine at a time, and that dark and bloody. He was admitted to the Infirmary on March 3rd, suffering from severe dropsy and uræmic convulsions. Under cupping, diuretics, and other treatment he somewhat improved, but soon again the symptoms increased in severity. Towards the end of April he came under my care. His face was then pale and pasty. He had general anasarca. The urine amounted to forty ounces daily, was pale but smoky, of specific gravity 1020, highly albuminous, and contained hyaline and fatty casts. There was much bronchitis, and some pulmonary œdema. Hot-air baths, acetate of potash, digitalis, and cream of tartar having proved unavailing, inhalations of oil of juniper were tried, with the result of producing immediate and free diuresis. The urine increased to upwards of one hundred ounces daily, and by this means, and pricking the dropsical skin, the dropsy soon yielded. He steadily improved, and was dismissed early in August quite well, except that the urine was albuminous.

In October of the same year, after exposure to cold, he had another attack as severe as the first, but less prolonged. In its course, also, he had at least one uræmic convulsion. From this time until 1871, I saw him occasionally. He thought himself quite well, and worked regularly, but the albuminuria continued.

On March 6th, 1871, he was readmitted to the Infirmary with an aggravation of his symptoms. His urine, very albuminous, varied from fifty to sixty ounces, and had, he stated, been recently increasing in quantity, especially during the night, when he had usually to rise four or five times. He had caught cold and had some degree of bronchitis, with return of dropsy. The heart had become hypertrophied, beating between the sixth and seventh ribs, the first sound being much prolonged. The pulse was full and hard, and the radial arteries thickened. The urine was ninety ounces daily, of pale colour, one-half albumen, and there were some hyaline and granular casts. Under treatment he improved, and went out at the end of April.

On June 3rd of the same year, he returned, suffering from pleurisy and catarrh of the stomach, with a return of the symptoms. The urine was scanty, of specific gravity 1011, contained much albumen, and a few hyaline and granular tube-casts. By the end of June he was again better, the urine having risen to sixty or eighty ounces daily, of specific gravity varying from 1011 to 1019.

The last time that Pendreigh presented himself at the Infirmary was on January 12th, 1872. He then stated that from the time of his leaving in June he had been pretty well, and had worked regularly until the end of December, when he got wet, and was at once seized with symptoms like those of his previous attack. On admission, his eyelids, and, to a less extent, his face generally, were œdematous; his expression was anxious; and he was restless and had considerable dyspnœa, so that he could not lie down. His temperature was 100 deg. Fahr. There was no abnormality of the alimentary system, excepting some difficulty of swallowing and a considerable amount of ascites. The heart's impulse was diffused; the area of dulness could not be made out from the state of the lungs: the first sound was prolonged. The pulse was 80, regular and strong. The radial arteries felt firm to the touch. The capillaries and veins were natural. The white corpuscles of the blood were somewhat increased; but there was no evidence of enlargement of the spleen. The action of the left side of the chest was somewhat defective; and towards the base of that lung, both in front and behind, there was a degree of dulness. Auscultation all over the chest, and especially on the dull part, revealed prolongation of expiration, the character masked by crepitations, sibili, and snoring *râles*. The vocal resonance could not be determined. There was great dyspnœa; the patient at first maintaining the erect or semi-erect posture, afterwards lying down. The cough was frequent, but not severe. The sputum was copious, of loose consistence, and contained streaks of blood. There was some œdema of the legs, but less than on the face; and the nutrition of the body was not markedly defective. He complained of a dull aching in the lumbar and vesical regions. The urine was thirty to forty ounces daily, of a light straw-colour, of specific gravity 1014, and acid reaction. It contained no deposit. The coagulum of albumen was one-fourth of the urine. The patient's memory was defective, and it was difficult to keep up his attention. He was drowsy, and had difficulty in keeping awake; still he slept badly, and was constantly restless, though not noisy. Warm poultices were applied to the chest, and other treatment adopted, but without benefit. On the 15th, three days after admission, all the symptoms had increased in severity. The dyspnœa was very distressing. He could not swallow. The bladder was not distended, although he had passed no urine for twenty-four hours. On the evening of the 16th, he vomited a large quantity of a fluid resembling hare-soup. His dyspnœa and restlessness continued unabated. He spoke a good deal, often confusedly; but was not so drowsy as formerly. He had much difficulty in speaking. During the night he remained conscious, and he died on the morning of the 17th.

The *post mortem* examination was made by Dr. Pettigrew on the following day. There was no œdema, excepting to a slight extent about the face and ankles. The pericardium was natural, excepting that there were some milk-spots on its surface. The heart was much enlarged, and weighed 19½ ounces. The hypertrophy was mainly, but not exclusively, confined to the left ventricle. The valves were competent—here and there slightly atheromatous. The coronary arteries were tortuous, atheromatous, and in some parts contained calcareous plates. The muscular fibre of the heart was not examined microscopically; it appeared natural. The aorta was in some parts slightly atheromatous. Many of the smaller arteries, such as those at the base of the brain and the radials, were diseased; some were sclerosed, some atheromatous, and others calcareous. Both lungs were adherent to the thoracic walls to a greater or less extent; their substance was congested and œdematous, in some parts almost solid. The bronchi contained a large amount of mucus. Their mucous membrane was congested and thickened. The liver was rather below the normal size; its surface was slightly granular. On section, it felt tough and fibrous; and, on microscopic examination, the interlobular connective tissue was found increased. The spleen was normal. The stomach was in a state of chronic catarrh, its surface coated with mucus, its mucous membrane thickened, and a few minute extravasations existing throughout its substance. The intestines were in a similar condition. The kidneys were smaller than natural, and weighed each 4½ ounces.

* Klinische Studien ueber die verschiedenen Formen von Chronischen diffusen Nierenentzündungen. Von Prof. C. Bartels in Kiel.

† *A Practical Treatise on Bright's Disease.* Second edition, 1871, p. 56.

Their capsules stripped off readily. The surface was uneven and granular. There was little sebaceous-looking material to be seen from the surface. On section, the organs appeared somewhat congested, especially the cones. The cortical substance was relatively considerably diminished. Throughout it, and to a less extent in the cones, there were deposits of sebaceous-looking material. There was also a good deal of fat in the pelvis of the kidney. The ureters and bladder were natural. On microscopic examination of the kidneys, many of the tubules were found to contain fatty matter, and in some there were mineral impregnations. There were no cysts, nor was the connection increased as in cirrhosis. The arteries were thickened and prominent. Many tubules were normal; but here and there, throughout the whole organ, there were individual tubules full of opaque fatty matter. The size and form of the affected tubules varied much, some being of natural size and round, others smaller and angular, presenting, as it seems to me, the different stages of absorption of contents and consequent atrophy. The brain was pale and somewhat œdematous; it weighed nearly three pounds. The vessels at the base were at many parts atheromatous and calcareous.

I do not propose to comment upon all the points in this case—only to select two or three which appear of special interest. On looking back at this case, I feel convinced that a single process was in progress throughout its whole course. It will not be denied by any one, that at the commencement we had to do with an ordinary though severe case of inflammation of the kidney: and there was no break in the history. The albuminuria continued throughout. The tube-casts, the occurrence of dropsy when he caught cold, the gradual deterioration of the blood and the tissues generally, the hypertrophy of the heart, and the degeneration of the arteries, were all such as we expect to follow upon such an ailment when it neither proves fatal nor is fully recovered from.

The morbid anatomy exactly corresponds to what I have described as the third stage of the inflammatory form of Bright's disease, and of course confirms the accuracy of that description. I quite perceive that some observers might interpret the case differently. No one could regard it as an example of pure cirrhosis, but it might be held to be a combination of inflammation of the tubules with that process. This view appears to me untenable for the following reasons: 1. That the kidneys were not so reduced in size as they are in cases of fatal cirrhosis; 2. That the capsule slipped off readily, not carrying with it any portions of the renal tissue, as it does in cirrhosis; 3. That the surface was granular and uneven, but not to the extent met with in cirrhosis; 4. That the cortical substance was atrophic, and contained abundance of sebaceous-looking material; 5. That the stroma was not absolutely increased, while the blocked up tubules presented all stages of atrophy from the commencing to the most advanced—an atrophy apparently due to molecular absorption of the contents, rather than to any increased growth of connective tissue.

The symptoms attending the process were also of interest. While the albuminuria was persistent throughout, there were at first diminished flow of urine and dropsy. At a later period there was little dropsy, and the urine attained or exceeded the natural amount. The dropsy was throughout determined by the amount of urine secreted; and that secretion was, in the early stage, below the natural amount, because the obstruction in the tubes exerted a counter-pressure to the blood-pressure within the Malpighian bodies. In the later stages, when hypertrophy of the heart had occurred, and when comparatively few tubes were occluded, the blood-pressure was so increased as to induce a certain amount of diuresis. This appears to me one of the most beautiful and satisfactory explanations of pathological process with which I am acquainted.

Another point which is worthy of remark, is the extreme desirability of discovering some treatment by which the chronic inflammation which results in continued albuminuria should be removed. My experience shows me that the skim-milk treatment, so highly commended by Dr. Donkin, does not suffice to accomplish this; and while I have sometimes succeeded by means of counterirritation, with croton oil and with iodine, I have often failed. The internal use of belladonna also has in some cases appeared useful, but it is in too many cases valueless. I shall be very glad to hear the experience of members of the Society in regard to the point.

I may further remark that this case has a certain bearing upon the views recently advanced by Sir William Gull and Dr. Sutton. If my interpretation of the facts be correct, the thickening of the arteries and disease of the heart were complications consequent to the renal affection; and, if this be so in one form of chronic Bright's disease, it surely establishes a probability that in other forms the relationship will not be reversed—that, in other words, cirrhosis also induces, and is not a mere attendant upon, vascular disease.

ON DIPHTHERITIC ALBUMINURIA.*

By R. BROWNING, L.R.C.P.L. etc.

THE pathognomonic importance of albuminuria when occurring in the progress of true diphtheria is a practical point which, strangely enough, I find, after some painstaking, either totally passed over, or at least barely mentioned in the writings and *viva voce* cliniques of the highest authorities I have yet been able to consult.

In the absence of *post mortem* observations of my own, it is with some diffidence that I venture to put before you what I have reason to consider an equally novel and successful treatment of this momentous symptom. I would premise that by the term "true diphtheria" I wish to specify that dangerous disease known, unfortunately, but too well to most of us in this neighbourhood, characterised especially by the appearance of a false membrane on the surface of the pharynx, which membrane can be removed in strips by a forceps, and consists of numerous epithelial scales and cells, with some occasional pus-globules, all interspersed in the intestines of fibrinous filaments, to the exclusion of so-called "genuine croup," of "laryngitis stridulosa," and of any bad forms of tonsillitis, muquet, or local scarlatinal lesion. [I have placed "genuine croup" in this *Index Expurgatorius* from deference to the opinion of most English authors; but many years since I was taught by Dr. Semple, at the St. Pancras Dispensary, that it was really and actually the diphtheritis of Bretonneau, and the same is held by most modern French writers.]

From what I have lately witnessed while watching two local epidemics of diphtheria, I am disposed to consider

a. That albuminuria is present in nearly all cases.

b. That its appearance is usually about the end of the first week after the diphtheritic membrane is developed, though sometimes earlier, more rarely later.

c. That coexistently with its appearance, a notable diminution of the quantity of the urine, and an increased excretion of urea occur (the latter sometimes equalling treble its normal amount); whilst lithates (with uric acid, oxalates, and sometimes phosphates) generally, tube-casts, both granular and waxy, frequently, blood-corpuscles not seldom, and pus-globules occasionally, are found on examination of what is secreted. The urinary specific gravity mostly averages 1016, and the temperature of the body is, as a rule, from 100.4 to 102 degrees.

d. That the gravity of the prognosis increases in an equal ratio with the quantity of albumen existing in the urine, independently of the amount of throat-affection or kidney disorganisation, and that an early or late discovery of albumen is of serious import.

e. That local mischief attacking the pharynx, larynx, or other structures, and paralysis subsequently occurring, are entirely the result and symptomatic of a morbid poison affecting the general system, just as the sore throat of syphilis is the sequence of a blood-disease previously contracted.

f. That albuminuria, in any quantity, is due to obstruction of circulation through the kidneys, caused by congestion of the Malpighian tufts, this congestion being produced by paralysis of the nerves supplied to them; but that a mere trace only arises, either from pus or else blood-corpuscles, which have casually entered the volume of urine.

g. That the indication of treatment, in albuminuria occurring to an appreciable degree during the progress of a case of diphtheria, is to remove this obstruction by overcoming the paralysis, and that local Faradisation affords the best method of doing so.

h. That, after albumen has disappeared from the urine, it may return, synchronously with a relapse of diphtheria; and that throughout the whole course of this malady little, if any help, is derived from the use of the clinical thermometer.

[Details of seven cases, tending to support the above views, were here read.]

You will observe that *both* the cases which terminated fatally were those in which no Faradisation was employed, and that *five* others, all of very serious nature, recovered after it was resorted to; *all* were marked by unmistakable evidence of blood-poisoning, and albuminuria, with more or less suppression of urine, was noticed in each. The treatment of all was conducted on the same principle, plus or minus the induction coil; the object aimed at being at first, during the premonitory symptoms, to regulate the secretions, and then to support the strength of the system in every possible way. My sheet-anchor was the tincture of perchloride of iron sometimes combined with glycerine, sometimes with chlorate of potash, and sometimes given *per se*. Stimulants and nourishment in every variety were supplied with no sparing hand. Iodide of potassium proved a disappointment. The customary topical

* Abstract of a paper read at Canterbury, May 23rd.

medication was, of course, attended to. In some instances, the ordinary conductors fitted to most galvanic batteries; in others, "etnas" of this construction were employed ("etnas" shown). Faradism was thus employed over the lumbar regions along the lower part of the spine, and as nearly as possible in the direction of the ureters. Its use in this manner is, I think, an entire novelty.

I must confess that I am thoroughly at a loss to determine the special cause—the *fons et origo* of diphtheria. We know that the blood is charged with urea as soon as, if not before, paralysis of the kidney occurs; but so it is in other diseases, and yet a totally different train of symptoms is witnessed. I look forward to being enlightened on this point by more able and experienced observers.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF CRETINISM.

(Under the care of Mr. SAVORY.)

THE details of this interesting case have been forwarded by Mr. G. C. Parnell, House-Surgeon.

On June 10th, 1872, Henry B. was brought by his stepmother into the surgery, in order to have some advice respecting his teeth. He was admitted into the hospital under the care of Mr. Savory.

From the evidence of a certified copy of a register of births, he was born on May 18th, 1854, and would therefore be in his nineteenth year, although he looks like a child about eight years old. His height is 2 ft. 10 inches, and he weighs 2 st. 11 lbs. The head is large, but well formed; the hair long, and of a light-brown colour; the eyes are large and wide apart, and, when examined by Mr. Vernon, were found to be healthy; the eyelashes long and black; the nose is broad and flat at the root, the tip upturned, and the openings of the nostrils somewhat rounded; the mouth is slightly open, large, the lips thick, the upper being the thicker; the palate is normal. The teeth, examined by Mr. Coleman, presented the following appearance. The alveolar arches are well developed. In the upper jaw, the first permanent molars are present, but carious. In the lower jaw, there are the central incisors, the first bicuspids of each side, and the first permanent molars, the latter also carious. The age as indicated by the teeth is between eight and nine years. The temporary teeth are much worn by mastication, indicating a longer period of use than usual; the permanent teeth are fairly strong, excepting the first molars. The temporary cuspidati are unduly developed; and the lower central temporary incisors were removed to give space.

The neck is thick, measuring ten inches and a half in circumference. There is no goître, but the thyroid body can be distinctly felt in front of the trachea; and on each side, situated over the clavicles, is a small immovable subcutaneous swelling, imparting a sensation to the touch like a fatty tumour.

The chest is well formed, 21½ inches in circumference; and situated over the upper part of the sternum, and extending over the thyroid gland, is a delicate network of veins. The heart-sounds are feeble. The abdomen is "potbellied." The skin is coarse and sallow; and over the abdomen only, and upper third of the arm, it assumes a slight ichthyotic condition. He has a congenital phimosis. The testicles are both present; and there is an absence of hair on the pubes, and in the axillæ.

His limbs are in fair proportion to the rest of the body, but are a little thick. The tibiæ are slightly curved, and he is flat-footed.

His father, aged 54, is a basket-maker by trade, and has lived in the vicinity of London all his life. Careful inquiry failed to elicit any history of syphilis or intemperance, although he admits to have had, on rare occasions, a drop too much. He married, when he was twenty-one years of age, his first cousin, and had the following children, all of whom were well formed and healthy. The first, a boy, born fifteen months after marriage, died at seven years old of scarlet fever; the second, a female, died thirty hours after birth; the third and fourth, males, are now respectively twenty-five and twenty-one years of age; the fifth was the cretin; a miscarriage then followed; the sixth was a female, now sixteen years old; then came two miscarriages; and, lastly, a female child. The mother died of consumption, aged 49.

The child was born at the full period; but, two months before birth, the mother was frightened by a fire that took place close to their house; the labour was protracted, but no instruments were used.

The parents did not notice anything peculiar in the child till he was two years old, when they discovered that his intellect was bad, and that he ceased to grow. He was a healthy child, but suffered from epistaxis, and it was necessary once to have the posterior nares plugged. He has had measles, variola, and scarlatina. He did not walk till he was twelve years old, and he was then sent to school; but the boys laughed at him, and he took a dislike to it. His temper, however, is very good; he talks but little; would sometimes play, his favourite amusement being a horse and cart; and he has always been clean in his habits. At the time of admission in the surgery, he allowed himself to be examined without speaking a word, but since he has been in the ward he now answers in short and somewhat indistinct sentences, his voice being very disagreeable, more like a "croak" than a human voice. If anything please him, his face lights up with a stupid grin, and he names correctly anything shown to him. He walks slowly about the ward, all his movements being marked with a certain amount of deliberation. He never cries, plays with a few toys, has been taught a few things since he has been admitted, and has become a general favourite in the hospital.

OPERATIONS, SATURDAY, JULY 20TH, 1872.

Amputation above the Knee.—This was a case of complete destruction of the knee-joint from acute scrofulous inflammation. The synovial membrane had completely disappeared, and a large portion of the cartilages had suppurated within a few months. A number of abscesses had opened externally, and were constantly discharging, and the ends of the bones were broken down to a pulpy state. Mr. Savory had hoped that excision would suffice to cure the diseased joint; but the boy had so failed in strength during the last week, and his appetite had been so much impaired, that he thought it best at once to amputate, and give him a chance of life. This was accordingly done, nothing remarkable occurring during the operation.

Caries of the Surface of the Tibia.—This was a case of chronic inflammation of the surface of the tibia. There was no evidence of dead bone enclosed in a new sheath; but for many months there had been chronic inflammation and suppuration of the surface of the bone. Some months ago, the integument covering the tibia was also much inflamed and thickened, but rest in the hospital had cured this. Mr. Savory now made an examination of the tibia, to ascertain its precise condition, but did not think it wise to interfere any further than to gouge its surface. He did not think that recovery would ever take place naturally, but yet felt disposed to wait longer before amputation. This condition of the bone he considered very uncommon.

Necrosis of the Tibia.—Mr. Callender removed almost the entire length of a necrosed tibia from a boy who had long been suffering from abscesses in the leg. Only the epiphyses of the original bone were left. The necrosed bone had been quite fixed until a few days previously, when it showed signs of loosening, pus freely running from one opening when the probe was inserted in another in the upper part of the tibia. This was not the case with the lower part of the spiculum, which seemed yet quite fixed. Mr. Callender made a free incision along the length of the bone, and, after taking away the front portion of a new sheath, removed almost an entire tibia, quite necrosed. He thus hoped to entirely cure the disease. The cavity was filled up with oiled lint, and the wound closed in the usual way.

KING'S COLLEGE HOSPITAL.

OPERATIONS, SATURDAY, JULY 13TH, 1872.

Severe Rectal Fissure complicated with Fistulæ.—This patient came to the hospital imagining that she suffered only from piles, but, on examination, rectal fissure and two fistulæ were found. Mr. Henry Smith cut the fibres of the external sphincter through the fissure, and laid open the fistulæ freely. He stated that the only bad result in such cases was occasional incontinence of fæces, which might be obviated altogether in most cases by taking care only to divide the external sphincter.

Varicose Veins.—Sir Wm. Fergusson operated on a woman for varicose veins by two needles in the usual manner. The veins were not extraordinarily enlarged, but they gave very much pain and irritation, making the patient's life a continual misery.

Tic Douloureux.—The patient had been operated on by Sir W. Fergusson five times for the same disease during the last six or eight years. It had always returned with great severity. All the ordinary means had been tried to arrest the neuralgia, but without effect; and the only relief the patient found was after the operation of dividing the

nerve—the third branch of the third pair. The pain while it lasted was excessive, and drove him to the operation. It was remarkable that, for a few days after the operation, the pain lasted in all its intensity, subsiding afterwards to perfect and complete relief. Since the last operation, eighteen months had elapsed, and the pain had been coming on for the last two months. In most cases, the intervals between relief become less and less, until both patient and surgeon tire out in operating; but in this case the intervals had rather increased. In this case, the shape of the jaw had altered a little after each operation, and Sir W. Fergusson had a little difficulty in finding the mental foramen. But, this found, he not only cut the nerve, but with a small gouge cleared the canal for half an inch.

In reference to the proposal to take out a piece of the jaw for extreme cases of neuralgia, he thought this would not in any degree answer the purpose better than division of the nerve. The pain does not depend altogether on union taking place, but on nervous nodes forming in the canal, just as they do in painful stumps. If the jaw is to be touched at all, it would only be necessary to remove a small length of the alveolar ridge down to the canal, and then to cut out a portion of the nerve. Sir W. Fergusson narrated a case of a similar kind where, after thirteen years' agony and the failure of every means resorted to for a cure, division gave instant and prolonged relief.

Tumour of Breast.—Mr. John Wood, in removing this tumour, made some important remarks on retraction of the nipple as a sign of cancer of the breast. The tumour was not malignant, and yet there were retraction and discharge from the nipple. Retraction has generally been regarded as a pretty sure sign of cancer; but Mr. Wood looks upon it as only a sign that the lactiferous tubes are involved in disease of any kind—benign or malignant. In most cases of cancer, he has seen no retraction of the nipple—the disease being at one end or other of the gland. The retraction, then, has reference solely to the *position* of the disease, and not to its *nature*. It has sometimes been urged that non-malignant tumours of the breast are best let alone, as they are situated in an important gland, and an operation is likely to interfere much with its usefulness. Mr. Wood believes that it is best in every case to remove the tumour; if it be non-malignant, the gland can suffer little by its removal; and if malignant, an operation cannot too soon be performed.

ST. MARY'S HOSPITAL.

INJURY OF THE HEAD FOLLOWED BY DELIRIUM, EPILEPTIFORM CONVULSIONS, AND APHASIA.

(Under the care of Mr. JAMES LANE.)

J. S., aged 27, a painter, fell head-foremost from a scaffolding twenty-five feet high. On admission (May 28th), he was suffering from severe concussion—collapsed and insensible; there was extensive bruising of the right temporal region and ear, and bleeding from the meatus. After about two hours, he vomited and recovered his senses. Soon afterwards, however, he became noisy, restless, and at last violently delirious, so that he had to be strapped in bed. Next morning he was placed in a separate ward. The delirium continued. The patient was quite unconscious; his breathing was laboured and stertorous; pulse 60. His head was shaved, and ice applied. Five grains of calomel were given, followed by a dose of croton and castor oils.

On the 30th and 31st, he continued in the same state. The pulse was never over 60. There was no paralysis. He was quite insensible, and violently delirious.

June 1st. Three severe epileptiform fits occurred during the night. Pulse only 65; respiration laboured; the bowels were confined. He was ordered to have two drachms of sulphate of ammonia in acetate of ammonia mixture every two hours, till the bowels acted.

June 2nd. He had had more fits, but was somewhat better in other respects. The bowels were freely relieved.

June 3rd. He was sleepy and dull, but could answer questions when roused. The pupils were contracted. Fits occurred occasionally, but were much less violent.

June 12th. He had slowly but steadily improved. There were no fits after the 4th. The restlessness diminished, and consciousness gradually returned. It was now found that, though sensible and wishing to speak, he could not express himself intelligibly.

June 24th. There was steady improvement, but the faculty of speech was still very imperfect; in attempting to explain himself he used words which were quite irrelevant, and was equally unable to write down his thoughts and wishes correctly.

July 1st. He was gradually recovering his speech; he could say his name; but when asked where he lived, he constantly repeated the word "square". Though he could now make his ideas intelligible, he still frequently used words which which were quite foreign to the subject.

July 8th. The patient was up and moving about the ward. His pulse was regular but slow: the bodily functions were normal. He had no pain in the head. He spoke much more intelligibly; but, if at all excited, wandered into a maze of incoherency. When calm, he could say that he lived in Carburton Street, Fitzroy Square; but, if excited, could utter nothing but "square, square."

REMARKS.—Mr. Lane remarked, concerning this case, that probably there had been mere contusion of the brain-substance: the patient had first concussion, then symptoms of cerebral irritation, then aphasia. The bleeding from the ear was probably due to some superficial source. He never had any distinct signs of compression, never had any muscular paralysis, or signs of intracranial inflammation; the pulse was always slow, the skin moist, and the temperature but slightly above the normal at any time.

LIVERPOOL NORTHERN HOSPITAL.

TWO CASES OF PRIMARY AMPUTATION: CARBOLIC LIGATURES AND COTTON-WOOL DRESSING.

(Under the care of Mr. LOWNDES.)

CASE I. *Primary Amputation of the Arm.*—Wm. Mulloy, aged 35, labourer, was admitted on March 6th, 1872, with compound fracture and dislocation of the left wrist, and very extensive laceration of the soft parts extending up to and above the elbow. Amputation was performed the same day in the lower third of the humerus. The arteries were secured with Lister's carbolised catgut ligatures, cut short off, and the edges of the skin-flaps were brought accurately together with a large number of silver-wire sutures. The cavity of the stump was then well syringed out with a solution of carbolic acid (1 in 20), and a narrow slip of lint soaked in carbolic acid (1 in 10) laid over the wound. The whole was then wrapped in two layers of cotton-wool, and a bandage loosely applied. Hardly any febrile reaction came on; and as the stump remained free from pain or any appearance of discharge, the dressings were not removed till March 11th, five days after the operation, when it was found that there was not the least discharge or inflammation, and that primary union had occurred over the whole stump. The same dressing was reapplied, and he was allowed to get up. No drawback whatever occurred, and he was discharged cured on March 28th.

CASE II. *Primary Amputation of the Leg.*—Edward Kelly, a 35, labourer, was admitted on March 11th, 1872, suffering from a severely lacerated compound fracture of the leg. Amputation just below the knee was performed the same day. The arteries and also the large veins were tied in the same way as in the last case, and the wound closely stitched this time with catgut sutures. The cavity of the stump was not syringed out, but the wound was dressed with carbolic oil and thick layers of cotton-wool as before. There was considerable oozing after the operation, which soaked through the cotton-wool, and necessitated an extra layer. March 14th.—There had been some feverishness since the operation, which had been met by calomel purgatives and low diet. The pulse to-day was 108. The stump was dressed for the first time; there was some little inflammation.—March 15th. There was slight swelling about the stump, and some duskiness and hardness up the outer side of the thigh. The sutures were removed, and a light poultice applied to the face of the stump, from which there was some healthy discharge.—March 17th. The outer side of the thigh was red, and felt brawny. A long and deep incision was made, and gave vent to a good deal of pus. From this time, he went on well, slept and ate well, and by March 24th the stump was healed. The wound in the thigh soon closed, and the patient has for some time been going about on a wooden leg, but is still kept in hospital on account of pain in the other hip, which was severely contused by the accident.

SUFFOLK GENERAL HOSPITAL.

CASE OF FRACTURE OF THE ACETABULUM.

(Under the care of Mr. KILNER.)

Reported by F. E. IMAGE, M.B.Cantab., M.R.C.S.

CHARLES SPINK, aged 54, a farm labourer, fell on his right side off a hay-stack during the afternoon of Thursday, July 4th, 1872, and was admitted to the Suffolk General Hospital at 5 P.M. on the same day, under the care of Mr. Kilner. On examination, it was found that there was no shortening of the right leg; it lay in its normal position, neither inverted nor everted; and the limb could be rotated outwards. There was a slight depression in the position of the great trochanter. The anterior superior process of the ilium was splintered off, and could be

felt *in situ* under the skin. He could pass his urine, and it contained no blood. On July 5th, the bowels not having acted, a calomel purgative, followed by a saline, were administered. After these, the bowels acted freely twice; there was no blood in the motions. He was quite conscious during the whole day. He was without much pain, and was visited by his master, with whom he talked quite rationally. The symptoms on July 6th were the same as on the preceding day; but during the night the house-surgeon was called up, as he was seized with vomiting. He died in the night.

The necropsy took place on Monday, July 8th, thirty hours after death. On the abdomen being opened and the bowels removed, they were found to be perfectly healthy; there was no sign of their having been inflamed. The psoas magnus, psoas parvus, iliacus, and antero-lateral abdominal muscles of the right side, were infiltrated with blood; and the right kidney, the substance of which was quite healthy, was enveloped in a clot; but, with the exception of these hæmorrhages, it did not appear that any vessels of importance were injured. The bladder was healthy; the thoracic organs were not examined. The right os innominatum was very extensively fractured. The right anterior superior process of the ilium was chipped off. There was a fracture extending through the crest of the ilium an inch behind the anterior superior spinous process, running directly downwards, passing through the posterior quarter of the rim of the acetabulum to a point midway between the spinous process and the tuberosity of the ischium, but not separating the bone into two portions. This fracture was quite through the thickness of the bone. An irregularly wedge-shaped portion of bone, whose upper surface extended from the base of the inferior anterior spine of the ilium to the root of the superior ramus of the pubes, and whose outer side was formed by the upper third of the acetabulum and inner by nearly an inch of the upper part of the ischium, was completely severed from the rest. There were eight or ten other irregularly shaped pieces of bone, in size from three-fourths of an inch square downwards, lying in the pelvis. Another line of fracture was given off from the anterior lower corner of the wedge-shaped portion above mentioned; it extended from the base of the superior ramus downwards, and slightly backwards through the lower anterior third of the acetabulum, and then, tending forwards and downwards, opened into the thyroid foramen at its lower angle. The head of the femur had been driven through the acetabulum, and was seen projecting into the cavity of the pelvis. When it was pressed outwards, the depression over the great trochanter disappeared; and when it was seized from the inside of the pelvis and leg rotated from the outside, no crepitus was discoverable. There was no fracture of the neck or of any other part of the femur. The man sustained no other fractures than those mentioned.

COLUMN FOR THE CURIOUS.

MERCURY.—Some give Paracelsus the credit of being the first to use mercury in syphilis. This seems to be a mistake. According to Boerhaave, Berengarius was the discoverer of its merits; and the following is from Douglas's *Bibliographia Anatomica*, Lyons, 1734. "Jacobus Berengarius Carpensis, ita dictus a Carpi civitate in Italia... ...inunctionis ex hydrargyro in curâ luis venereæ primus fuit inventor, illoque solo quæstu mirè opulentus redditus est."

INTESTINAL OBSTRUCTION.—In Culpeper's translation of Riverius, London, 1678, reference is made in the 226th observation to a case of obstruction where the contents of the gut made their way out into the abdomen above the stricture, and again by an ulcerated opening into the rectum. "Thus a looseness happening in the iliac passion may deceive a physician."

COAGULA FROM THE URETER.—I do not recollect any reference being made in a modern work to this curious result of renal hæmorrhage. A short time ago, I was shown coagula voided from the bladder, and evidently moulded in the ureter, which bore a striking resemblance to small specimens of ascaris lumbricoides. The following is from Boerhaave's *Institutes*, English edition, 1746, vol. vi. "When blood extravasated into the pelvis of the kidney congeals into grumes, as they pass from thence into the ureter and bladder, an obstruction is by this means generally formed either in the ureter or urethra. I have myself seen blood concreted so as to put on the shape of a worm in the urethra, from whence we were obliged to extract it by a hook. Of this disorder perished that considerable anatomist Drelincourt."

GEORGE F. ELLIOTT, M.D., Hull.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 27TH, 1872.

THE MEDICAL ACT.

AT Marlborough Street, on the 18th instant, Mr. John Hamilton, of Oxford Street, was summoned by Mr. Deakin, house-surgeon of the Lock Hospital, for using the title of "doctor," thereby implying that he was registered under the Medical Act. The complainant did not appear, and the defendant's solicitor asked to have the summons dismissed, inasmuch as the question whether the defendant was entitled to use the title of doctor was in process of being brought before a higher tribunal for decision. A short time ago the defendant was convicted and fined by Mr. Knox, and against that conviction an appeal had been lodged, as the point had already been decided in the defendant's favour, he having been summoned before the Liverpool magistrates. The summons had been dismissed by them, the case had been taken to the Queen's Bench, and the judges decided that the decision of the magistrates was correct. Since the late conviction, the defendant had done all in his power to comply with proper requirements; he had altered the description of himself in his work, and had also made alterations in what was placed on his window and door. The defendant had a diploma from the Metropolitan Medical Body of New York, sanctioned by an Act of Congress. Mr. Mansfield thought that it was hardly proper to take out fresh summonses while proceedings were pending in a higher court, and dismissed the summons. Shortly afterwards, Mr. Chandler, of Berners Street, applied for another summons against Dr. Hamilton, on the plea that Mr. Deakin was in the country on important business, and that, as the defendant still continued to use the title of "doctor" as if duly registered, and absolutely set the late decision at defiance, he had rendered himself liable to a fine of £20 under the 40th section of the Medical Act. Mr. Mansfield declined to grant the summons. He said it had been ruled by the judges that a man had a right to use on English soil a title acquired in another country. He considered that a person might call himself a doctor, just as he might call himself a captain if he pleased.

Thus, by this decision, all the objects of the Act, so far as it purports to protect the public, are nullified; the means of distinguishing impostors and pretendant quacks from educated and qualified medical persons are removed; and the title of doctor is once more degraded to the vile purposes of any advertising impostor soever, who pleases to dub himself doctor and hang out a board to delude unwary sufferers, and injure and perhaps ruin their health and peace of mind. From so gross a declaration of the failure of the Medical Act to carry out the public purposes for which its preamble declares it to have been primarily framed, we may, it must be trusted, at least deduce the hope that there will not be much further delay in setting to work to amend this part of the Act.

And here we may suggest a course which appears to us worthy of the consideration of our Association at its Annual Meeting at Birmingham, and of the support of the leaders of the profession in all their various relations and positions. There are certain points of great importance to the public and the profession in relation to the amendment of the Medical Acts, on which we are not all agreed in the profession, and on which we are not yet quite at one with the Goverment, although substantially the British Medical Association and the Government have arrived at a good basis for a common understanding. These are, the constitution of the Medical Council, and the legislative means for procuring a completely satisfactory minimum standard of examination. The pressure exercised by the action of the Association and their accord with the Government on the last subject have already, however, led to excellent results in the latter respect, by inducing the Corporations themselves to endeavour to find a voluntary means of obtaining such an unified minimum standard, while they avoid some of the coercive changes by which the Government Bill could have limited their powers and finally reduced their constituency. The voluntary schemes for conjoint examination are to a large extent the result of the strong moral influence excited by the Association, in forming and bringing into form and powerful action professional opinion on this subject. The reformed constitution of the General Medical Council remains still a difficult nut to crack. But there is one thing on which we are all agreed—the necessity for an amendment of the Medical Act which shall vitalise the 40th or penal section and make it workable, so as to protect the public, to prevent vile imposture, and to carry out the original intentions in this respect declared by the preamble. The Government, the Medical Council, the British Medical Association, the Universities, and Corporations, are all agreed both as to the urgent necessity for such an amendment and as to the shape which it should take; nay, even as to the form of words which should be adopted.

The Government Bill, introduced into Parliament two years ago, contained a clause imposing a penalty of £20 for each offence upon all who, being unregistered, practise medicine for gain, or assume any designation used to distinguish duly qualified practitioners. This amended clause was acceptable to all. A short Bill merely embodying this amendment would not, we believe, meet with opposition in any quarter; and, pending the final settlement of other questions, which may, we fear, have to await a distant solution, it is worth the consideration of our Association whether a short Bill amending the 40th clause should not be at once promoted by us and passed into law. It would be an acceptable service to the profession, and a great boon to the public at large. We are not insensible to the advantages of retaining in hand an amendment in which all concur, for the purpose of procuring a hearing and enforcing a settlement of others as to which audience and agreement are less easy of attainment and less early to be expected; but there is reason to doubt whether sufficient weight has not already been attached to this consideration, in what has been done thus far, and whether the time has not come to put an end to the intolerable scandal of a continued impunity to all classes of impostors, and to the existence on the statute-book of the impotent provisions of an Act framed to punish and preclude pseudo-medical frauds and malpractices, but which, as now interpreted, only serves to cover them with the cloak of an implied sanction by the State.

THE PUBLIC HEALTH BILL.

We should be disposed to call Mr. Stansfeld's feat of last week a *tour de force*, if there had been any force to overcome. But he had not even the *vis inertiæ* to contend against; for the attractions of the country, and the longing desire of overworked members to escape from the fierce heat of the London dog-days, had effectually mobilised the House, and told powerfully in favour of the minister's tactics. Nor were these natural forces the only ones that fought for Mr. Stansfeld. The combinations, and even the divisions of parties, and the very nature of the subject, told equally in his favour. Sanitary improvement has now become a political watchword. So much the worse for the thing itself. But this adverse result has not been brought about in the ordinary course of party warfare. It is not the opposition, but the consent of parties that is now the fatal hindrance to a good sanitary measure. The eagerness of both parties to secure the credit—for such it is now reckoned—of being sanitary reformers, makes them afraid of opposing, even while they disapprove, any proposals professing to secure the wished-for object. Among the Liberals, there are not a few who doubt the wisdom and the practicability of the ministerial scheme, but they cannot even in appearance be traitors to their party. In private, they frankly say that they do not see how the Bill can work; but in public, they dare not even

"Hint a doubt, or hesitate dislike."

Among the Conservatives, there are many who thoroughly disapprove of the Bill on account of its defective local machinery and centralising tendencies; but the fanatical excitement of Sir Charles Adderley, and the adhesion to the Government measure of the author of the famous catchword "sanitas sanitatum, omnia sanitas", secure their tacit or express assent to a measure which falsely represents itself as in accordance with the recommendations of the Royal Sanitary Commission. Above all, most, even of those who openly expressed their disapproval of the Bill, disavowed any wish or intention of procuring its rejection. Even Dr. Playfair, Mr. Dalrymple, and Mr. Corrance, long clung to the hope of its being so amended as to enable them to give it a hearty, instead of a reluctant and hesitating, support. And it was not till the really valuable second part of it was lopped off, that the Joint Committee felt constrained, at the eleventh hour, when all hope of organising a successful opposition was extinguished, to exchange their qualified support into unqualified disapproval.

Yet another consideration—more than once adverted to in these columns—which told powerfully in favour of the Government measure, was the intricacy of the details involved in the settlement of the extent and boundaries of the areas of jurisdiction. In choosing the union as the sanitary unit, it was obvious that the Royal Commission and Her Majesty's Government had taken up a position that was, parliamentarily considered, very strong. It had the triple advantage of obviating the necessity for careful inquiry on the part of the Government, for hard and distasteful study of really difficult details on the part of honourable members, and also for creating new authorities when existing ones might be made use of for the purposes of the Bill. This last consideration addressed itself most forcibly to the instincts of Parliament, without unduly taxing its reasoning powers in inquiring and deciding whether or not these bodies were at all fitted for the discharge of sanitary duties. So welcome to the House was the escape from this burdensome duty, that it accepted, without the semblance of an investigation, the Government plan of simply *adopting* the Boards of Guardians as they are, instead of that proposed by the Royal Commission, of *adapting* them for the discharge of their sanitary functions by important changes in their constitution and mode of election. That either Mr. Stansfeld, or Sir Charles Adderley, who turns his back on his own report, has much faith in the probable efficiency of Boards of Guardians as sanitary authorities, we do not for a moment believe; but they believe, which we do not, that it will be possible to keep them to their duties by frequent visits of inspectors from the central office. It is an elaborate system of local puppets and central wire-pullers, the

virtue of which consists in its offering a way of escape, on the recommendation of Her Majesty's Government, from grappling with a very large and complicated subject, which is nothing less than the future local government of England and Wales. The working solution of that great problem stands adjourned for at least another year. Mr. Stansfeld repeatedly reminded the House that this was only a provisional measure, and that he hoped next year to address himself to the task of creating County Boards for certain larger purposes of sanitary administration; and he further consented to the adoption of an amendment to the effect, "that the appointments of medical officers of health first made after the passing of this Act, shall be for a period not exceeding five years", on the express understanding that it might be found to be necessary to supersede many of those now to be appointed, and to appoint others over much wider areas.

We regret to find that our apprehensions as to the protection of the officers of health by the Local Government Board being partial and not universal, were too well founded. It is optional on the part of the local boards whether or not they shall be subject to the control of the central authority. If they are tempted by the financial offers of the Government, they may attempt to induce neighbouring Boards to join with them in an application for partnership, on Poor-law terms, with the Local Government Board—an operation which has hitherto been *uniformly* unsuccessful, when combinations of authorities for common purposes have been proposed. But we apprehend that many boards of guardians will reason thus: "If we bring ourselves under the control of the Local Government Board, it may, and probably will, insist on our paying for our moiety a considerably larger amount than we should require to pay if we retain our independence, with undivided control of our officers." They will, in that case, as a matter of course, decline to hamper themselves with official aid and dictation; and woe to the officer who does not act on the maxim that "discretion is the better part of valour". For if Colonel Barttelot had spoken out his whole mind, when arguing for making all future appointments renewable every five years, as a ready method of getting rid of inefficient officers, might he not have said that it would also afford an opportunity of getting rid of the active and efficient, and therefore troublesome, officers?

Those who spoke best in opposition to the Bill were Mr. Dalrymple, whose statement of his objections to the Government measure was clear, succinct, and forcible; Mr. Corrance, Sir Michael Hicks Beach, and especially Lord Robert Montague and Mr. Ward Hunt, whose speech was an admirable summary of the views which have been persistently upheld by the Joint Committee.

FATTY HÆMATURIA.

In connexion with the very valuable and skilful addition to our knowledge of helminthology made this week by Dr. Cobbold in the paper published in another column, we may cite from *L'Union Médicale*, for the sake of their interest to practitioners, a brief abstract of observations on the chylous or fatty hæmaturia of hot climates by Dr. J. Crevaux, a naval physician who has observed a very complete case, and compares it with others recorded in science, in order to assist in obtaining a methodical description of the disease.

The disease, which is endemic in hot countries, is observed between 30 deg. North latitude and 35 deg. South latitude; that is, in America, in the Antilles, Guiana, Brazil, Chili, and Peru; in Africa, in Egypt, the Cape, Madagascar, and the Mauritius; in Asia, in Calcutta, Java, and Sagon. Both sexes, all ages, all races, are there exposed to it. It seems, however, that Europeans are less attacked by it than the natives. Some examples are recorded in which the disease has been hereditary, and also some in which the hot season has favoured its development, and others in which the cold has caused it to disappear.

The health of those afflicted continues generally good, and usually they recover. During the time of general discomfort which precedes the attack, there is nausea, and sometimes sickness. The urine has a sanguineous and chylous appearance, which frequently changes; and the appetite becomes increased, instead of diminished; indeed, some of the patients have a real *bulimia*. Nothing abnormal is found on auscultation of the heart and carotids. In a patient of Dr. Crevaux, frequent epistaxis took place a year before the attack, and disappeared afterwards. The serum of the blood is not milky. Sometimes there is sudden throbbing in the region of the kidneys; but more frequently there is scarcely any discomfort before the attack, and it is with the greatest astonishment that the patient sees his urine red as blood or white as milk. He has a frequent desire to pass urine; and clots are expelled easily, which usually are soon dissolved. The urine has all shades of colour between the two extremes. The red clots, from their solidity and their vermiform shape, appear to be formed in the ureters; they have also a tremulous gelatinous look, which makes them greatly resemble the curd of milk. The odour is variable, generally very faint, sometimes indicating ammonia or sulphuretted hydrogen. The taste resembles nothing so much as that of milk. The density varies between 1005 and 1025. The quantity differs little from the normal amount. Polyuria, it seems, is a bad sign. The urine is generally acid at the moment of its emission. Heat and nitric acid cause an abundant precipitate, the quantity of which is in proportion to the amount of blood and fat corpuscles. Sometimes albumen is found. Urea is demonstrated when the fatty matter is removed by ether. From seven to nineteen parts of fatty matter have been found in one thousand parts of the fluid. Uric acid is often found; sometimes triple phosphate; sugar never; but always veritable blood-corpuscles, many of the white corpuscles appearing to be leucocytes. The white colour of the urine is due in a great part to attenuated powdery granules, also of a fatty nature. A number of discolorised fibrinous cylinders, which are empty and free from fatty molecules, are also met with.

This disease is always chronic. It usually appears in paroxysms, and sometimes hæmaturia exists alone. A creole, who was a sufferer from this disease for fifty years, died at the age of eighty.

Three theories have been put forth—that of the chyle, that of the lymph, and that of fat in the blood. The author adopts the last, and says he has seen the blood of the famous geese with fatty livers as white as the urine of his patient. "The white matter", he adds, "proceeds from the lymphatic glands; and the blood-corpuscles come from the capillaries. The discharge is the consequence of rupture of the vessels in some part of the mucous lining of the urinary apparatus. In all the cases observed by Dr. John Harley, the rupture was caused by a helminth—the *Distomum capensis;* and he has the honour of having first discovered and made known this fact."

Therapeutically, he advises residence in cold and elevated regions; cold baths; reduction of the amount of heat-producing foods, such as fat, alcohol, sugar, and starches; and the employment of certain anthelminthics, whose action upon the *Distomum* has been shown by Dr. Harley, such as iodide of potassium, taken by the mouth or injected into the bladder. These injections should be alternated with those of the oil of the male fern. He also recommends copaiba, and refers to the case of a young man from the Isle of France who was attacked by an obstinate hæmaturia and by blennorrhagia, but who recovered from both diseases by the help of copaiba.

The quarterly dinner of the Edinburgh University Club will take place at St. James's Hall on Thursday, August 1st.

The four hundredth anniversary of the University of Munich will be celebrated on August 1st.

The King of Sweden has conferred the Knighthood of the order of Wasa on Dr. Lewis A. Sayre, of New York.

His Royal Highness the Prince of Wales has graciously consented to become the Patron of the Hospital for Diseases of the Throat.

Dr. Tilt has been elected a Corresponding Fellow of the New York Academy of Medicine.

A MAIL despatch from South America states that small-pox is committing great ravages on the West Coast.

THE Municipal Council of Paris has agreed to the construction of a laboratory for pathological chemistry adjoining the Ecole Pratique.

THE deaths from small-pox in Vienna amounted to seventy-two during the week ending July 19th. Outside the hospitals, the victims are almost without exception children.

MR. DONALD DALRYMPLE has given notice that, on Monday next, he will move for leave to bring in a Bill providing for the detention and treatment of habitual drunkards.

THE forty-fourth annual meeting of the Medico-Charitable Society of the West Riding of Yorkshire was held at Harrogate on the 11th instant, under the presidency of Dr. Myrtle. The sum of nearly £500 was voted to seventeen applicants.

THE College of Professors in the University of Vienna have determined on adding a third teacher of Clinical Midwifery to the two already existing, and have appointed to the new post Dr. Gustav Braun, Professor of Midwifery in the Joseph's Academy.

SIR JOHN LUBBOCK, Bart., M.P., F.R.S., has been elected Vice-Chancellor of the University of London, in the room of Sir Edward Ryan, who accepted the office for a year only on the death of Mr. Grote.

THE annual distribution of prizes at the Charing Cross Hospital Medical School took place on the 19th instant—R. Few, Esq., presiding. The report of Dr. Julius Pollock, the Dean, on the condition of the Medical School, was very satisfactory.

THE DRAINAGE OF WINDSOR CASTLE.

IT is expected that the extensive works now in progress for the drainage of Windsor Castle and the utilising of the sewage of Frogmore House and the Castle will be completed before the return, in winter, of Her Majesty to Windsor. A reservoir and several fields have already been prepared for the reception of the sewage, and earthenware pipes are being laid at and from the Castle.

LADY DOCTORS.

MRS. CHAPLIN AYRTON has just passed her second professional medical examination (anatomy and physiology) in Paris, with the note of "très satisfait". The Medical Faculty accepted that lady's certificates from Apothecaries' Hall and the Edinburgh University as equivalent to the Bachelier-ès-Lettres and Bachelier-ès-Sciences, and to their first professional examination. Miss Archer, an English lady, who presented herself for their first professional examination (chemistry, physics, natural history, and botany), also passed with "très satisfait".

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THIS Association will hold its annual meeting in Brighton during the week commencing August 14th, under the presidency of Dr. W. B. Carpenter, F.R.S. Dr. Sharpey is to be one of the Vice-Presidents; and the following officers have been elected for the Section of Biology. *President:* Sir John Lubbock, Bart., M.P., F.R.S. *Vice-Presidents:* Mr. John Ball, F.R.S.; Dr. Beddoe; Mr. W. H. Flower, F.R.S.; Colonel A. Lane Fox; Mr. J. G. Jeffreys, F.R.S.; Dr. Burdon Sanderson, F.R.S. This section is subdivided into three departments, as follows. 1. *Zoology and Botany.—President:* Sir J. Lubbock, Bart., M.P. *Secretaries:* Mr. Thiselton Dyer, and Mr. H. T. Stainton, F.R.S. 2. *Anatomy and Physiology.—President:* Dr. Burdon Sanderson, F.R.S. *Secretaries:* Dr. A. Gamgee, F.R.S.; Mr. E. Ray Lankester; Dr. Rutherford; and Dr. Pye-Smith. 3. *Anthropology.—President:* Colonel A. Lane Fox. *Secretaries:* Dr. Charnock; Mr. F. W. Rudler; and Mr. J. H. Lamprey. Dr. Carpenter will deliver his address on the evening of Wednesday, August 14th.

M. RICORD.

OUR associates who are about to visit Birmingham will, we are sure, learn with pleasure that they will have an opportunity of hearing from his own mouth an exposition of the views of the veteran Ricord, on the subjects to which he has specially directed his attention.

A FORTUNATE HOSPITAL.

THE treasurer of the Massachusetts General Hospital at Boston has lately received the large sum of 446,000 dollars, which was paid to him as the result of a provision of the will of the late John Redman. Mr. Redman died twenty years since, leaving a will by which the hospital was made the residuary legatee of his estate upon the death of a son who had a life interest in it. The advance in both real and personal estate since that time has increased the value of the legacy from the 50,000 dollars, which the trustees of the institution once expected to receive, to nearly half a million.

HAMPSTEAD HOSPITAL.

THE managers of the Metropolitan Asylums Board have resolved that no more cases shall be admitted to the Hampstead Hospital, and that when the beds at present filled are empty the place shall be disinfected and prepared for imbeciles now in the London workhouses. All the small-pox cases arising in the districts hitherto covered by the Hampstead Hospital will be sent to the Homerton or Stockwell Asylum. This course has been adopted owing to the great decrease of the disease all over London.

EFFECTS OF THE HEAT IN NEW YORK.

THE American correspondent of the *Times*, writing from Philadelphia on July 5th, says that the people of the regions between the Alleghanies and the Atlantic Coast of the United States are accustomed to very hot weather in summer, but it was doubtful if any portion of the temperate zone was ever subject to a period of such torrid weather as that prevalent there during the week then closing. This region embraces New York, Philadelphia, Brooklyn, Washington, Baltimore, and other large cities. Extensive parts of these cities are crowded to repletion with the ill-ventilated, stifling homes of the poor. At the best of times the mortality is heavy, but during the week referred to it had been enormous. June was a hot month, the average temperature being considerably higher than during any June since 1790. From June 27th until July 5th, the temperature at Philadelphia ranged between 75 deg. Fahr. at 7 A.M. on June 27 and 28, and 9 P.M. on July 4, to 101 deg. Fahr. at 2 P.M. on July 2nd. In five only out of twenty-six observations (at 7 A.M., 2 P.M., and 9 P.M.) the temperature was below 80. At New York, the temperature in the middle of the day was somewhat higher than in Philadelphia; the mercury standing at or above 100 on the 2nd, 3rd, and 4th of July, the highest being 102 on the 2nd. Brooklyn shows somewhat similar reports with New York, and Baltimore and Washington with Philadelphia. Boston had a shorter fiery period, an easterly gale partly relieving her; but all the rest of the section sweltered under the intense heat for the entire week, without rain, or cloud, or relief of any kind, until a fierce tornado swept over the country on the evening of the 5th, and in Philadelphia temporarily reduced the temperature to 75 deg. at 9 P.M., the time when the storm was at its height. Every disease peculiar to summer had multiplied its ravages, particularly sunstroke and infantile cholera. In New York, there had been nearly one thousand cases of sunstroke reported, of which, up to eight o'clock on the 6th, about 230 had resulted in death. In every other part of the section affected sunstroke had also made fearful ravages; and in all the cities the hospitals were filled with patients. Among the little children and infants the mortality from cholera and kindred diseases had been enormous. Dysentery, diarrhœa, and all the other diseases of summer, had also swollen the mortality lists. The sufferings of horses and other animals had been intense; the horses falling down, overcome with heat, and dying in the streets by scores.

A FEMALE HOUSE-SURGEON.

We recently called attention to an advertisement, offering the post of resident medical officer in the Birmingham and Midland Hospital for Women to qualified ladies as well as gentlemen. The result of the competition has been the election of Miss Louisa Atkins, who recently obtained the degree of Doctor of Medicine at Zurich.

POTTERY-GASES.

The Archbishop of Canterbury has called the attention of the House of Lords to the nuisance caused by the Lambeth potteries, which emit large quantities of hydrochloric acid at intervals, and thereby injure the stonework of buildings, and also the contents of libraries, and in particular of the library at his own palace. Dr. Mac Cormack, the medical officer for the district, has accordingly reported on the matter. That the gases emitted from these potteries are very injurious to vegetation and destructive to stone, is admitted by Dr. Mac Cormack, who thinks, however, that they are not "prejudicial to health".

LIGHTNING-STROKE.

The number of accidents from lightning which have occurred, and are reported in the papers during the past week, has been very noticeable. The occurrence of a fatal issue without any or little mark of external violence in some cases, and the comparative immunity from general symptoms and shock, combined with considerable external injury, in others, is remarkable. Of the latter class of cases we recently met with a very extraordinary example, under the care of Mr. James R. Lane, at St. Mary's Hospital, the full details of which we shall shortly publish. The electric current entered above the right ear, destroying the cap, bruising the skin of the ear, destroying the tympanum, melting a silver chain which passed round the person's neck, partially staving in his watch, and tearing his flannel to pieces. The current then passed in a circuitous manner round his right thigh and leg, peeling the skin off in its course, and passed out at the foot, carrying away the greater part of the boot; the right leg of the trousers was at the same time unstitched the whole way down. The man appears to have been rendered insensible only for a few minutes at most, and otherwise suffered little. A fatal case, with similar marks of external violence, occurred a few days ago in Epping Forest.

PRECAUTIONS AGAINST CHOLERA.

An official letter has been addressed to several of the ports on the Eastern coast by the Medical Department of the Local Government Board, stating that information has reached the Local Government Board that cholera, which has for some time been extensively prevalent in the south of Russia, has lately reappeared, and is spreading at St. Petersburgh. Up to the 9th July, 197 cases had occurred there, of which 81 have been fatal. In July and August of last year, orders of Council were made providing for the examination of ships coming from ports infected with cholera; and the attention of the sanitary authorities of ports (especially of such as had much trade with the Baltic) was called to the need for active measures being taken to prevent, if possible, the importation of the disease. The orders of Council made last year in regard to cholera are still in force; and as the disease is now prevalent in St. Petersburgh, and, if it should follow its usual course, will probably later in the season extend, as it did last year, to other Baltic ports, and perhaps to Hamburgh and Altona, the Local Government Board request that attention may, without delay, be again directed to the above-mentioned orders; and that the necessary measures may be taken, as regards the examination of shipping, and the provision (if this have not already been made) of hospital accommodation, in order to prevent any case of cholera, or any articles infected with cholera, being landed without due precautions having been taken against the spread of infection. In urging the sanitary authorities of ports to provide, without delay, the necessary hospital accommodation for the treatment of cholera patients brought in by shipping, the Board observe that port-hospitals for infectious diseases must not be considered as necessary only on such emergencies as the present, but as ordinarily requisite to secure as far as possible the population of sea-port towns from the importation of infectious diseases; and that such hospitals, although now required to meet a special danger, will, if properly constructed, be found of permanent service. Floating hospitals, which are especially suited for the reception of cases from shipboard, were constructed last year in the Tyne, and at Lowestoft and other places; and the authorities of the several ports are advised, if they have not already available hospitals, to ascertain from the Shipping Inspection Committee of the Tyne ports (Tynemouth), or from the Lowestoft Improvement Commissioners, the results of last year's experience.

CLUB-FEES.

At the recent anniversary meeting of the court of the Ancient Order of Foresters at Cradley Heath, it was unanimously resolved to pay the surgeon, Mr. Standish, four shillings per member *per annum*, instead of three shillings as heretofore.

THE PARIS SOCIETIES AND THEIR GERMAN MEMBERS.

In their patriotic determination to purge their lists of members of Germans, some of the Parisian Societies have included Austrian subjects in their proscription, along with the subjects of the German Empire. One of these, Dr. von Wecker, having been informed that he was among those marked for exclusion by the Medical Society of the Arrondissement de l'Elysée, has protested against the proceeding, on the ground that, before the commencement of the war in 1870, he had become a naturalised subject of the Austrian Empire, and had received a title of nobility. He accompanies the protest with a notice of resignation, remarking at the same time that the Société Médico-Pratique, the Société de Médecine Pratique, and the Medical Society of the Seventh Arrondissement, have each excepted him from the sentence of expulsion pronounced against Germans.

MR. HANCOCK.

Mr. Hancock, who has most honourably fulfilled the duties of surgeon to Charing Cross Hospital for many years, and has just been appointed to fill the presidential chair at the Royal College of Surgeons, has resigned his former position. Mr. Hancock will, however, continue to give to the medical school the benefit of his long clinical experience in the ensuing winter session.

HARVEY TERCENTENARY MEMORIAL.

The President and Fellows of the Royal College of Physicians, Pall Mall East, having kindly placed the College at the disposal of the London General Committee of the Harvey Tercentenary Memorial, the first meeting of the Committee will be held there on Monday next, at 5 P.M.

BRITISH MEDICINE IN CHINA.

The tenth annual report (for 1871) of the Peking Hospital, in connexion with the London Missionary Society, drawn up by Dr. John Dudgeon, is before us. It states that, during the year, 10,128 out-patients were treated, and 54 in-patients. In both classes of patients there was a diminution as compared with the two previous years: especially among the in-patients, who numbered 94 in 1869, 64 in 1870, and 54 in 1871. The report contains notes of some interesting cases, and remarks on Chinese notions of medicine.

THE PRUDHOE CONVALESCENT HOME.

The annual meeting of this institution was held on the 22nd instant. The report of the Committee was of a highly satisfactory character; the institution had not only carried on its work without hindrance, but with increasing usefulness. The medical report stated that the number of cases treated during the last twelve months was 628. Of these, 599 were admitted during the year, and 29 were in the Home at 31st March, 1871. Of the total 628, 419 were males, and 209 were females. 129 had been previously under the care of the physicians and surgeons

of the Newcastle Infirmary. 50 were received free of payment, 414 were admitted by subscribers' letters, and 126 on the weekly payment ticket. 222 were from Newcastle, 141 from the county of Durham, and 137 from the county of Northumberland. Of the whole number, 545 were either completely relieved or greatly benefited; 52 were somewhat better; 20 were *in statu quo*; 10 were worse at the date of their discharge; and there was one death. Taken altogether, 597 out of 628, or 95 per cent. of all admitted, received benefit.

INTERNATIONAL OPHTHALMOLOGICAL CONGRESS.

THE International Ophthalmological Congress will meet at the Royal College of Physicians, Pall Mall, on Thursday, Friday, and Saturday, August 1st, 2nd, and 3rd. On Saturday there will be a grand banquet at the Crystal Palace.

THE CONTAGIOUS DISEASES ACTS.

IN supply, on the vote for the dockyard police, Mr. Jacob Bright on Monday night moved to omit the item of £3,648 for the policemen employed under the Contagious Diseases Acts. He was supported by Mr. Brand, who thought the law unjust and one-sided; by Mr. Henley, who objected to this kind of legislation altogether; by Mr. Rylands and Mr. Mundella, who both contended that the Acts had been a failure. Mr. Cardwell said that this was not a proper occasion on which to raise the question; and Sir John Pakington, Mr. Eykyn, and Dr. Brewer testified to the excellent physical effects of the operation of the Acts, and their good working in garrison towns. The division showed, for the amendment, 74; against it, 140.

THE CITY OF LONDON LYING-IN HOSPITAL.

AT the Annual Court of Governors of the City of London Lying-in Hospital, City Road, held on the 17th inst., it was determined to extend the usefulness of that old established and excellent charity, by instituting "an out-door maternity department", for the purpose of aiding poor married women at their own homes. A staff of medical men, midwives, and druggists were appointed to carry out this resolution, which is to come into operation immediately. The patients will be recommended by letters issued to governors upon the plan adopted by kindred institutions. It has been thought desirable that the medical staff, as well as all the other officers employed, should have some remuneration for their services, and not be called upon, as is too frequently done, to give them gratuitously; and we feel confident that the profession at large will appreciate the liberal sentiments thereby evinced in this matter by those having the management of the hospital funds, and, as far as possible, support it. By thus acting, the committee has set an excellent example to other and more wealthy establishments of a like character, by displaying the desire that the members of the hardworked and frequently ill-requited medical profession should not be expected to give their very valuable services without some direct acknowledgment. The area of the new duties is to include the city of London, the parishes of St. Luke, Clerkenwell, Shoreditch, as much of Islington as is bounded by Essex Road to the New North Road, also of Bethnal Green to Cambridge Road, and a portion of Whitechapel.

THE CHILDREN OF THE STATE.

WE are very glad to learn from the reply of the Secretary of the Local Government Board to Mr. W. H. Smith recently, in the House of Commons, that the general order of the Poor-law Board issued by Mr. Goschen on November 25th, 1870, for boarding out pauper children, is giving results not less satisfactory than we had hoped in the cases in which it is being carried into effect. These are, however, as yet, neither so numerous nor so extended as had been hoped. It appears from Mr. Hibbert's statement that, up to the date of the most recent reports from the inspectors, forty-one boarding-out committees had been formed—ten in Lancashire, seven in Surrey, six in Westmorland, and eighteen in fifteen other counties. The order was issued to 134 unions of England and Wales, and only ten of them had availed themselves of its advantages. Of these, four were in the metropolis, and they had boarded out fifty-seven children. The Local Government Board had ordered their inspectors to call and see the children personally, and to report. These reports had been received, and were all of the most satisfactory and encouraging nature.

SCOTLAND.

THE EDINBURGH ROYAL INFIRMARY AND VOTES BY FIRMS.

AN interlocutor has been pronounced by Lord Jerviswoode, giving the opinion that firms may enter one vote at Infirmary elections. The majority of votes recorded in January last in favour of the admission of lady students to the Infirmary wards will thus stand good.

THE SEPTEM CONTRA EDINAM.

THE action in which the lady medical students claim to have their right established to study and to graduate in the University of Edinburgh was debated on Wednesday and Thursday in last week before Lord Gifford. His lordship deferred his decision.

SANITARY STATE OF EDINBURGH.

LORD KINNAIRD'S rhetorical statement in the House of Lords on the death-rate in Edinburgh has called forth statistics and other facts bearing on the subject. A statement by Mr. W. T. Thomson has been forwarded to us, in which he very properly calls attention to the enormous number of burials that take place annually in open graveyards within the city. Mr. Thomson's remarks on the death-rate are less to the purpose. In an attempt to assign any particular cause for the mortality in Edinburgh, we should have expected to be furnished with many facts which Mr. Thomson makes no reference to; such, for example, as a comparative table of the deaths in the old and new parts of the town, where the conditions are totally different. In protesting against open graveyards in the city, Mr. Thomson is doing good service, but his remarks and figures as to the rate of mortality are loose and inexact, and, for his purpose, might have been perfectly well omitted. We hope, however, that Mr. Thomson's ill-advised mixing up of his imperfect statistics on the rate of mortality with the very important question that forms the burden of his statement, will not afford the municipal authorities and their officer of health an excuse for longer deferring the question of interment within the city.

GLASGOW CHAIR OF MEDICAL JURISPRUDENCE.

ANOTHER professorial chair has been filled up, by the appointment of an educated gentleman unknown to science, to the exclusion of a man of mark. Without going so far as to say that the present instance of patronage is so glaring as that which recently occurred in the midwifery appointment at Edinburgh, still the result of the Crown's decision is very disheartening. Great Britain is not overstocked with men of science. If the legitimate prizes be withheld from the cultivators of science, there will be fewer and fewer workers, and the country will fall more than ever in the rear.

IRELAND.

AT the Tipperary assizes, Dr. Kitson sued Dr. M'Keogh for £500 as damages for libel on his mode of treating the gentleman wounded in the attack on bank officials. The jury awarded him 6d.

MR. CARDWELL AND MILITIA SURGEONS.

THE Association of Militia Surgeons, which has been recently formed in Ireland to bring the claims of militia surgeons under the notice of Government, in opposition to Mr. Cardwell's scheme of Militia Medical Reform, have drawn up for circulation a statement embodying leading grounds for objecting to the proposed regulations.

MEDICAL REFORM IN JAMAICA.

THE following memorial has been presented to Sir John Peter Grant, K.C.B., and the members of the Legislative Council of Jamaica, by registered members of the medical profession residing in the island.

That your memorialists are graduates and members of Universities and Royal Colleges of Great Britain and Ireland, and of other licensing bodies therefrom, practising as such in this Her Majesty's Island of Jamaica. That for the obtaining the qualifications entitling your memorialists to practise medicine and surgery in this island, or elsewhere, a comprehensive and lengthy curriculum of study is enforced, and strict and rigid examinations are instituted by the medical schools of the United Kingdom ; and this as well for the better security of the health and lives of those committed to their professional care, as for the purpose of maintaining always at a high standard the status of the medical profession throughout Her Majesty's dominions ; thus protecting it from the encroachments of those who, obtaining from other countries licenses to practise, without these safeguards, and with imperfect tests of their competency ; as also by purchase, view the acquisition of a diploma as a means of pecuniary advantage only, without regard to the higher and nobler aims and objects of the profession of medicine. That there is at present before your Honourable Council a measure entitled "A Bill to Amend the Laws relating to Medical Practitioners", which not only permits the holders of diplomas from all parts of the Dominion of Canada to practise here *without* examination, but grants the same privileges and the same immunity from our local regulations to all those holding qualifications recognised therein. That in order to practise in this island, your memorialists, by the existing Act, were required to register their qualifications in the Island Secretary's office, and pay a registration fee, and by a proviso of the same Act no one can legally practise in this island with, or register a medical qualification other than a British one, without passing an examination before the Board of Examiners appointed under the said Act. That it was under the protection afforded by the said proviso of this and of previous acts, that your memorialists were induced to practise in this island. That a similar protective law exists and is rigidly enforced in almost all the other British possessions in these latitudes. That in the colonial possessions of other powers in Europe, no one not possessing a diploma from the parent country is entitled to practise without undergoing an examination, and in some of these the absence of a diploma from such parent state debars from practice altogether without even the option of such test. Thus your petitioners could not, without infringing the law, practise in Cuba, St. Thomas, or any of the French possessions. The same obtains also in many of the independent republics of South America, namely Peru and Chili, as also in Monte Video, Buenos Ayres, and the Empire of Brazil. That your memorialists desire to submit to your especial attention the fact, that holders of Canadian diplomas are not entitled to registration in Great Britain and Ireland without pre-residence, and without having conformed to a recognised curriculum and submitted themselves to an examination before one of the licensing boards, a diploma from which they may desire to obtain. That there is no Medical Act now in existence in Canada, from a "Dominion point of view", as would appear from the papers and other documents to which your memorialists have been permitted access, but that each state or province has its own regulations and restrictions. Further, it is abundantly manifest from the same source that the several provinces constituting the Dominion, mistrust the qualifications granted by each, and that there is certainly no uniformity and no reciprocity amongst such provinces in the matter of medical qualifications ; therefore, unless the law of 1871 has been passed, each province stands by its own individual enactment, each varying as to what diplomas are recognised, and what rejected. That the Medical Act of Ontario, 1869, which is *de facto* the one now in force, has had grave exception taken to it by the Medical Press of England, on, amongst others, the ground of the composition under the Act of its Medical Council, the which, according to the *Lancet* of March 6th, 1869, is calculated to cast "distrust" on qualifications granted by a body so composed. Your memorialists would draw the attention of your Honourable Council to the extract from the *Lancet* on this point, appended to this their memorial, premising at the same time that the *Lancet* is not the organ of any particular party or section, but is purely a journal devoted to scientific purposes, while it is one of the exponents of the views of the medical profession as a body, of the United Kingdom. That by the 23rd section of the Bill of 1869, cited as "The Ontario Medical Act" (and which section your memorialists append hereto) a qualified person not having become possessed of any one of the qualifications enumerated in schedule A of the Act, *before* the expiration of six months after its passing—"Shall, before being entitled to registration, present himself for examination as to his knowledge and skill for the efficient practice of his profession." In the schedule A your Honourable Council will observe that amongst the enumerated qualifications are those from the United Kingdom. Thus it will be seen that an examination would be demanded even from graduates and members of British colleges, while your memorialists desire only that the clause in the existing law of the colony, requiring examination of those *not* possessing British diplomas, be retained. That the proposed "Dominion" Act of 1871, by which it is sought to consolidate all the licensing bodies of the various provinces, still maintains the features in the composition of its Council so forcibly objected to by the profession in England. Further, it would be manifestly unjust to subject your memorialists to the operation of a law which has not yet, it would appear, received the sanction of the Legislature of the country for which it is designed, and which has been under discussion, and in *statu quo* for nearly two years. That this contemplated law, by section XXIII, provides that persons entitled to registration under the Imperial British Statute, shall be eligible to registration and to the rights and privileges appertaining thereto in Canada *only* in the event of the same being conceded in Great Britain to Canadian qualifications. Thus, should the bill pass into law, the holders of Canadian diplomas would enjoy rights and privileges here, from which your memorialists as holders of British diplomas would be debarred in Canada. Your memorialists would observe that many of the provincial regulations are of an exceedingly vague, unsatisfactory, and transitory nature ; as an example of this, they may remark, that a law of the province of Nova Scotia allows the privilege of registration and practice to any one who presents a diploma from any School of Medicine in "good standing," but the law does not, so far as they are aware, define what may be regarded as constituting such a school. Your memorialists cannot ascertain what are the degrees recognised in the province of New Brunswick beyond those of Great Britain, as all the information obtained goes to show that the Medical Council decides, subject to the approval of the Governor in Council, from time to time, what other colleges or bodies giving qualifications shall entitle the possessor of them to registration. At the same time your memorialists would call attention to the fact that no information has been afforded by the Governments of British Columbia and Prince Edward's Island, relative to the state of medical registration in the respective provinces. That whereas the scrutineers of diplomas, emanating from schools other than those of Canada, are members of the *Medical Council*, appointed by the Act of Ontario, as also by the proposed Dominion Act ; the bill now before your Honourable Council confides this important function, simply to a justice of the peace, without the intervention of any medical element—an element essentially necessary in such scrutiny. As one instance in the transitory character of the regulations, and the absolute necessity there exists for a board of scrutineers of foreign and colonial diplomas, and that such should be composed of medical men, your memorialists would direct attention to section XXIV of the "Contemplated Dominion Act" which provides that schools and colleges recognised at one time may cease to be so at another ; according as from time to time shall be determined by the Council. It would thus be impossible for a justice of the peace to know whether a diploma presented here for registration emanated from a college which had ceased to be recognised in Canada or in any one of the provinces thereof. Your memorialists assure your Excellency and Honourable Council that they are actuated by no selfish motives in this their memorial, but that they are now as they have always been, willing and ready to receive and welcome into the ranks of the profession in this colony not only the possessors of British diplomas, but also those holding foreign or colonial qualifications, who in a fair examination before the Local Examining Board, shall prove their competency to practise the various branches of the medical profession. Your memorialists feel compelled to express their extreme regret that a bill so vitally affecting the medical profession should have been prepared, entertained, and carried through three of its stages in the Legislative Council without any notice whatever of the intention of the Government having been afforded. From the documents forwarded to the Medical Committee by the Honourable Colonial Secretary, it would appear that directions had been given by his Excellency that a copy of the draft bill, when prepared, be forwarded to the principal medical officer of the Government Medical Department, but your memorialists have reason to believe that the intention of his Excellency was not carried out. While willing to believe that this omission may have arisen from inadvertence, your memorialists would most respectfully submit to your Honourable Council that a proportion of the members of the medical profession of the island, each one of whom was individually deeply interested in the measure, is in no way connected with the Government Medical Service. Your memorialists would beg respectfully to suggest that in any future measure

which the Government may contemplate, affecting the medical profession, public and timely notice of the same be given to the members thereof. Your memorialists, therefore, humbly pray, that taking into consideration all the circumstances they have had the honour to lay before your Honourable Council in this their memorial, you will not allow the Act entitled "A Bill to amend the Law relating to Medical Practitioners" to become one of the statutes of this island.

Extract from Section 23rd of the Ontario Medical Act of 1869.—"Every person desirous of being registered under the twentieth section of this Act, and who shall not have become possessed of any one of the qualifications in the said schedule A mentioned, before the expiration of the period of six months after the passing of this Act, shall, before being entitled to registration, present himself for examination as to his knowledge and skill for the efficient practice of his profession before the Board of Examiners in the next section mentioned, and upon passing the examination required, and proving to the satisfaction of the Board of Examiners that he has complied with the rules and regulations made by the Council, and on the payment of such fees as the Council may determine, such person shall be entitled to be registered, and in virtue of such registration, to practise medicine, surgery, and midwifery in the province of Ontario".

A Bill to Amend the Law Relating to Medical Practitioners.

The following is the Bill referred to in the foregoing memorial.

Whereas it is desirable that the provisions of "The Medical Act, 1859", (23 Victoria, session 1, chapter 17) and the statute amending the same (23 Victoria, session 2, chapter 1) should be extended so that licentiates of any college, or faculty of physicians and surgeons, recognised in all parts of the dominion of Canada may be admitted to practise in this island: and whereas it is desirable that the provisions of the said statutes, with respect to the registration of medical practitioners, should be amended: be it enacted by the Governor of Jamaica, with the advice and consent of the legislative council thereof, as follows:

1. Any person, being a fellow licentiate, or extra licentiate of any college or faculty of physicians and surgeons, and being as such, authorised to practise as a physician or surgeon in all parts of the dominion of Canada, who shall desire to practise medicine and surgery, or medicine or surgery in this island, shall upon the production by him to the registrar of a declaration to be made before any justice of the peace, according to the form annexed to this law, declared to and signed by him, and impressed with a stamp of twenty shillings, together with the diploma license, or other document referred to in such declaration, be entitled to be registered under the said recited statutes as a duly qualified medical practitioner.

2. Whereas it was the intention of sections 3 and 4 of "The Medical Act, 1859", that any person making a declaration, such as is specified in the said sections, should produce to the justice of the peace before whom such declaration is taken the diploma license, or other document mentioned in the forms B and C contained in the schedule to the said statute and referred to in the said sections; and whereas such intention is not expressly stated in the said statute, it is enacted that no declaration under either of the said sections or under this law taken by any justice of the peace shall entitle the declarant to registration unless the diploma license, or other document mentioned in the said forms B and C, is produced to the justice of the peace at the time that he takes such declaration, and is then marked for identification by such justice, and is produced so marked to the island secretary, together with the declaration.

3. It shall be lawful for the Board of Medical Examiners, if they shall in any case think that any person on the register of medical practitioners, whether registered before or after the passing of this law, has improperly obtained such registration, to require such person to produce to the registrar a declaration taken before a justice of the peace under "The Medical Act, 1859," or under this law, together with the diploma license, or other document referred to in such declaration duly marked for identification by such justice at the time that the declaration was made. If such person neglect for the space of three months after being so required as aforesaid, to produce such declaration and diploma license, or other document, to the registrar, and neglect to account for his inability to produce the same in a manner satisfactory to the said board, the said board may, if they think fit, direct the registrar to strike the name of such person from the register, and the registrar shall obey such direction.

4. Except as altered by the law the said recited statutes shall be incorporated with and read as part of this law.

Form Referred to in this Law.

I, residing in the parish of in Jamaica, do hereby declare that I am a (fellow licentiate or extra licentiate, as the case may be) of the (here state the college or faculty), which said (college or faculty) is recognised in all parts of the dominion of Canada, and that I was authorised by such college or faculty so recognised as aforesaid, on the day of in the year one thousand eight hundred and as appears by my diploma (or license, or other document) to practise medicine and surgery (or medicine or surgery, as the case may be) in all parts of the dominion of Canada. (Signed) J. O.

Declared before me this day of one thousand eight hundred and

SMALL-POX IN THE METROPOLITAN HOSPITALS.

A VALUABLE statistical document has just been issued by the managers of the Metropolitan Asylum District, in the form of the report of a Committee appointed on the 1st June, to collate and report upon the returns furnished by the committees of the several hospitals, and also such supplemental returns and information as the medical superintendents have been able to supply with regard to the cases of small-pox treated therein. The report includes—1. A summary, in a form prescribed by the managers, showing the numbers admitted of each sex, in decennial groups of ages (after the first ten years), distinguishing the vaccinated from the unvaccinated; the number and percentage of deaths in each group and class; and the total admissions, deaths, and rates of mortality from the opening of the several hospitals to the 30th April, 1872. 2. A table showing the proportion of the numbers admitted within each decennial group of ages, both vaccinated and unvaccinated, to the total numbers admitted, and the corresponding proportions of deaths to the total numbers of deaths. 3. A statement showing at the decennial groups of ages the decreasing rate of mortality according to the number of vaccination marks, whether good or bad, as exemplified in 5,539 cases treated in the Hampstead and Stockwell Small-pox Hospitals. 4. A table showing the relative rates of mortality in unvaccinated, and in well and in badly vaccinated cases, as exemplified in 3,085 cases treated in the Homerton Fever and Stockwell Small-pox Hospitals. The Committee express the belief that, although the protection afforded by vaccination has been conclusively proved, and the percentages of mortality in each class of cases have been frequently given, the more detailed statistics now set forth will be found interesting not only to those engaged in the treatment of small-pox, but also to the public generally.

The first table shows that 11,174 cases reported as vaccinated were treated, of which 6,169 were males and 5,005 females; that 3,634 unvaccinated cases were treated, of which 1,884 were males and 1,750 females; and that the rate of mortality in vaccinated cases was 10.15 per cent., and in unvaccinated cases 44.80; the percentage in both classes being higher in the male than in the female cases. The death-rate on the whole number was 18.66 per cent.; but of the 2,763 deaths, about 394 occurred within forty-eight hours after admission. If these cases, which can scarcely be said to have been under treatment, are subtracted, the average mortality will be reduced to 16.4 per cent., and, exclusive of children under five years of age, to 14.0 per cent. The Committee observe that much has been said by the opponents of vaccination upon the fact that the vaccinated cases received into the hospital are three times as numerous as the unvaccinated cases; but, for this to be of any importance, it ought, at the same time, to be shown that the number of the vaccinated population is not more than three times the number of the unvaccinated: so far, however, from this being the case, it is estimated that, even previously to the commencement of the present epidemic, the vaccinated were about nineteen times as many as the unvaccinated.

A second table shows the proportions which the number of cases admitted in each group of ages bears to the total number admitted, and also the proportions which the deaths bear to the total number of deaths. The proportion of children under 10 years of age was 8.79 per cent. of the whole number of vaccinated cases, and 43.86 per cent. of the whole number of unvaccinated cases. Between 10 and 30, there were 73.96 per cent. of vaccinated cases, and 42.39 per cent. of unvaccinated cases; and the percentage of deaths among the vaccinated children under 10 was 8.63 of the whole number of deaths, and among the unvaccinated 49.45 per cent. Whilst the admissions between the

ages of 10 and 20, of vaccinated cases, were 40 per cent. of the whole number admitted, the deaths were 20 per cent. of the whole number of deaths; showing the chances of recovery to be about twice as great as the chances between 20 and 30, when the death-rate was 36 per cent., and the proportion of admissions 33 per cent.

A third table shows at decennial groups of ages the decreasing rate of mortality, according to the number of vaccination marks, whether good or bad, as exemplified in 5,539 cases treated in the Hampstead Hospital and the Stockwell Small-pox Hospital. The percentage of deaths which, in the whole of the unvaccinated cases was 55.9, decreased from 15.2 in cases with one mark, to 5.5. in cases with five or more marks.

The fourth table shows the comparative results in unvaccinated cases, in cases which have been badly, and in cases which have been well, vaccinated; distinguishing those under from those above 15 years of age, as taken from 3,085 cases treated in the Homerton Fever and the Stockwell Small-pox Hospitals. The mortality, which in unvaccinated cases was no less than 47.5 per cent., and in badly vaccinated cases 25 per cent., varied in well-vaccinated cases from 5.3 in those showing one good mark, to 1.1 in those showing four or more good marks; and of the total of 420 well vaccinated cases under 15 years of age, the death-rate was only 0.47 per cent., giving a comparative immunity from fatal results.

More males than females were treated (the numbers being 8,053 males and 6,755 females), and the percentage of deaths in the former was higher than in the latter—viz., 19.50 males and 17.64 females. The reasons given by Dr. Grieve for this are the extra wear and tear undergone by the man, his more irregular habits (which unfit him to cope with the disease), and his occupation generally bringing him more into contact with the disease. The differences in the numbers and in the death-rates of the two sexes were chiefly in adults. Up to 20 years of age the numbers admitted were 4,112 males and 3,803 females, and the death-rate was nearly the same—17.9 per cent. in males and 17.6 in females.

The report next comments on the additional cost imposed upon the ratepayers in consequence of non-vaccination and the imperfect manner in which vaccination is often performed. The average duration of treatment of a well vaccinated case is about twenty-four days. Up to the 30th March last, 14,300 cases were treated, of which 2,700 died, and 11,700 remained under treatment until complete recovery. If all these had been properly vaccinated, the duration of their stay in hospital should have been about 245,400 days; but the actual number of days charged to the parishes and unions for these 11,700 cases (allowance having been made for the 2,700 deaths) has been 378,700, or 133,300 days more than would probably have been the case had all been well vaccinated; which, as the average cost per patient for maintenance has been 1s. 4¾d. per day, represents an extra charge of upwards of £9,300 for maintenance alone, exclusive of the proportionate additional expenditure incurred for the salaries and maintenance of officers, and the other establishment charges of the hospitals. Again, as the average rate of mortality in well vaccinated cases is only about four per cent., the deaths would probably have been under 600 instead of 2,700, and thus 2,100 lives might have been saved.

The necessity of revaccination when the protective power of the primary vaccination has to a great extent passed away, cannot be too strongly urged. No greater argument to prove the efficacy of this precaution can be adduced than the fact that, out of upwards of 14,800 cases received into the hospitals, only four well authenticated cases were treated in which revaccination had been properly performed, and these were light attacks. Further conclusive evidence is afforded by the fact, that all the nurses and servants of the hospitals, to the number at one time of upwards of 300, who are hourly brought into the most intimate contact with the disease, who constantly breathe its atmosphere, and than whom none can be more exposed to its contagion, have, with but few exceptions, enjoyed complete immunity from its attacks. These exceptions were cases of nurses or servants whose revaccination in the pressure of the epidemic was overlooked, and who speedily took the disease; and one case was that of a nurse, who, having had small-pox previously, was not revaccinated, and took the disease a second time.

SURGICAL TREATMENT OF ANASARCA.—In a severe case of anasarca, Dr. Wolff (*Berlin. Klin. Wochenschr.*, No. 141, 1872) introduced into the skin a number of fine cannulæ, such as are used for subcutaneous injection, and left them there. Through twenty-five cannulæ thus used, twenty quarts of fluid were discharged in three days. The fluid was carried away in elastic tubes into a vessel near the bed. No inflammation of the punctures, nor any other unpleasant results, followed the operation.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
FORTIETH ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in Birmingham, on the 6th, 7th, 8th, and 9th days of August next.

President—JOHN WHIPPLE, Esq., F.R.C.S., Consulting-Surgeon to the South Devon and East Cornwall Hospital.

President-elect—ALFRED BAKER, Esq., F.R.C.S., Senior Surgeon to the General Hospital, Birmingham.

An *Address in Medicine* will be delivered by SAMUEL WILKS, M.D., F.R.S., Physician to and Lecturer on Medicine in Guy's Hospital.

An *Address in Surgery* will be delivered by OLIVER PEMBERTON, Esq., Surgeon to the General Hospital, and Professor of Surgery in Queen's College, Birmingham.

The business of the Annual Meeting will be conducted in *five* Sections, viz.:—

SECTION A. MEDICINE.—*President:* Dr. Bell Fletcher, Birmingham. *Vice-Presidents:* Dr. J. W. Ogle, London; Dr. Wade, Birmingham. *Secretaries:* Dr. Sutton, 9, Finsbury Square, London; Dr. Johnston, 9, Easy Row, Birmingham.

SECTION B. SURGERY.—*President:* Sir William Fergusson, Bart., F.R.S., London. *Vice-Presidents:* George Southam, Esq., Manchester; J. Vose Solomon, Esq., Birmingham. *Secretaries:* Furneaux Jordan, Esq., 22, Colmore Row, Birmingham; T. Vincent Jackson, Esq., Darlington Street, Wolverhampton.

SECTION C. MIDWIFERY.—*President:* Dr. Evory Kennedy, Dublin. *Vice-Presidents:* Samuel Berry, Esq., Birmingham; Dr. J. Matthews Duncan, Edinburgh. *Secretaries:* Dr. Underhill, Summerfield, West Bromwich; Lawson Tait, Esq., Great Charles Street, Birmingham.

SECTION D. PUBLIC MEDICINE.—*President:* The Rev. Dr. Haughton, D.C.L., F.R.S., Dublin. *Vice-Presidents:* Dr. Birt Davies, Birmingham; Dr. T. P. Heslop, Birmingham. *Secretaries:* Dr. Arlidge, Newcastle-under-Lyme; Dr. Alfred Hill, Winson Green, Birmingham.

SECTION E. PSYCHOLOGY.—*President:* Dr. Maudsley, London. *Vice-Presidents:* Dr. J. Batty Tuke, Cupar, Fife; Dr. J. Crichton Browne, Wakefield. *Secretaries:* Dr. G. F. Bodington, Sutton Coldfield; Dr. J. Thompson Dickson, 59, Queen Anne Street, Cavendish Square, London.

All the meetings in connection with the Annual Meeting will be held at King Edward's School, New Street.

The five Sections will be held—A. *Medicine:* Governors' Room, King Edward's School. B. *Surgery:* Lecture Room, King Edward's School. C. *Midwifery:* Upper Class Room School House, King Edward's School. D. *Public Medicine:* Classical School Room, King Edward's School. E. *Psychology:* Lower Class Room School House, King Edward's School.

The General Meetings and the Addresses in Medicine and Surgery in the Classical School Room.

The Annual Museum will be held in the English School Room.

TUESDAY, *August 6th.*

1 P.M.—MEETING OF COMMITTEE OF COUNCIL—Governors' Room.
3 P.M.—MEETING OF GENERAL COUNCIL—Governors' Room.
8 P.M.—FIRST GENERAL MEETING—Classical School Room.
Business—
President resigns Chair to President-elect.
Vote of thanks to Ex-President.
The President's Address.
REPORT OF COUNCIL and discussion thereon. Election of General Secretary; election of Auditors.

WEDNESDAY, *August 7th.*

9.30 A.M.—MEETING OF NEW COUNCIL—Governors' Room.
11 A.M.—SECOND GENERAL MEETING—Classical School Room.
Business—
Appoint place of meeting for 1873, and President-elect. Presentation of Hastings Medal.
11.30 A.M.—ADDRESS IN MEDICINE, by SAMUEL WILKS, M.D., F.R.C.P., F.R.S., Physician to Guy's Hospital.
1 P.M.—PUBLIC LUNCHEON (by invitation of the Birmingham and Midland Counties Branch)—Exchange Assembly Rooms.
2 P.M.—MEETINGS OF SECTIONS—King Edward's School. Adjourn at 5 P.M.
8 P.M.—PRESIDENT'S SOIRÉE—Town Hall.

THURSDAY, *August 8th.*

10 A.M.—THIRD GENERAL MEETING—Classical School Room. Reports of Committees.

11 A.M.—ADDRESS IN SURGERY, by Professor OLIVER PEMBERTON, Surgeon to the General Hospital.

1 P.M.—PUBLIC LUNCHEON (by invitation of the Birmingham and Midland Counties Branch)—Exchange Assembly Rooms.

2 P.M.—MEETINGS OF SECTIONS—King Edward's School.

6.30 P.M.—PUBLIC DINNER OF THE ASSOCIATION—Exchange Assembly Rooms.

FRIDAY, *August 9th.*

10 A.M.—MEETINGS OF SECTIONS.

1 P.M.—PUBLIC LUNCHEON (by invitation of the Birmingham and Midland Counties Branch)—Exchange Assembly Rooms.

2 P.M.—CONCLUDING GENERAL MEETING.

RECEPTION-ROOM.—The upper Corridor, King Edward's School, will be fitted up as a Reception-Room, and will be opened at 10 A.M. on Tuesday, August 6th, and on the following days at 8 A.M., for the issue of tickets to members and for supplying all necessary information.

Gentlemen are requested to register their names and addresses in the Reception-Room immediately after their arrival.

The Offices of the General Secretary, of the Editor of the JOURNAL, and of the Honorary Local Secretaries, will be found in connection with the Reception-Room.

The Honorary Local Secretaries are—

T. H. BARTLEET, Esq., 8, Old Square.
Dr. BALTHAZAR FOSTER, 16, Temple Row.
J. F. WEST, Esq., Bingley House, Broad Street.

GENERAL ARRANGEMENTS.—*Reception-Room.*—Provision will be made for the receipt and postage of letters, and for the care of parcels, etc. A writing-room and lavatories will be provided.

The General Post Office is in New Street, and the Postal Telegraph Office is in Cannon Street, near King Edward's School.

Gentlemen intending to visit Birmingham during the meeting are requested to send their names as soon as possible to the Secretaries of the Visitors' Committee—Dr. Mackey, Newhall Street; and Mr. Lloyd Owen, Newhall Street.

Members requiring Private Lodgings are also requested to apply at once to either of the Secretaries of the Visitors' Committee.

HOTELS.—The following are the chief hotels: "The Hen and Chickens", New Street; "The Queen's", attached to the London and North-Western and Midland Railway Station; "The Great Western", attached to the Great Western Railway Station; "The Union", Union Street; "The Stork", Old Square; "The Swan", New Street; "The Royal Hotel", Temple Row; and at Edgbaston, "The Plough and Harrow".

The new Club Masonic Hall, New Street, will (by the kindness of the Committee) be open to members of the Association during the meeting.

EXCURSIONS.—*Friday.* I. Black Country Excursion. A special train will leave Birmingham for Dudley. The Earl of Dudley's Iron Works at Round Oak will be visited, and the manufacture of iron in all its details shown to the visitors. The Dudley Caverns will be illuminated by Lord Dudley for the visit of the Association. The Ruins of Dudley Castle will be visited; and, in the town of Dudley, the Geological Museum will be open for inspection.—The Associates in South Staffordshire and East Worcestershire invite the visitors to luncheon at Dudley.

Friday. II. Worcestershire Excursion. A special train will leave Birmingham for Stoke Prior, where Mr. Corbett's Salt Works will be open to the members. The train will then return to Blackwell, where the site of the new Sanatorium will be visited. Thence the members will walk to the Lickey Hills, visiting, on the way, Hewell Grange (the seat of Lord Windsor), where the grounds and gardens will be open, by the kind permission of Lady Mary Windsor Clive.

Mr. Prosser of Bromsgrove invites all members of the Association who join this excursion to Luncheon at the Rose and Crown Hotel, Lickey, whence members will return by train to Birmingham.

Saturday. Warwickshire Excursions. Special trains will leave Birmingham early on Saturday, to enable members to visit (1) Leamington, Kenilworth Castle, and Warwick Castle; and (2) Stratford-on-Avon.

(1) At LEAMINGTON, the Town Sewage Works and Lord Warwick's Sewage Farm will, by the permission of the Local Board and Lord Warwick, be open for inspection. The Pump Rooms and the Jephson Gardens will repay a visit.—Mr. Ebbage, President of the Birmingham and Midland Counties Branch, invites members to luncheon at his residence.—Kenilworth can be readily reached by ordinary train from Leamington, where the ruins of the Castle can be visited. Members can proceed on the return journey to Warwick by train, or, if they prefer it, by an easy and picturesque walk passing Guy's Cliff.—At Warwick, the noble Castle, St. Mary's Church, the Beauchamp Chapel, and the Leicester Hospital, form objects of great interest.—Dr. Tibbits of Warwick invites members to luncheon.

(2) The excursion to Stratford-on-Avon will enable members to visit Shakespeare's House; the remains of New Place; the poet's monument in the fine parish church; and the churchyard, beautifully situated on the banks of the Avon. Excursions will be made to Ann Hathaway's Cottage, and to Charlecote, by kind permission of Mr. Spencer Lucy.—In the town, Messrs. Flower and Sons have kindly offered to allow members to inspect their extensive breweries.—Dr. Nason invites members visiting Stratford to luncheon at the Town Hall.

*** *It is especially requested that all gentlemen who intend to avail themselves of these excursions, will send in their names to Mr. W. C. Gannan, Honorary Secretary of the Excursion Committee, at the Reception Room, King Edward's School, not later than Wednesday, August 7th, at* 4 P.M., *for the Friday excursions, or than Thursday, August 8th, at* 4 P.M., *for the Saturday excursions.*

On Friday, a Flower Show will be held at the Botanical Gardens, Edgbaston, to which members of the Association will be admitted on presenting their cards.

The following places of interest in the neighbourhood may be conveniently visited by the members during the meeting:—Lichfield city and cathedral; Worcester city and cathedral, with the Malvern Hills; Coventry, with its Guildhall and churches; Sutton Park; Burton-on-Trent, where Messrs. Bass and Co.'s breweries will be open to members of the Association; Redditch, where Mr. William Smith has kindly offered to shew his fellow-Associates the process of manufacture of needles and fish-hooks. Messrs. Chance Brothers' Glass Works at Spon Lane will be open to a limited number of members on Thursday and Saturday of the meeting: early application must be made by letter to Dr. Balthazar Foster, at the reception room.

During the meeting, the following institutions and manufactories will be open to the members of the Association on presenting their cards of membership:—The Free Library, the Shakespeare Library, and the Art Gallery, Ratcliff Place.—The Midland Institute News Room and Museum, Ratcliff Place.—The Old Library News Room, Union Street.—The Deaf and Dumb Asylum and the Blind Asylum, Church Road, Edgbaston.—Mr. Mason's Orphanage, Erdington.—Messrs. Elkington and Mason's Electro-Plate Works.—Messrs. Winfield's Brass Foundry, Cambridge Street; Messrs. F. and C. Osler's Glass Chandelier Factory, Broad Street; Messrs. McCallum and Hodson's Papier Mâché Works, Summer Row; Messrs. Edelsten and Williams's Pin Factory, George Street; Messrs. Hardman and Co.'s Stained Glass Mediæval Furniture Manufactory, Newhall Hill; Messrs. Gillott's Steel Pen Works, Graham Street; Messrs. Bragg's, Jewellers, Vittoria Street; Messrs. Hammond, Turner, and Sons' Button Manufactory, Snow Hill; Messrs. Stone, Fawdry, and Stone's Glass Works, Dartmouth Street; Messrs. Tonks and Sons' Brass Foundry, Mosely Street; Messrs. Blews and Sons' Bell Foundry, Bartholomew Street; Messrs. J. and E. Wright's Wire Rope Works, Garrison Lane; the Stephenson Tube Works, Liverpool Street; the Proof House (10 A.M. to 12, and 3 to 5 P.M.), Banbury Street; the Small Arms Factory (9 A.M. to 12, and 1 to 6 P.M.), Small Heath; the Borough Gaol; the Borough Lunatic Asylum; and all the Medical Charities.

The Honorary Local Secretaries regret that up to the present the railway companies have refused to grant any extra accommodation to the members of the Association visiting Birmingham.

THE ANNUAL MUSEUM.—The Committee invite contributions of the following articles.

1. New or improved Surgical Instruments or Apparatus.
2. New Drugs or Pharmaceutical Preparations.
3. New Articles of Diet for Invalids.
4. New Medical Works.
5. Pathological Specimens, wet or dry; and Casts, Photographs, Drawings, or Diagrams, illustrative of Pathological Conditions.
6. Preparations, etc., illustrative of Diseases of the Organs of Circulation; and Instruments employed in their detection and treatment. It is the intention of the Committee to arrange these in a separate department of the Museum.

Contributors are requested to send a description of the matters which they propose to exhibit to the Honorary Secretaries before July 13th, as it is intended to issue a printed catalogue.

The Honorary Secretaries for the Annual Museum are—

CHARLES J. BRACEY, Esq., M.B., Old Square, Birmingham.
ROBERT JOLLY, Esq., M.D., Newhall Street, Birmingham.

NOTICE OF MOTION by DR. A. B. STEELE.

That the Treasurer be authorised to pay the travelling expenses of members attending the meetings of Committee of Council, and of its Subcommittees in all cases in which provision for such payment does not already exist.

ALTERATION OF LAWS.—Notice of Motion by Dr. A. B. STEELE.

That Laws 15 and 16 be so altered as to read as follows.

1. The subscription to the Association shall be one guinea *per annum*, which shall entitle each member to receive the publications of the Association for the current year. The subscription shall date and be considered due in advance on the 1st of January in each year, except in the case of a member admitted on or after the 1st July, when the subscription for such part of a year shall be half a guinea in advance.

2. Any member whose subscription shall not have been paid on or before the 31st December of the current year shall be suspended from all privileges of membership; and at the end of the succeeding year, if the arrears be still unpaid, he shall cease to be a member, and shall be ineligible for readmission until he shall have paid all arrears due at the period of his suspension.

3. Any member wishing to withdraw from the Association shall give written notice of his intention to the General Secretary on or before the 1st December of the current year; and neither withdrawal, suspension, nor erasure of a member's name from the books of the Association, shall be deemed either in honour or equity to relieve such member from his liabilities to the Association.

PAPERS.—The following papers have been promised :—

A. B. Steele, L.R.Q.C.P. On the Treatment of Puerperal Eclampsia.

W. F. Teevan, F.R.C.S. 1. On the Treatment of the Impassable Stricture.—2. Clinical Remarks on Stone in the Bladder.—3. On Impotence.

W. Macdonald, M.D. Embryonic Circulation.

Reginald Harrison, F.R.C.S. On the Relative Value of Certain Methods of Treating Stricture in the Urethra.

A. E. Sansom, M.D. The Disinfection of Air.

Edward John Tilt, M.D. On Uterine Inflammation after the Change of Life.

Protheroe Smith, M.D. Fibroid Degeneration of the Uterus, and the Best Way of Treating it.

J. Althaus, M.D. On the Treatment of Rheumatic Gout by the constant Galvanic Current.

A. R. Simpson, M.D. On the Removal of Portions of Morbid Tissue in Cases of Carcinoma Uteri.

William Adams, F.R.C.S. Three Additional Cases of Subcutaneous Division of the Neck of the Thigh-bone: with Remarks.

James F. West, F.R.C.S. Syphilitic Constriction of the Œsophagus.

Lawson Tait, F.R.C.S. 1. Ovariotomy. 2. Intrauterine Therapeutics. 3. Statistics of Lying-in Institutions.

Alfred Wiltshire, M.D. On the plan of Treatment of Cancer proposed by Professor Simon of Heidelberg: with Cases.

Charles Warden, M.D. 1. On Polypus of the Ear and Perforation of the Membrana Tympani, and the Instruments used in the Diagnosis and Treatment of Diseases of the Ear, at the Ear and Throat Infirmary, Birmingham; also, upon a new form of Artificial Drum. 2. Spinal Curvature, Club-Feet, and other Deformities, and the Instruments used in their Treatment at the Birmingham Orthopædic Hospital.

W. Acton, F.R.C.S. Treatment of the advanced stages of Constitutional Syphilis.

Charles Steele, F.R.C.S. On Colotomy for Intestinal Obstruction.

William Stokes, M.D., F.R.C.S.I. Reduction of Dislocation by a modification of Jarvis's Adjustor.

Edward Lund, F.R.C.S. Removal of both Astragali in a Case of severe Double Talipes.

T. H. Bartleet, M.B., F.R.C.S. Two Cases in which the Femoral Artery was tied for unusual Pathological Conditions.

Balthazar Foster, M.D. 1. The Lactic Acid Treatment of Diabetes. 2. Notes on Diseases of the Heart.

J. W. Eastwood, M.D. The Use of Alcohol in Health and Disease.

W. R. E. Smart, M.D., C.B., Inspector-General R.N. Notes towards the History of the Medical Staff of the English Army prior to the Accession of the Tudors.

James Thompson, M.B. 1. Remarks on the Mineral Waters of Leamington. 2. Remarks on the use of Secale Cornutum in cases of Labour complicated with Feeble Action of the Heart. 3. Details of a Case of Necrosis of the major portion of the Clavicle in a Child.

Thomas P. Heslop, M.D. The Necessity for the Complete Severance of the Sale of Drugs from the Profession of Medicine.

George Southam, F.R.C.S. Case of Dislocation of the Patella on its Edge.

S. M. Bradley, F.R.C.S. Tricœlian Human Heart.

John Bassett, M.R.C.S. Secondary Uterine Hæmorrhage.

A. C. C. de Renzy, M.R.C.S., Surgeon-Major Indian Army. Sanitary Improvement in India.

Andrew Fergus, M.D., Glasgow. Deranged Soil-pipes as a cause of Diphtheria, Typhoid, and other Diseases.

Furneaux Jordan, F.R.C.S. 1. Removal of the Tongue. 2. Lithotomy in the Female.

Charles B. Taylor, M.D. The Modern Art of Tinting Opacities of the Cornea.

Thomas Chambers, M.R.C.P. Case of Retroflexion of the Uterus: Progressive Hemiplegia with great loss of Temperature: Replacement of the Uterus: Recovery.

Alfred Hill, M.D. 1. Drinking Water and its Analysis. 2. The Use of Arsenical Colours.

George Cordwent, M.D. The first Stages of Progress of the late Epidemic of Small-pox at Taunton.

James Ross, M.D. The Graft-theory of Disease.

Edward Woakes, M.D. Scarlet Fever and Syphilis: a Suggestion.

Gentlemen desirous of reading papers, cases, or other communications, are requested to forward the titles to the General Secretary, or to one of the Secretaries of the Section in which the paper is to be read. All papers should be forwarded to one of the above named officers *on or before the 1st of August.*

No paper must exceed *twenty* minutes in reading; and no subsequent speech must exceed *ten* minutes.

All speeches at the General Meeting must not exceed *ten* minutes each.

FRANCIS FOWKE, *General Secretary.*

General Secretary's Office, 37, Great Queen Street, W.C.,
July 3rd, 1872.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, July 18th.

PUBLIC HEALTH BILL.

The House resolved itself into Committee on this Bill.

Mr. GOLDNEY moved an amendment, of which he had given notice, believing it would be convenient at the outset to define the bodies to whom the sanitary authority should be relegated. If the sanitary authority were vested in a proper and efficient body, the rather meagre provisions of the Bill would, probably, succeed, but otherwise they could not. The boards of guardians had failed to discharge the duties imposed on them by previous statutes, no fewer than twenty-three or twenty-four of which would be repealed by the present measure, the principal being the Nuisance Removal Act and the Diseases Prevention Act. Boards of guardians had failed in carrying out the Cattle Plague Act, whereas the counties had effectively administered it. This Bill, however, gave to boards of guardians duties which they had hitherto confessedly neglected, and put into operation a Bill which had proved very defective. A county board would be a great advantage over boards of guardians. Its accounts would be regularly published, and its proceedings would receive greater publicity, and be more widely criticised than those of the guardians, the only effectual check to whom would be the Local Government Board. The county boards he proposed would be formed of county magistrates elected at quarter sessions, with an equal number of representatives elected by boards of guardians. These would have under their supervision the sanitary arrangements of the county; and he thought it would be a great advantage to the ratepayers that such a board should have to deal with an extensive area. Such a wide jurisdiction prevented local quarrels and jealousies among rival and smaller jurisdictions. Possibly in boroughs these questions might not arise in the same degree; but, with regard to rural districts, as the Bill stood, there would be no guarantee for a really effectual sanitary administration, and at the same time for proper local self government. He moved that for the word "urban" the word "county" should be substituted.

Mr. CORRANCE concurred with the amendment. The main question for consideration was—who should administer the law? and it would have been well, as he had previously suggested, if this point had been carefully considered before a select committee instead of being left to be dealt with by a tired House of Commons at the fag end of the session. According to the proposal of the Government, the body appointed to administer the provisions of this Bill were the boards of guardians; but he contended that for the task so assigned them they had no inclination, no time, and not the necessary independence. Of their disinclination to engage in these duties it would be easy for members to satisfy themselves; that they had no time was evident from the

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amount of work of different kinds already imposed upon them; and, though no doubt they were independent in one sense, yet as neighbours and men desiring to live on friendly terms with those around them, they would feel tempted to shirk labour, much of which must necessarily be of a disagreeable and unpleasant nature. The Commission appointed to consider this question objected to powers of this kind being vested in the justices, on the ground that the justices were not a representative body. It was true the justices were not elected, but in that sense and that sense only could they be said not to be representative, while the existing boards of guardians, though elected, were not representative for the purpose of this Bill, because at the time of their election they were in no way selected on account of their fitness for the performance of these duties. The tendency of the Bill was, he contended, towards centralisation, and in the present case he very much doubted whether that central power was strong, for it had shown itself too weak even to frame a satisfactory measure dealing with the subject. He was no opponent of the Bill; he wished it to pass; but he could not, at the same time, express any very strong approval of its provisions.

Mr. D. DALRYMPLE, in reply to some remarks which had been made on a former occasion as to the power which the Bill would place in the hands of the medical profession, expressed it to be his belief that without the aid of that profession sanitary reform would be nowhere. There were some hierarchies which were probably worse than a hierarchy of doctors. There was the hierarchy of engineers, who thought the earth was created that they might operate upon it, and it was even possible to have such a thing as a hierarchy of lieutenant-colonels. As to the Bill itself, he thought the board of guardians, who had quite enough to do as it was, and who were a fluctuating body, would not form a good sanitary authority. His second objection to the Bill was, that there was to be under its operation no controlling authority except the central board, and that all the rest was to be done by inspectors. His third objection was that, although the Poor-law medical officer might be a very useful person to carry into effect certain portions of the Bill as a general rule, he was not the best person on whom to confer some of the powers which it created. His fourth objection was to the division of powers between the different local boards, as if there were any difference in sanitary matters between urban and rural districts. He referred to certain amendments which he had placed on the notice paper, but which he now intimated his intention to withdraw, leaving with the Government the *onus* and responsibility of preparing at some future time a more complete and efficient sanitary measure.

Sir M. H. BEACH said it was unpleasant for any member to appear an opponent of a measure for the preservation of the public health, and the difficulty in the present instance was not a little added to by what fell from the right hon. member for North Staffordshire (Sir C. Adderley), who charged those who opposed the present Bill as being enemies to the public health of the country, and objecting to the Bill at one time for being too large, and another for being small. If the Bill was too small, the blame must be thrown on the Government, who preferred to take up the time of the House by the discussion of the Ballot Bill instead of by the consideration of a proper Health Bill. The sanitary authorities proposed to be constituted by the Bill were the Town Councils in boroughs and the boards of guardians in rural districts; but did the Committee think that those bodies were such as could be properly entrusted with the permanent conduct of sanitary matters? With respect to the tenure of office by the members of sanitary boards, the Sanitary Commission specially recommended that if the boards of guardians were to be made the sanitary authorities, the guardians should be elected for a term of three years, instead of for one year. The Sanitary Commission recommended that the owners of property should have a more considerable voice in the election and deliberations of the bodies chosen for sanitary purposes. He failed to see any provision of that kind in this Bill. Even while initiating such authorities, the Government distrusted their course of action, and under the twenty-third clause took powers in reference to them which were of the most vexatious and stringent character. The Bill gave power to the central authority by a provisional order to unite for the purposes of the Sanitary Act any districts; and the powers which, in an analogous matter, the Poor-law Acts gave to unite or dissolve parishes and unions, and the manner in which those powers had been carried out in the metropolis, showed how stringent they were. The right hon. gentleman who formerly presided at the Poor-law Board had treated the ratepayers and boards of guardians in many instances as if they were a set of wilful children. He had not only united or dissolved unions for proper and legitimate purposes, but to a far greater extent than was right and necessary for the purpose of proper administration. It seemed to him that often the unions made by him were simply for the purpose of controlling those who were thus placed under his power. Instead of dividing and conquering, his motto was—unite and conquer. Now, he contended that in the matter of sanitary regulation such powers were bad for the central authority itself, as giving a great deal too much to do, and they were also bad for sanitary administration. The medical officers of health were to be the Poor-law medical officers. They would be placed in a most invidious position if they were required not only to report but to inspect. What they required in the way of medical aid was advice rather than inspection; and where large sanitary questions were involved, Poor-law medical officers were not as a class capable of giving such advice. He had no more wish than the hon. member who said "Deliver us from the doctors" to be governed by them; but, if they were to control us, he would say, "Let us have an able and competent despotism; but don't deliver us over to the Poor-law medical officers, who won't act because they will be afraid to do so, or who, if they do, will be likely to act ignorantly and without experience." If the Bill passed in its present form, it would be a misfortune rather than a blessing, because it would foster centralisation, and that at the very time when localisation was being introduced into the Army. The measure would institute a number of authorities who, being themselves incompetent or unwilling to act, would be the puppets of the central administration; and it would add one more to many futile statutes on the subject of sanitary legislation.

Sir C. ADDERLEY said the verbal amendments proposed by the hon. member for Chippenham raised a point which ought strictly to be discussed on Clause 5; but as the discussion had been commenced, it might as well be continued so as to avoid the necessity of resuming it on the fifth clause. The question was whether, in rural districts, the sanitary authority should be a county body, or should be the board of guardians. As to corporations and local boards, they were pretty well agreed that these must be left untouched. The guardians were already in existence, they were already charged with some sanitary duties, and the object of the Bill was to compel them to perform those duties. No one had sketched the constitution of the proposed county board. It was not likely that gentlemen who met in Quarter Sessions could attend to small nuisances, and, if they divided themselves into committees, it would come to the same thing as utilising the present boards of guardians. The Poor-law had educated farmers and others who had risen to discharge the duties imposed upon them. In like manner, the present measure would doubtless elevate them, and they would fit themselves for the work which Parliament was now about to entrust them with. He had heard it stated that guardians were not sufficiently independent, and that they would not care to take proceedings against their landlords in order to suppress a nuisance. Now, he did not for a moment believe they would be deterred from doing their duty by any fear of the gentlemen around them; but if it should in any case happen that the guardians were afraid to act, the central authority would intervene, and say—"If you do not do so and so within six months, we shall send men down from London to do it, and charge you with the expense." The hon. member for Gloucestershire had remarked that the Bill did not carry out the recommendations of the Royal Commission; but this statement was only true to a certain extent. The Commission recommended that the guardians should be elected for three years, in order to make them a more permanent body; but it should be borne in mind that they were even now almost invariably re-elected. Consequently, they were not a fluctuating body; indeed, if a guardian did his duty, it was difficult for him to get out of his place. It had also been said that the guardians had quite enough to do already. The answer to this objection was that they were already called on to perform most of the work which the Bill imposed upon them, and the additional work would be so slight that practically it would not add more than half an hour to the meetings of the guardians about four times a year. As to the objection to centralisation, he might point out that the function of the central authority was to guide, assist, and inspect the local authorities, but in no case to do the work for them, except in case of default. In conclusion, the right hon. gentleman said this was not, as had been stated, either a temporary or a provisional Bill.

Mr. STANSFELD was anxious to take the opinion of the Committee at the earliest opportunity on that question, which formed an essential part of the Bill; but he should hardly be acting with due respect towards the Committee if he did not address himself to some of the remarks which had been made in the course of the debate. He would not discuss at any length the scheme that had been suggested for the construction of a county board, because his hon. friend the member for Bath had said he would withdraw his proposal. He might, however, take this opportunity to remark that he never thought either his hon. friend or any of the hon. gentlemen who had taken part in the discussion entertained any desire to impede the progress of the Bill. The member for Chippenham objected to the scheme embodied in the Bill, because he did not believe the guardians would be a competent rural sanitary authority. Now, it was by no means correct to say of the guardians that they had

failed to exercise the powers they possessed, because hitherto there had been two classes of poor and sanitary authorities. The guardians were the nuisance-authority, under the Nuisance Removal Acts, and the vestry was the sewer-authority, under the Sewage Utilisation Acts. Therefore, the guardians had laboured up to this time under the difficulty of a divided jurisdiction. He did not think, then, it was correct to say that they had failed, or that their failure must be taken as conclusive evidence of their unfitness to undertake the duties with which they would be entrusted by this Bill. As far as his knowledge went, the majority of the guardians in this country were undoubtedly willing and ready to accept the duties which would be entrusted to them by this Bill. The hon. baronet the member for Gloucestershire did not like either the boards of guardians or the Town Councils; but the hon. baronet, who had expressed a preference to the county authorities, was himself the very person who objected to the clause under which he proposed to take power for enlarging the area where it might be deemed necessary. The hon. baronet the member for Gloucestershire had objected to the mode of proceeding by provisional order, and had complained that the proceeding by that method would necessarily be a high-handed one. Administration, however, which was founded upon provisional order, was invariably preceded by full inquiry and discussion; and the objections urged by the hon. baronet on this point, therefore, were entirely founded on a misapprehension of the actual state of things.

Mr. WARD HUNT said that, since this Bill had been before the House, he had found the opinion general that the boards of guardians were not the right authorities to entrust those duties to. He was anxious that they should pass a good Health Bill; and as this measure, when passed, was not to be temporary, it was important that they should not hand the matter over to the wrong authority. The reason given by the right hon. gentleman opposite for their selection, was that they were existing bodies, not that, as existing bodies, they were qualified for the exercise of these powers. The fact was that many of the powers which would be conferred by this Bill were already lodged in boards of guardians, and were generally ignored. It would be better that these duties should be entrusted to a county board; and the constitution of such a body was carefully framed in the Valuation of Property Bill which he had introduced some few years since, and which was then read a second time with the consent of the Government opposite. Boards of guardians were elected for a particular purpose, and that purpose they had answered admirably. They were the persons interested in the administration of the Poor-law; but he denied that they had any special interest in the working of the Sanitary Laws, beyond other classes of the community; while doctrines of false economy would, he feared, too often militate against their successfully carrying out their provisions. If these powers were to be placed in the hands of any such body, it would be better that they should be entrusted to the highway boards, whose districts were always within the limit of the same county. The President of the Local Government Board would find it an insuperable objection to his scheme that in many cases the unions would not lie within one county, but in several. The guardians, too, would not take an interest in sanitary matters, and would be subject to local influences—the influences of landlords, for instance—to such an extent that a eeling would grow up in favour of placing them under the controlling pofwer of the head of the Local Government Board. The real power would then be in the hands of the central authority, the very thing it was desirable to avoid. He, on the contrary, wished to have a county board, to be composed partly of magistrates elected by Quarter Session, and partly of ratepayers elected by the highway board, or by the guardians of those parishes lying within the boundary they would have to control. This would be a thoroughly independent body. Much, indeed, almost everything, depended on the executive officers. They should be thoroughly independent of the district and of every one within it, and should be subject to no influences calculated to prevent them giving information to the central authority. Such men should devote their whole time to the work, and their position should depend upon their efficiency. These conditions could not be fulfilled unless the districts were large and the local body independent. For these reasons he objected to placing the authority in the hands of the guardians.

Mr. WHITBREAD was in favour of constituting the guardians the authority under the Act. It was absolutely necessary that the authority should make itself acquainted with every part of the district it controlled, and to do this the authority must be large and scattered. Of course it would be difficult to move such a body; that was a necessary defect which must be put up with. But how would a bran-new board inform itself of what was being done in a remote part of the district? It was not a stink extending over the whole county, such as the Quarter Sessions might smell, that it was sought to remove. A nose was wanted in every corner to put an end to the little evils which, in the aggregate, did so much harm. Besides, this suggested county board would be composed of the very persons who should first be called to account—the landlords and county magnates who sat at Quarter Sessions. The right hon. gentleman had complained that the guardians had failed to do their duty. This was unfair, because hitherto they had had no power. Having the power he trusted they would awaken to the necessities of the case, and, without concerning themselves so much about the dribbling question of an extra twopence in the pound, would seek to improve the health of their district, extend the working hours of a man's life, and prevent his children growing up the miserable weedy things that now fed the poorhouse.

Mr. F. S. POWELL expressed the opinion that as soon as the guardians were constituted the sole authoritative body the confusion complained of would cease. The local boards which this amendment would abolish had, on the whole, discharged their functions admirably, and placed the country under deep obligation. It was necessary to retain them, because sanitary work was intensely local, as distinguished from that caused by cattle-plague, for instance, and it could be done only by those intimately acquainted with the localities. It was imperative that combinations should be enforced, subject to local inquiry and Parliamentary sanction, because one or two parishes could often defeat a valuable scheme for supplying a district with water. He believed there was a strong feeling in favour of the Poor-law Guardians, and if the Bill were passed, and they were invested with larger powers, it was probable that they would save many lives during the autumn, and confirm their title to public confidence before Parliament could again legislate on the subject.

The amendment was by leave withdrawn. Some verbal amendments were made and the clause was agreed to.

On clause 5 (description of rural sanitary districts and rural sanitary authorities),

Mr. CORRANCE said the time was now come in which the committee might conveniently divide on the subject which they had so long been discussing. For the purpose of enabling them to do so he would move in page 3, line 3, after the word "district", to leave out the words to the end of the clause, and insert "For the purpose of this Act the respective districts, authorities, rates, or funds, and officers described in the schedule to this Act, shall be the district, the local sanitary authority, the local rate".

The committee divided :—

For the amendment	7
Against	84
Majority	—77

The clause was ordered to stand part of the Bill.

On Clause 10 (which gives directions as to the appointment of a medical officer of health and other officers of the sanitary authorities), Colonel BARTTELOT proposed to insert after the words "officers of health" "for a period not exceeding five years, but nothing in this Act shall prevent their re-election." This amendment was very important, because it would enable boards of guardians to have some power over these officers of health, and would prevent them from doing as they pleased. Many of these gentlemen did their duty exceedingly well, but there were others who did not do their duty in a way satisfactory to boards of guardians. They were good servants, but bad masters.—Mr. HENLEY supported the amendment, urging the importance of an efficient officer, and the difficulty of satisfying an external authority of the inefficiency of a permanent officer.—Mr. STANSFELD acceded to the amendment, on condition of its applying only to the first appointments under the Act. The functions of the officer being a matter of experiment, it was not desirable to make the first appointments permanent.—Sir M. BEACH objected to the amendment, thinking that a five years' officer, like an American President, would be afraid of displeasing those on whom his re-election depended.—Colonel BARTTELOT was not satisfied with the modification proposed. Was it to apply to the first five years of every officer's tenure, or to the first five years after the passing of the Act?—Mr. CORRANCE said the Bill had been made almost worthless by entrusting its operation to boards of guardians, and the amendment would reduce it to a nullity by impairing the independence of the medical officer.—Mr. HIBBERT and Mr. PELL approved the amendment.—Dr. BREWER thought the proposal of Colonel Barttelot ought to be accepted.—Mr. STANSFELD would have accepted the amendment modified so as to make the first appointments under the Bill tenable for five years only, leaving the question of their permanency open for future decision.

After some further remarks the amendment of Colonel Barttelot, modified by Mr. Stansfeld so as to run in these words, "the appointment of the medical officers of health and inspectors of nuisances first made after the passing of this Act, shall be for a period not exceeding five years", was carried, and the clause as amended was then ordered to stand part of the Bill.

On Clause 13 (permitting the inspectors of the local government board to attend the meetings of local boards), Mr. MONK said this would result in unnecessary interference with the local authority, and moved an amendment which would allow the inspectors to attend upon the application "of one-third of the members of any local board or sanitary authority, or of one-twentieth of the persons rated in the district". This would assimilate the clause to the provisions of the Local Government Act.—Mr. RATHBONE said the inspectors were depositaries of valuable information which would be very useful at the board, and their presence should be encouraged.—Mr. EYKYN desired it should be made clear as to whether the inspectors would have authority to attend meetings of town councils. His objection to the clause would be met if the inspector attended only when the sanitary authority was summoned to meet such inspector.

Mr. STANSFELD said experience showed that Poor-law inspectors were always favourably received by Boards of Guardians, but Town Councils were not only sanitary but municipal authorities, and the Government had not thought it worth while to draw a distinction between the two duties. The effect of the clause would be that if a cause of complaint as to the action of the Local Sanitary Board came up to the Local Government Board, they would send their inspector down to inquire, and he would have the ordinary powers of a Poor-law inspector to call for papers and examine witnesses.—The words "for the purpose of any inquiry directed by the Local Government Board," were inserted in the clause, and the clause as amended was agreed to.

On Clause 14, Mr. STANSFELD proposed to insert the words "the sanitary authority of the district of Oxford shall not for the purposes of this section be deemed to be a local board." The amendment was agreed to, and the clause was adopted.

Sir M. H. BEACH had great doubt as to the propriety of retaining the words in Clause 15 which gave power to the sanitary authorities to provide hospital accommodation. He moved their omission.—Mr. STANSFELD could not agree to this amendment. Under existing Acts the local authority had power to provide hospital accommodation. The expense would either be general or special. It could not be special because the hospital accommodation would be provided for the whole district. The omission of the words would make no practical difference in the working of the clause, and he resisted, not so much the amendment, as the inference which had been drawn from their presence.—Sir M. BEACH said all his anxiety was to prevent a wrong inference from being drawn.—The amendment was agreed to.

On Clause 18, Mr. STANSFELD moved that the Corporation of London be the central authority in the port of London, and pay out of their corporate funds all the expenses thereof.—Colonel BERESFORD proposed the Thames Conservancy Board, which already possessed sanitary powers over the port of London.—Colonel HOGG had given notice of a proposal that the Metropolitan Board of Works should be the authority, but he joyfully accepted the offer of the Corporation, and thought their funds would be very properly applied to this purpose.—Mr. SCLATER-BOOTH thought the Thames Conservancy Board the proper authority. The amendment was agreed to, and the clause as amended was ordered to stand part of the Bill.

On Clause 32, Mr. KAY-SHUTTLEWORTH moved an amendment to include "The Metropolis Water Acts, 1852 and 1871," as well as the "Alkali Act, 1863," so that in future the Local Government Board should exercise the power conferred by those Acts upon the Board of Trade.

After discussion, the Committee divided, and the numbers were—

For the amendment	193
Against	16
Majority in favour of the amendment	—177

The clause as amended was agreed to. The further discussion of the clauses of the Bill was adjourned.

CORRESPONDENCE.

HYSTERIA.

SIR,—In reference to Dr. Tilt's criticism of the fatal case of hysteria recently reported by me in the JOURNAL, will you allow me to say that I only saw the patient alive once, and that was a few hours before her death; also, that "the frequent occurrence of an offensive vaginal discharge" had directed the attention of the medical attendants both to the diagnosis and treatment of the uterine disease, but with no particular benefit, I believe. In describing the *post mortem* appearances of the body, the uterus is said to have contained "thick glassy mucus"; this should be "glairy mucus." I am, etc., R. W. FOSS, M.D.

Stockton-on-Tees, July 20th, 1872.

OBITUARY.

J. LAWRENCE BULLOCK, M.R.C.S.

BY the melancholy death by drowning in Lake Neufchâtel of Mr. J. Lawrence Bullock, the East London Hospital for Sick Children has lost a valuable and most efficient servant. He had started a few days previously for a tour with his brother and a friend, and while boating in Lake Neufchâtel the boat capsized, and, sad to say, all three were drowned. Mr. Bullock had acted for two years as resident medical officer to the Hospital, and during his term of office he endeared himself to the patients and officials by his kindness, and gained the entire respect and confidence of the members of the staff for his professional ability and upright character.

JOHN FITZ PATRICK, M.D., SURGEON-MAJOR INDIAN ARMY.

THE late Surgeon-Major John Fitz Patrick was the eldest surviving son of the late Wm. Fitz Patrick, Esq., of Castle Dunow, Queen's County. He was born in December 1817. At the age of fifteen, he passed the preliminary examination at the Apothecaries' Hall of Ireland, and was articled to the late Mr. Fraser, a general practitioner of considerable repute in the city of Limerick. He studied at the Royal College of Surgeons of Ireland, and in 1840 obtained the diploma of the Royal College of Surgeons of London. In December of the same year, he was appointed Assistant-Surgeon in the Madras Presidency. He served in nearly every station in that Presidency, and in January 1859 was promoted to the rank of Surgeon, and in December 1860 to that of Surgeon-Major. He retired from the service in December 1862. In the year 1846, he married Mary Ann Ulrica, only surviving daughter of the late Major-General Wharnell, Madras Army, by whom he had nine children—five sons and four daughters. With the exception of his eldest son, who was unfortunately killed by a fall from his pony in 1859 at Bath, his children all survive.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 18th, 1872.

Balkwill, William Edward, Kingsbridge, Devon
Dunn, William Allison, Louth, Lincolnshire
Harrison, Napoleon Augustus Rogers, Lambeth
Graham, Arthur, Castle Street, Leicester Square
Lawton, Herbert Alfred, York Street, Borough
Tayler, Herbert Price, New Cross

The following gentleman also on the same day passed his primary professional examination.

Parker, George Williams, St. Thomas's Hospital

As Assistants in compounding and dispensing medicines.

Bowker, William, Bolton, Lancashire
Platt, J. Wright, New Delph, Saddleworth
Walton, W. Foulds, Sowerby Bridge, near Halifax

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations, held on Monday, Tuesday, Wednesday, and Thursday, July 8th, 9th, 10th, and 11th, the License to practise Medicine was granted to:

Brereton, Samuel
Burney, Walter Charles S.
Esmonde-White, Henry P.
Frazer, Robert F.
Irvine, John Armstrong
Moore, Ayres
Nolan, Joseph John
O'Brien, Terence
Reid, John Baker
Ross, Richard Edmond

The Diploma in Midwifery was obtained by:

Brereton, Samuel
Doherty, Hugh, M.D., Harvard University, Boston (Mass.)
Esmonde-White, Henry P.
Irvine, John A.
Kerr, Elias William
Moore, Ayres
Reid, John Baker

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALFORD, Lincolnshire—Admiralty Surgeon and Agent.
ANDERSON UNIVERSITY, Glasgow—Lecturer on Medical Jurisprudence.
BASINGSTOKE UNION—Medical Officer for District No. 1: £85 per annum.
BOSTON UNION, Lincolnshire—Medical Officer for the Kirton District: £105 per annum.
BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.
CALLAN UNION, co. Kilkenny—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kilmoganny Dispensary District; £100 per annum, and fees.
CHARING CROSS HOSPITAL—Surgeon.

CORK UNION—Medical Officer for the Blarney Dispensary District: £120 per annum.
DORSET COUNTY HOSPITAL, Dorchester—Honorary Physician.
DUNDEE ROYAL INFIRMARY—Dispenser: £35 per annum, bed, board, and washing.
EAST LONDON HOSPITAL FOR CHILDREN and DISPENSARY FOR WOMEN, Ratcliff Cross—Resident Medical Officer: £60 per annum, residence, board, and washing.
EAST PRESTON UNION, Sussex—Medical Officer for District No. 1: £100 per annum.
ENNISCORTHY UNION, co. Wexford—Medical Officer and Public Vaccinator for the Killan Dispensary District: £90 per annum, and fees.
EPPING UNION, Essex—Medical Officer and Public Vaccinator for the Roydon District: £30 per annum, and extra fees.
FEVER HOSPITAL AND HOUSE OF RECOVERY, Cork Street, Dublin—Two Resident Medical Pupils.
GLANFORD BRIGG UNION, Lincolnshire—Medical Officer for the Ulceby District: £37 per annum.
GLASGOW—Medical Officer of Health: £600 per annum.
HARRIS, Inverness-shire—Parochial Medical Officer.
HEREFORD COUNTY AND CITY LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, furnished apartments, rations, fire, light, attendance, and washing.
INVERARY, Argyleshire--Parochial Medical Officer for the North District.
INVERARY—Surgeon to the Prison.
ISLINGTON, Middlesex, Parish of—Medical Officer to the Workhouse: £160 per annum.
LINCOLNSHIRE SEA-SIDE CONVALESCENT HOME, Mablethorpe—Medical Officer.
LIVERPOOL DISPENSARIES—Hon. Medical Officer to the South Dispensary.
LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE—Lecturer on Comparative Anatomy.—Demonstrator of Physiology.
LOCHCARRON, Ross-shire, and part of the parish of Applecross—Parochial Medical Officer: £145 per annum, and various perquisites.
LOUTH UNION, Lincolnshire—Medical Officer for the Withern District: £57: 10 per annum.
MANCHESTER ROYAL INFIRMARY—In-door Physician's Assistant: 80 guineas per annum, with board and residence.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Two Entrance Scholarships: £25 and £20 per annum, for two years.
MONAGHAN COUNTY INFIRMARY—Physician: £50 per annum.
NEWBURGH, Fifeshire—Parochial Medical Officer.
NEW ROSS UNION, co. Wexford—Medical Officer for the Templeudigan Dispensary District: £50 per annum.
NEWTOWN AND LLANIDLOES UNION, Montgomeryshire—Medical Officer for the Newtown District: £80 per annum.
NOTTINGHAM UNION—Medical Officer for District No. 2: £120 per annum.
QUEEN'S COLLEGE, Cork—Assistant Chemist.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Physician.
ROYAL ISLE OF WIGHT INFIRMARY, Ryde—House-Surgeon: £40 per annum, board, lodging, and washing.
ST. LEONARD, Shoreditch, Parish of—Dispenser: £120 per annum.
ST. MARY'S HOSPITAL MEDICAL SCHOOL—Scholarship: £40 per annum for three years.—Exhibition: £20 for one year.
SHIPSTON-ON-STOUR UNION, Worcestershire—Medical Officer for the Mickleton District: £30 per annum.
STOCKPORT INFIRMARY—Assistant to the House-Surgeon.
STOURBRIDGE DISPENSARY—House Surgeon and Secretary: £120 per annum, furnished rooms, coals, and gas.
SUFFOLK GENERAL HOSPITAL, Bury St. Edmund's—Physician.
TOXTETH PARK GIRLS' INDUSTRIAL SCHOOL, Liverpool—Honorary Surgeon.
TOXTETH PARK LYING-IN CHARITY, Liverpool—Surgeon-Accoucheur.
TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.
WARNEFORD LUNATIC ASYLUM, Oxford—Resident Medical Superintendent: £260 per annum, with board, furnished apartments, etc.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*CATON, R., M.D., appointed Lecturer on Physiology at the Liverpool Royal Infirmary School of Medicine.
COUGHTREY, M., M.B., M.C., appointed Demonstrator of Anatomy at the Liverpool Royal Infirmary School of Medicine.
*SUTCLIFFE, Henry, Esq., *SANSOME, Thomas, Esq., and *BROWNE, Henry L., L.R.C.P.Ed., appointed Honorary Surgeons to the West Bromwich District Hospital.
TUCKER, J., M.D., appointed Surgeon to the Sligo Rifles.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

MCNALTY.—On July 19th, at Napier Street, Stoke, Devonport, the wife of *G. W. McNalty, M.D., Staff-Assistant-Surgeon, of a son.

MARRIAGES.

*HART, Ernest, Esq., of 42, Harley Street, to Alice, third daughter of the late A. W. ROWLAND, Esq., of Champion Hall, Sydenham, at St. Saviour's, Paddington, on July 19th.

DEATHS.

*FITZPATRICK, John, M.D., Surgeon-Major H.M.'s Indian Army (retired), at Lenham, Kent, aged 54, on July 1st.
LACEY, John, Esq., Surgeon, at Shrewsbury, aged 75, on June 23rd.
SYMES, Henry, Esq., Surgeon, at Bridgwater, aged 54, on July 3rd.
WILLIAMS, D. T., Esq., Surgeon, of Reynoldston, Gower, at Tymelyn, Llangeitho aged 31, on July 6th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.
WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

THE "granules d'acide arsénieux" are prepared by Garnier and Lamoureux, 213, Rue St. Honoré, Paris; and are sold in London by Bell in Oxford Street, and many other chemists.

ERRATUM.—In our notice of Mr. Hodgson's communication on Throat Deafness, in last week's JOURNAL (page 68), the word "Surrey" was printed by mistake in the first line for "Sussex". The communication was made at a meeting of the East Sussex District Society.

MR. G. F. HODGSON (Brighton).—Many thanks.

INSURANCE FEES.

SIR,—In supplement to your recent admirable article, "The Height of Meanness", I beg to assure you that within the last three weeks I was offered the appointment of Medical Officer to an Insurance Company, at the magnificent remuneration of sixpence fee for each passed postulant. The company in question appears to possess an extensive organisation in Great Britain; and, what seems to me still more extraordinary, publishes on the face of its prospectus the names of more than a dozen respectably qualified members of the medical profession as referees. However, my powers of appreciating being perhaps limited, I declined the offer.

Dublin, July 15th, 1872. I am, etc., R. W. EGAN.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, July 20th; The Birmingham Daily Gazette, July 23rd; The Scotsman, July 23rd; The Belfast Morning News, July 24th; The Merthyr Express, July 20th; The Northern Whig, July 19th; The Aberdeen Herald, July 20th; The Lincolnshire Chronicle, July 19th; The Royal Cornwall Gazette, July 20th; The Northern Star, July 18th; The Edinburgh Courant, July 18th; The Dublin General Advertiser, June 20th; The Western Mail, July 18th and 19th; The Lincolnshire Chronicle, July 19th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—
Dr. G. M. Humphry, Cambridge; Dr. T. Spencer Cobbold, London; Dr. A. B. Steele, Liverpool; Mr. C. Bullock, Great Berkhampstead; The Secretary of the Epidemiological Society; Mr. Charles Green, West Bromwich; Dr. Gregory. Bolton; Mr. Hugh Norris, South Petherton; The Secretary of the Hospital for Diseases of the Throat: Dr. B. W. Foster, Birmingham; Mr, Dalby, London; Dr. Tweedy, London; Dr. J. W. Langmore, London; Mr. Soutter, London; Dr. J. G. Swayne, Clifton, Bristol; M.R.C.S.; Dr. Henry Barnes, Carlisle; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Grainger Stewart, Edinburgh; Mr. Wanklyn, London; Mr. W. G. Cooper, London; Mr. Holmes, London; Mr. H. R. Reeves, London; Dr. J. H. Wilson, Liverpool; Mr. G. F. Hodgson, Brighton; Mr. R. W. Egan, Dublin; Mr. W. J. Harris, Worthing; Dr. R. W. Foss, Stockton-on-Tees; Mr. John Bassett, Birmingham; Mr. Bowman, London; Dr. R. P. Cotton, London; Dr. H. Wilson, Dublin; Dr. Thomas Stratton, Devonport; Dr. D. W. Ferguson, Howden; Mr. W. T. Thomson, Edinburgh; Dr. Franklin Gould, London; Mr. Henry Finch, Colchester; Dr. Aveling, London; Dr. Handfield Jones, London; Dr. Smart, Anerley; Dr. Tilt, London; Mr. Edward Huxley, London; Mr. F. Waterhouse, Bolton; etc.

CLINICAL LECTURE

ON

A CASE OF ACUTE RHEUMATISM, WITH HEAD-SYMPTOMS AND HIGH TEMPERATURE, SUCCESSFULLY TREATED WITH BATHS.

By HENRY THOMPSON, M.D., F.R.C.P.,
Physician to the Middlesex Hospital.

GENTLEMEN,—It has long been a familiar fact to all who are conversant with the history of acute rheumatism, that now and then, in a few rare and sparse examples, the malady proves fatal by an unexpected outbreak of overpowering nerve-symptoms. You will find ample illustrations of this in the works of those who wrote before the days of thermometry. It has been reserved for a later age, and, indeed, for the writers of the last five years, among whom Dr. Ringer stands foremost, to make the discovery that head-symptoms are complicated with hyperpyrexia in many rapidly fatal attacks of rheumatic fever. There can be no sort of question that the two sets of cases are essentially the same, and only differ in the commentaries given and the hypotheses advanced by the pathologists of past and present epochs. In older times it was all metastasis, meningitis, and the like processes; now it is all hyperpyrexia, or at all events an exorbitant stress has been laid upon hyperpyrexia *pathologically*. It is hardly possible to overrate its importance *practically*, as I shall presently show. Beyond question, inordinate body-heat is a destructive agent of great power, and capable of doing a vast amount of mischief to the nervous and other systems; nevertheless, in these particular cases any one who examines the records scattered through the journals and elsewhere, will at once see that the law is this: the nerve-symptoms invariably precede, and the hyperpyrexia, however it may intensify, or seem to intensify, those symptoms, invariably follows. The law may be annulled hereafter; but as far as existing data go, it must stand. The highest recorded temperature on the first accession of the nerve-symptoms in the case now under consideration (see page 122), appears to have been at most 105.5 deg.; but this example is unique, and in another part of the same record the temperature is limited to 105 deg. In a large proportion of cases the temperature is below this level, and oftentimes considerably below it. Clearly, then, on the assurance of all past experience, the mischief originates in some profound and damaging impression upon the nervous system—an impression which gives rise at once to the phenomena of cerebral or cerebro-spinal derangement, and to those of exalted body-heat. They are in the main coincident effects of one common cause. I have dwelt upon a point well known to those who, personally or by reading, are familiar with the cases in question, but much misconceived by many intelligent and well-informed persons. Be it so, you will say; but at any rate it is the hyperpyrexia which plays the principal part in the destruction of life. I am not so sure of that, gentlemen. Any one who watched the progress of my own case for many days before the invasion of anything like excessive fever-heat, and took note of the delirium, the tremors, the subsultus, and the floccitation, must have felt assured that the boy's life was in jeopardy, whether the temperature should rise to the height of hyperpyrexia or not; as much in jeopardy as that of any one who presented the same symptoms in enteric fever or in variola. Yes; but the bath, and the wet sheet, and the ice-bag, reduce temperature, and at the same time restore consciousness, or, it may be, save life itself. It follows, therefore, you will say, that, as so much good ensues upon the removal of the hyperpyrexia, so, when the result is unfavourable, the hyperpyrexia is mainly responsible for the evil. The reasoning is inconclusive. There may be many factors at work, all conspiring together to compass the death of the patient. If the aggregate of these factors be overwhelmingly strong, there is an end of the matter, and the patient dies; but let the powers of life and death be more evenly adjusted, then the removal of any single factor (say the temperature) turns the scale in favour of life; or, to use a more homely metaphor, takes off the last ounce that is breaking the camel's back. You cannot, then, conclude with certainty that in fatal cases the hyperpyrexia has done all, or nearly all, the work of destruction, even if you regard the processes of refrigeration as resulting simply in the reduction of heat: still less are we at liberty to draw this conclusion if we change the point of view altogether, and presume (as not unreasonably we may) that our refrigerating agents strike home at the root of the evil, and directly antagonise the first deleterious impression on the nervous system by producing a salutary counter-impression, which controls alike the hyperpyrexia and all the associated elements of death. The evolution of heat may be paramount from beginning to end in sunstroke; but in sunstroke the rule is, that a temperature averaging 107 deg. precedes, and the nervous phenomena follow. In rheumatism, it appears to be the reverse. Nevertheless, it is universally believed that a continuous body-heat, ranging from 108.6 deg. to 112 deg., is absolutely incompatible with life; and I dare not gainsay that belief. Now, in the terrible cases of which I am speaking, the temperature, if unchecked, runs rapidly up to the aforesaid range, and, if unsubdued, must inevitably issue in death. It behoves us, therefore, practically to accept the dogma, that it is the heat which is the main destructive element, and to act upon it at the bedside, whether we believe it or not. We can control temperature, and we are bound to control it. This, in my judgment, is best accomplished agreeably to the plan originated in this country by Dr. Wilson Fox, by the use of the bath, at a temperature of 90 or 95 deg. in the first instance, gradually reduced by the addition of cold water to 70 deg., or even to a lower point in some cases. I confess I have no personal experience of the wet pack and the ice-bag; but many of those who assisted me had such experience, and they all emphatically declared their preference for the bath, as at once the easiest, the most manageable, and the least distressing of all the appliances. In our case, at any rate, the bath was all-sufficient for the purpose required; but it is possible that our case was exceptionally amenable to treatment.

And now, gentlemen, you will naturally ask me whether we are to be perpetually wielding the thermometer, registering temperatures, and constructing charts in every case of acute rheumatism. If we are sure of the ground we have taken, on a foundation of some five years' standing, such a proceeding would be a lamentable loss of time. Recollect what I said about the invariable antecedence of the nervous phenomena in the small minority of cases accompanied by hyperpyrexia. If, therefore, the law stand fast hereafter, as it has stood hitherto, you may in the main rest contented with the ordinary routine of daily registration two or three times in the twenty-four hours, and wait until one or more of the nerve-symptoms arouse the suspicion of impending peril; but you must give a large latitude of meaning to the term "nerve-symptom", and you must be keenly alive to everything that can fairly be included under it. I will enumerate all the prodromata of nervous origin that I have been able to gather from my own experience and from the cases recorded within the last five years—at least from those recorded in detail, and bearing conclusively upon the point in question. They are delirium, restlessness, rebellious to treatment, and, it may be, disproportionate to pain; subsultus, tremors, disorderly respiration, stupor, somnolence, deafness, prostration, apathy, strangeness and waywardness of manner, unnatural anxiety and depression of mind; even unnatural gaiety and garrulity. Let any of these sound the note of alarm, and the thermometer, how slight soever its value by comparison hitherto, becomes invaluable now. It is now your bounden duty to apply it many times in the day: how many times, it is not easy to say. I will give you roughly my own ideas on the subject as far as they go. If there be delirium alone, or delirium with extreme restlessness, I should recommend the temperature to be taken at least every two hours. I gave these instructions in my own case. It is true the boy was naturally excitable in a high degree, and the case was an unpromising one from the first; but, under any circumstances, I should look upon a longer interval as unsafe, with a certain reservation for the contingency of sleep. After all, your labour will often be lost. Delirium and restlessness, as a rule, pass away, and leave nothing behind; nevertheless, they are now and then true prophets of evil, and their warnings are never to be disregarded. In cases of this nature I should not allow the temperature to go beyond 106 deg. before administering the bath.

As for the remaining prodromata on the list, it is difficult to estimate with precision their respective values: there are two, however, which I should regard with especial misgiving—over-anxiety and stupor. In the presence of stupor, I should take the temperature every hour or every half-hour; indeed, I should look upon the arrival of a climax as all but a certainty, and I should plunge the patient into a bath the moment the thermometer marked 105 or 105.5 deg. The case is somewhat different with over-anxiety: we might easily alarm the patient by perpetual interference; and it would be obviously inexpedient to disturb a calm and natural sleep, which might fairly be assumed to betoken that all was going on well. Under all circumstances, it is imperative to have the room cleared for action, and the bath and all its appliances in readiness. It is unsafe to be caught unprepared on this first ominous rise in the thermometer, for the interval between the event and the acme of the hyperpyrexia is sometimes fearfully short.

If, in reference to the possibility of overlooking the nervous phenomena, or, in order to make assurance doubly sure, you require collateral evidences of approaching danger, I will mention a few symptoms which are held to be of peculiar significance. A dry unperspiring skin ; a profuse and intensely red miliary rash ; an abatement of the pain and swelling in the joints, or their total disappearance ; diarrhœa, and a copious flow of pale alkaline or neutral urine, have all been observed to accompany or to precede the paroxysms : they may even precede the nervous prodromata, specially so called. In our case, a free flow of urine occurred before delirium, and diarrhœa occurred with it. The articular pains, for many days before the outbreak of delirium, appeared in all the joints, and disappeared from all in the most desultory way. Again, during the four days prior to that outbreak, there was a slow rise in the temperature, which on the fourth evening culminated at 104.2 deg.; the pulse-rate, also, during the same period, ruled higher than before ; but the complexity and continued severity of the case seemed sufficient to explain these occurrences. An unexplained rise in either direction would certainly be a suspicious symptom : perhaps even a rise of any kind should put us on our guard. Unfortunately, the collateral evidences are all inconstant, but they are useful auxiliaries, and when they appear they ought to awaken attention. Let me remark, by way of parenthesis, that, as I should be vigilant myself, so I should inculcate the extremest vigilance on every one entrusted with the care of the patient ; and I should direct the attendants, on the appearance of anything strange in his aspect or demeanour, to use the thermometer assiduously, and, if ever it rose to 105 deg., to send at once for the physician.

Gentlemen, I have laid down the law that, for all practical purposes, as far as the bath is concerned, we must take the thermometer for our guide. I wish, in some measure, to modify this hard and fast rule. So singularly calming is the bath, even when there is no great exaltation of the body-heat, that I should be disposed to administer it as a simple palliative in all exacerbations of delirium and restlessness, although the heat may have fallen far below its point of maximum intensity, and may register at the time no more than from 102.5 to 104 deg. in the axilla. At a lower level than the above it would not be desirable to use the bath, for such temperature would not allow a sufficient range to cover both the fall within the bath, which we can regulate, and the fall after the bath, which we cannot regulate with exactness ; although, from a comparison of Dr. Wilson Fox's cases, I should roughly reckon the average for the after-fall at about four degrees. On the foregoing plan our last bath was administered, when the temperature was no higher than 103.1 deg. in the axilla, and it accomplished its purpose. Perhaps I might have adopted the same plan with advantage during the prolonged agitation which preceded the climax. In this connexion I would remark that, with a temperature descending gradually from 95 or 90 to 70 deg. or thereabouts, the bath is at least as much a warm bath as a cold bath ; and warm baths have for ages been recognised as sedatives to the nervous system.

Before dismissing the subject of the bath, it is important to observe that the chest-complications, severe and extensive as they were, including pneumonia, pleurisy, bronchitis, and pericarditis, underwent no perceptible change for the worse in consequence of its use.

With regard to medicinal remedies, opium and hydrate of chloral are the only soporifics and sedatives of any real value. They may be given freely enough during the premonitory period, or stage of suspicion, to control mere delirium or restlessness ; but if I saw the danger-signal in the thermometer, I should put on the break at once and stop the opium for the time being. I might resort to it again if, after the subsidence of the hyperpyrexia, the agitation persisted, and chloral failed to soothe it. Under these circumstances, we cannot afford to dispense with opium altogether ; but let it never be forgotten that there is no sharp and unvarying line of distinction between the comatose and the delirious class of symptoms ; that stupor may alternate with excitement, and that death by coma is the natural termination of the attack.

In cases characterised by stupor from the first, with or without alternations of excitement, you may apply ice to the forehead or scalp, or the so-called revulsives to the trunk and extremities. I confess I should be afraid of blisters, wherever applied. As the symptoms progressed, I should trust principally to the early employment of the bath, as before stated. In all cases, of whatever type, I should feed and stimulate the patient largely, and I should take especial care not to weaken him in any way.

You are aware that modern researches have established for quinine a high reputation as a refrigerant ; but in all the cases that I have perused, I fail to find any illustration of this reputed power. In my own case, as the boy happened to be doing well, on the principle of letting well alone I was unwilling to alter one iota of the treatment, and so he remained for days and weeks under the influence of quinine, whatever that might be. I cannot determine its value ; and the same thing is true of the digitalis associated with it. The possible production of cinchonism is a great drawback to the use of quinine, and might embarrass the prognosis in a class of cases where deafness may be a spontaneous symptom, and a dangerous one.

Gentlemen, in this lecture I have enlarged in great measure on the premonitory symptoms, and passed lightly over the features of the developed attack. With the addition of hyperpyrexia, the last stage is, in the main, the climax and complement of the first. The symptoms may be more conspicuously typhoid in character ; there may be convulsions or cyanosis ; and there is sure to be coma. I have preferred to dwell upon the premonitions, because the great practical point is to discern the nascent mischief at the moment of its possible origin, and to arrest its ulterior evolution.

I have not ventured formally to affix the name hyperpyrexia to my case : indeed, I know not how to define hyperpyrexia exactly ; but this I know, that no one who saw the patient on the night of his first bath would hesitate to say that, without the bath, he must have died in the course of a few hours, with hyperpyrexia on any definition.

In conclusion, I beg to acknowledge the great services rendered by the resident medical officer and all the clinical assistants, without whose aid the patient would never have lived.

CLINICAL LECTURE
ON
INJURIES FROM LIGHTNING.

By JAMES R. LANE, F.R.C.S.,
Surgeon to St. Mary's Hospital.

Gentlemen,—Opportunities for witnessing the effects of lightning on the human body are not in ordinary seasons very common in this country ; and the cases of which I propose to speak to you to-day are well worth your attention, not only from their rarity, but also on account of the many curious and interesting circumstances connected with them.

On the afternoon of Tuesday, June 18th, two men, having with them a horse and cart, were at work, road-making, in a field near Willesden. A severe thunder-storm coming on, they took shelter under a large oak-tree growing in an earthen bank, with no hedge or other tree within a considerable distance. The horse and cart stood near, but not under, the tree. The men were close together, but not touching the trunk of the tree. Suddenly they were both struck down ; one was rendered completely insensible; the other did not lose his senses, but was unable to rise from loss of power in his lower limbs. Some men who saw what had occurred went to their assistance, and, as soon as a conveyance could be procured, they were brought to the hospital. When the men were struck, the horse took fright and bolted with the cart, but neither horse nor cart sustained any injury. A large branch was torn off from the trunk of the tree.

One of the men was but slightly injured. When admitted, he appeared to be suffering from shock ; his pupils were dilated, and he was unable to stand. The loss of power, however, was confined to the lower extremities, on both of which an erythematous blush was seen extending from the knee downwards. There was nowhere any breach of surface or ecchymosis, and his clothing was uninjured. This man's symptoms soon subsided ; by the next morning the redness was gone, and the paralysis had completely passed off. He said he felt quite well, and was allowed to leave the hospital.

With the other man the case was very different. He is reported to have been quite unconscious for about ten minutes after the occurrence ; then he recovered himself for awhile, but again lost his senses, probably from faintness. He says that he remembers feeling a violent blow on the head, which made "his eyes strike fire". When admitted, he was conscious, but in a state of collapse, and his pupils were widely dilated. He had bleeding from the right ear, the external part of which was of a dark purple colour, and seemed both excoriated and bruised. Some of the hair above the ear, and also the right whisker, had been burnt away. From the whisker there was an ecchymosis extending down the neck, and ceasing by forming a narrow circular line round the back of the neck, corresponding to the position of a silver watch-chain which he was wearing when he was struck. From this point, down to the right groin, there was no sign of injury ; but from the groin downwards there was a purple discoloration of the skin, about two inches wide, passing round the outside of the thigh to

the back of the knee and thence to the heel. Along this track the hair had disappeared, having apparently been singed off.

The condition of his clothing, which you see on the table, and which is to be preserved in the Museum, is very remarkable. His cloth cap has a large ragged hole in it on the right side, as if a piece had been torn out; but some padding of cotton-wool, and also the inner lining of the cap, are uninjured. The side of the cap was, no doubt, the point first struck, and thence the lightning passed over the ear and down the neck till it met with the silver watch-chain, which, from its greater conducting power, carried it onwards till it reached his watch, which was in the right pocket of his trousers. From this point the current travelled down his right thigh and leg to the ground, leaving the marks on the skin already referred to.

His calico shirt is blackened and burnt into several small holes round the back of the neck. It is blackened also in wide patches down the front, where the silver watch-chain rested; and here at one point it is burnt into a large hole. The front flap of the skirt is torn to shreds, but neither burnt nor blackened.

A red woollen jersey, which he wore under the shirt, is blackened, and evidently singed at a point corresponding to the hole in the front of the shirt, but not burnt completely through. The lower part is torn into shreds, both in front and behind. Both shirt and jersey were smouldering when he was picked up.

The silver watch-chain is broken into fragments. One piece about six inches long was found, and also several smaller pieces; the rest is missing. The large piece shows signs of partial fusion in places; the smaller ones are more completely melted. The relation of the fused watch-chain to the black patches on the shirt is interesting. These patches at first were thought to have been caused by scorching; but it seems more probable that they result from an impregnation of the texture by metallic silver in a state of minute subdivision, for the analysis by Dr. Wright of a piece about half an inch square indicated the presence of silver in considerable quantity.

As to the watch, the glass was broken into small pieces. The face is partially driven in, and is stripped of its white enamel. The hands are twisted and broken. The silver case shows signs of fusion in places, but the works do not seem to be injured. The watch was forced through a hole, partly burnt and partly torn, in the pocket, and through the torn trousers; for it was found detached from the chain and lying on the ground at some distance from the man's side. Some money, which was in a leather purse in the left trousers pocket, does not appear to have been touched.

The right leg of his fustian trousers is ripped open along the seams from the top to the bottom, but not burnt. The calico lining is torn to shreds.

The back of his right stocking is singed above, but torn open below, whence a large piece appears to have been blown away. The back and outer side of the right boot have also been blown away; there are holes in the heel, from which several large nails have evidently been forcibly driven out; but the majority of the nails remain undisturbed.

Such was the condition of the man and his clothing when brought to the hospital. His subsequent progress has been, on the whole, favourable. He soon recovered from the collapse; but the shock had evidently been severe, for he remained for several days in a very weak and languid condition. It was found that he was deaf in the right ear; an examination of which, by Dr. Peter Allen, showed a laceration of the membrana tympani; and when he makes an effort at expiration with the nose and mouth closed, you may hear the air whistling through the auditory meatus. On July 1st, he complained of severe pain in the ear and over the mastoid region, and this was accompanied by quick pulse, hot skin, and other feverish indications, so that we feared that some meningeal complication, arising out of the injury to the tympanum, might be setting in; but on the following day there was a free purulent discharge from the ear, and these unpleasant symptoms subsided. Complete deafness in this ear, however, still remains, which renders it probable that the nervous textures as well as the membrana tympani have suffered. The dark marks on the neck and right thigh gradually passed away. They were evidently ecchymoses, and not burns, as was at first supposed. The only sign of burning, with the exception of the scorched hair and some vesications on the ear, was found on the right thigh, in which a small piece of fused watch-chain was imbedded.

The operation of the lightning on the man's body in this case seems to have been in the nature of a dull heavy blow. In its passage it produced, for the instant, sufficient heat to scorch the hair, but not to burn the skin. It must have exercised at the same time great rending power in the outward direction, as indicated by the condition of the torn clothing. From the neck to the groin it left no mark, this interval having been protected to a great extent by the conducting power of the watch-chain; silver being, in fact, the best of metallic conductors. The chain, however, had not an area sufficient to permit so intense a current to pass without injury to its own texture by fusion and pulverisation, and consequent scorching of the shirt and jersey on which it rested.

Another curious phenomenon presented by this patient, to which I have not yet alluded, is a partial paralysis, together with a complete, or almost complete, absence of pulse in the left upper extremity, although this part shows no outward sign of injury. Soon after his admission, he complained that his left arm felt weak and numb, and he was unable to grasp anything firmly in his left hand. No pulse could be felt at the wrist, or in the brachial or subclavian arteries; and, in probable relation with this latter circumstance, there is a loud *bruit* to be heard below the sterno-clavicular articulation, over a limited area corresponding in position to the first part of the left subclavian artery. It was at first thought that this might depend on an aneurism involving the subclavian; but it is not probable that this is the case, for there is no dulness on percussion over the spot where the *bruit* is most distinctly heard, and none of the pressure-effects which an aneurism would be likely to produce have been observed. The *bruit* varies in intensity in different positions of the body; but change of position makes no difference in the pulse. The paralysis has gradually passed off, and now (a month after the occurrence) he is hardly conscious of any weakness remaining. There is very little difference, however, in the pulse; the slightest possible thrill being all that can be perceived.

With respect to the origin of the symptoms affecting the left arm, the evidence of the patient leaves no doubt that the paralysis was the result of the accident; but, the abnormal condition of pulse may of course possibly have existed previously without his knowledge. Looking, however, to the very curious and bizarre effects of lightning on the human body, the serious internal lesions which it may produce without leaving any trace of its action on the surface, I am of opinion that both the stoppage of the pulse and the paralysis were caused by the stroke. We know the tendency of electricity operating within a blood-vessel to cause coagulation; and it is not difficult to conceive that a current of extreme intensity, conducted as this was, from link to link of a silver chain of insufficient bulk for its free transmission, and which lay across the subclavian artery and brachial plexus of nerves, may have produced plugging of the vessel by coagulation, and have affected the nerves so as to cause loss of muscular power and numbness of sensation in the limb.

Time will not permit me to enter upon the question of the very curious and varied forms of injury which may be caused by lightning; but I would refer those who wish to inquire further into the subject to a very elaborate and exhaustive treatise, in two large volumes, by Dr. F. Sestier, published in Paris in 1866 (*De la Foudre, de ses Formes et de ses Effets sur l'Homme, les Animaux, les Végétaux et les Corps Bruts: Des Moyens de s'en preserver, et des Paratonnerres*). You will there find statistics and records of cases in abundance, showing at length and systematically the effects of lightning on each organ of the body; showing that persons may be struck dead without any trace of injury being discoverable either internally or externally; that there may be fatal internal injuries without lesion of the surface; that the surface may be extensively and deeply burnt without injury to the clothes; and that every article of clothing may be stripped off and scattered in all directions, leaving the wearer naked and unhurt.

There is, however, one practical consideration indirectly growing out of these cases, and in the nature of what may be styled *preventive surgery*, which is not without interest in this season of frequent storms, and on which I will say a few words, in order that you may be able to give some sort of answer to the question not infrequently asked by timid persons, as to the safest course to pursue when overtaken by a storm of thunder and lightning.

There is no doubt that the safest place for shelter is in the interior of a dwelling-house or other enclosed building, at a distance from windows and street-doors; and in a cellar, perhaps, for choice. Not only is the chance of being struck infinitely less, but the risk of serious injury is also much diminished. According to Dr. Sestier, the proportion of *fatal* cases occurring within houses is not more than one-fifth of the persons struck, and of these the greater number were standing near a window or on a door-step; whereas in exposed situations in the open country, three-fourths of the cases are fatal.

There is no doubt, also, that the popular notion, that it is imprudent to take shelter under a tree, is well founded, especially if, as in the cases before us, the tree be an isolated one. A low tree, or a hedge with several high trees in its proximity, is less objectionable, as the lightning will generally be attracted by preference to the most prominent objects. Trees standing together in a wood are seldom struck; the electric cloud, coming within the attraction of a mass of trees, pro-

bably discharges itself insensibly through the innumerable points of foliage. A wood, therefore, is not an unsafe place, though even there it may be well to keep away from a tree which is higher than its neighbours. Many persons have been killed while standing under a hay or corn rick; these, therefore, should be avoided. From their dryness they are worse conductors than the human body, so that the current passes from them to the latter, as the readiest channel by which it can reach the ground.

But if it is unsafe to stand under a tree or a haystack, is it safer to remain in the middle of a large open space? This is a doubtful question; for a man in the erect position, though less prominent than a tree, still offers a dangerous point of attraction when no other object is near, and if struck, the whole force of the stroke will pass through his body, entering probably by his head; whereas, under the tree, the current is likely to be divided and split up, so that though the chance of being struck may perhaps be greater, the risk of fatal injury is considerably less. According to M. Sestier's statistics, of those struck in exposed situations in the open country, three-fourths are killed; under a stack of hay or corn, two-thirds; under a tree, one-half; under a hedge, one-third; within houses, only one-fifth.

It appears to be pretty generally agreed that the safest plan, supposing shelter within a house to be unattainable, is to remain in the vicinity of some prominent object, such as a tree, but on the side opposite to that from which the storm is proceeding, and at a distance sufficient (say twenty or thirty yards) to avoid the risk of the electricity being attracted from the tree to the person. In the example before us, the horse and cart, which were standing near, but not under, the tree, escaped without injury.

Under any circumstances the recumbent is undoubtedly safer than the erect position; elevated and prominent situations being of course carefully avoided. It would be better, for instance, to lie down in a furrow than on a ridge. Additional security may also be obtained by depositing watch and chain, money, or other metallic substances which attract electricity, at a safe distance. Probably you will say that, by pursuing the course suggested, you are certain to get wet through, while under a tree you only run a remote chance of being struck by lightning. That is true, and the alternative selected will, I fancy, depend pretty much on individual temperament. Wet clothes, however, are not without a compensating advantage: they are all the better conductors of electricity; and, if they do not convey safely to the ground the whole of the current, they will transmit a much larger proportion of it, so that there will be all the less risk of serious personal injury. The men of whom I have been speaking went under the tree with their clothes only slightly sprinkled by the rain.

A gun is a very unsafe companion: nothing could well be worse than to walk about in a thunderstorm with a gun over your shoulder. To do so, is to convert yourself into the upper or attractive part of a lightning-conductor, without the accompanying provision for conveying the current safely away into the earth. Neither is it wise to walk along an exposed road under an umbrella, especially one with metallic stem and framework.

CLINICAL MEMORANDA.

HYSTERIA.

When summoned to a female patient in hysterical convulsions, we are apt to ignore danger, and to speak of the attack as "only hysteria." The cases related by Dr. Foss in the last number of the Journal prove that death may happen in one of the paroxysms; and I have lately met with a similar instance.

A married lady, of middle age and hysterical temperament, in whom faintness was readily induced by nervous excitement, was suddenly called to the bedside of her mother, who was supposed to be dying. The moment she saw her, a paroxysm of hysterical convulsion came on, followed by failure of pulse, cold perspiration, and unconsciousness. Although she partially recovered from this state of syncope, under the care of my friends Mr. Fryer and Mr. Hallett, death took place within twelve hours. A *post mortem* investigation by Mr. Hallett revealed a degenerated and softened condition of the heart. She did not come under my own notice until some hours had elapsed; and then I found her so much better that I unfortunately gave a very favourable prognosis, and was astounded when, next morning, I received a message announcing her death. As an old patient of my own, I had frequently seen her in similar attacks of more or less severity, and was not at all prepared for a fatal result on the present occasion.

W. F. Morgan.

Bristol, July 11th.

ABSTRACT OF LECTURES ON UTERINE HÆMORRHAGE.

Delivered at the Hospital for Women, Soho Square.

By ARTHUR EDIS, M.D.,
Physician-Accoucheur to the British Lying-in Hospital, etc.

Lecture I.

Gentlemen,—The subject for our consideration this evening is one that cannot fail to interest every one engaged either in the busy routine of general practice or in the study of diseases incidental to women. I intend using the term uterine hæmorrhage in its strictly correct, but, at the same time, not in its ordinarily accepted signification; this being applied almost exclusively to floodings connected with pregnancy and parturition. The term menorrhagia—literally, excessive menstruation—is far too limited to include all that I wish to say on the subject; and the term metrorrhagia is only applied to a steady flow of blood from the uterus, whether profuse or not, during the intervals of menstruation. Hence I employ the more comprehensive term uterine hæmorrhage, and shall limit my remarks principally to cases occurring in the unimpregnated uterus.

General Causes of Uterine Hæmorrhage.

I enumerate here, for your guidance, the most frequent general causes of this affection. They are as follows: Mental worry, distress, shock, etc.; emotional causes; ovarian irritation; heart-disease; tubercle, bronchitis, and pneumonia; emphysema; residence in tropical climates; congestion of liver; general plethora and luxurious living; sedentary and unhealthy occupations; abdominal tumours; constipation; hæmorrhoids; residence in marshy districts—ague; albuminuria; hæmophilia; exanthemata, cholera, fevers, etc.; anæmia; scurvy; lead-poisoning; period of sexual involution at change of life. A mere glance will suggest to you that, though it may be prudent to devote time and attention to a *speciality*, it is unwise to become a pure *specialist;* for uterine hæmorrhage cannot be regarded otherwise than as a symptom of the most varied affections, both general and local; and the sooner you get out of the way of regarding it as an entity or a disease *per se*, the sooner will you be in a position to treat rationally and successfully the cases with which you will meet, and will not lose time and credit in giving the numerous vaunted specifics for menorrhagia.

The consequences of uterine hæmorrhage, if allowed to go on unchecked, are sterility, hydræmia, hysteria, dyspepsia, extreme emaciation, death. The woman who repeatedly suffers from severe menorrhagia, without adopting means to restrain it, will become prematurely old; will, at a comparatively early period, present evidences of approaching decrepitude and of that re-arrangement of nutrition which ushers in old age. Who amongst you has not noticed in society individuals whose blanched appearance, dark areolæ surrounding the eyse, excessive languor and extreme irritability, whose very existence seems a burden too great for them to bear, and to whom every exertion is an effort? All this is due to some form of uterine hæmorrhage, which, either from neglect on the part of the patient, or inexperience on that of the practitioner, leads to much useless suffering and discomfort.

Before, however, we are in a position to appreciate morbid alterations in the discharge of blood from the uterus, we must first, very briefly, consider the normal condition of menstruation, or that periodic discharge of a sanguineous fluid from the uterus, which is attended by an engorged or congested state of that organ, as well as the ovaries and adjacent tissues. A greater part of the fluid under ordinary circumstances, probably the whole, comes from the uterus itself, and appears to be poured out from the open mouth of the uterine glands, which run from the free to the attached surface of the mucous membrane in a tortuous manner, this latter presenting a deeply red, velvetty, soft structure. The cavity of the cervix does not ordinarily pour out blood. The tissue of the uterus itself contains large sinuses, receptacles for venous blood, which during menstruation become filled; and, the veins being unprovided with valves, congestion of the uterine plexuses readily occurs, and the uterine tissue becomes engorged and expanded. It would appear that this condition, during the sexual life at least, is liable to occur also during intercourse. It is important to remember that ovulation and menstruation bear a peculiar relation to each other, the latter process not occurring in the absence of the former, although the contrary does not hold true. Ovulation, if it do not actually produce menstruation, is first in the chain of events; the ovary is, as it were,

the workshop of generation, and in all probability contains the inciting cause of menstruation.

There are instances where hæmorrhage occurs from vascular tumours of the urethra, bursting of varicose veins in the pudenda, and even from softening of the vaginal mucous membrane, as recorded by Trousseau, etc. In these cases, an examination will lead to a correct diagnosis; they are not comprised in my list.

Mental Worry, etc.—This condition is most frequently met with in those sad cases where a mother, wife, or sister is called upon to nurse some loved one through a tedious or painful malady, until at length the constant anxiety, broken rest, and severe and prolonged physical exertion, produce their result, and the nurse herself becomes in turn the patient, and demands our sympathy and help. Attention to ordinary hygienic rules, a proper amount of rest, and absence from the sick room, will do more to relieve the patient than medicine alone, although this may be a very useful adjunct. Long-continued mental depression, as seen in cases of melancholia, the sudden hearing of bad news, fright, and other causes of this nature, sometimes produce immoderate hæmorrhage, and may demand our interference.

Emotional Causes.—Under this head may fairly be classed *long engagements*, where the stimulus of being frequently in the society of one who, did circumstances permit, would hold a still nearer and dearer relationship, even in the purest minded, where passion is subservient to the nobler will, often produces serious menstrual irregularities, more especially menorrhagia. Such cases are by no means unfrequent, and cause much anxiety to the friends, who imagine consumption or some other serious malady to be present. Discountenance long engagements whenever you have the opportunity.

Recent Marriage.—Many cases of menorrhagia, attributed to the fatigues of travelling, are in reality due to the general excitement and unaccustomed exertion of the wedding tour. The unexpected return of the menstrual period, together with its immoderate flow, frequently give rise to much anxiety, not to say alarm.

Immoderate Coitus, with the accompanying ovarian and uterine congestion, recurring so often that it becomes almost constant, is not only a frequent cause of menorrhagia, but also of much subsequent suffering; and, in delicate and fragile women, often produces such an amount of ovarian irritation, that sterility and other serious consequences are the result. Ovaritis is no uncommon sequence. In *puellæ publicæ*, menorrhagia is very common; they have a ready mode of dealing with it by taking gin and vinegar. It appears to be quite certain, also, that unnatural excitation of the generative organs in women leads to irregular and profuse menstruation; and if the cause be not suspected and obviated, all our remedies prove inert and useless.

Ovarian Irritation.—Dr. Tilt, in his exhaustive work, states that "In those involuntary nuns of a society overstocked with women who have impatiently borne the burden of their virginity, and also in those who have given themselves up to excess of sexual indulgence, ovarian irritation often runs on to ovarian inflammation, and produces endless discomforts." When marriage occurs late in life, the ovaria, having been debarred their proper stimulus when most needed, become so accustomed to the privation, that, when the stimulus is at last presented to them, it produces a morbid impression. Hildebrand mentions cases where absence of sexual stimulus suddenly denied produces ovarian irritation, menorrhagia, etc.—as seen in young widows, prostitutes placed in confinement in penitentiaries, etc. Menorrhagia is a frequent result of this ovarian irritation; and it is in these cases that agents such as bromide of potassium, tincture of cannabis Indica, henbane, camphor, etc.. exert a very beneficial influence.

Heart Disease.—Hæmorrhage to a moderate amount may be regarded as beneficial; but in some instances it is so excessive that it becomes pathological, and demands our interference. Aconite and digitalis are the remedies that are generally most efficacious in quieting the heart's action and in restraining the uterine hæmorrhage.

Tubercle.—Hæmorrhage is both a cause and consequence of this condition. Long-continued excessive menstruation so deteriorates the general health, that in patients where there is any well-marked predisposition to tubercle this is greatly increased. Menorrhagia has also been noted as a not unfrequent complication of the early stage of phthisis, though amenorrhœa is the more usual condition.

Bronchitis and Pneumonia are occasionally accompanied by menorrhagia; but, as in heart-disease, if not excessive, it often proves beneficial.

Emphysema, by interfering with the normal circulation through the lungs, causes dilatation of the right side of the heart; and, by thus impeding the return of blood through the vena cava, produces chronic congestion of the pelvic viscera, and menorrhagia as a consequence.

Residence in Tropical Climates.—"We have conquered India, but we succumb to its climate", Dr. Tilt observes, in his *Uterine Therapeutics*. The intense long-continued heat debilitates the system; sudden cold checks the perspiration and produces internal congestion; and malaria poisons the nervous system; menorrhagia being one of the most frequent results, necessitating even a return to England before the condition can be remedied. Quinine and arsenic prove very beneficial in these cases. The return by the overland route, which is one of constant excitement, should be avoided. The long sea voyage is eminently qualified to restore the patient's constitutional strength.

Congestion of the Liver.—From the continued excesses at table of persons in the middle and upper classes of society, and in the lower classes of our larger towns, from the inordinate consumption of gin and porter, this condition frequently arises, and often produces menorrhagia. Exercise and abstinence, and saline aperients, will here be of far more benefit than astringents.

General Plethora and Luxurious Living.—Instances of enormously stout and large-built women are not uncommon, in whom the menstrual secretion is invariably profuse. It may become so immoderate that the general health suffers materially, and then interference is necessary. Small doses of antimony, to deaden or impair the appetite, sulphate of zinc, or a combination of the sulphates of iron and magnesia, and occasional mercurial purgatives, here prove of great benefit.

Sedentary and Unhealthy Occupations, such as exist in our large manufacturing towns, prolonged use of the sewing machines that work by treadles, and other employments of this nature, occasionally produce excessive menstruation, and necessitate rest and appropriate treatment.

Abdominal Tumours, by direct pressure on the vena cava and interference with the abdominal circulation, generally tend to produce abnormal congestion of the pelvic viscera, and so favour the discharge of blood from the uterus. This applies principally to tumours of the liver, spleen, and ovary.

Constipation, when habitual or chronic, is a frequent cause of menorrhagia, and at the same time a very difficult one to treat successfully; if you give acids or astringents, you tend still further to increase the mischief, by lessening the secretion of mucus, and so interfere with the process of defæcation. The principle that should guide you is to coax and assist, not force or worry. Dr. Bell's "peristaltic persuaders", composed of aloes, quinine, iron, and hyoscyamus, are useful in these cases. A formula that is also very efficacious, is that contained in our *Pharmacopœia*: Extracti nucis vomic. gr. ¼; extracti aloës Socot. gr. i; extr. hyoscyami gr. ii; or extract of belladonna with extract of Socotrine aloes.

Hæmorrhoids, by keeping up a more or less constant irritation, tend to produce congestion of the pelvic viscera, and so favour uterine hæmorrhage. Attend to the cause, and the effect will cease.

Residence in Marshy Districts: Ague.—Various authors mention this as a frequent cause of excessive menstruation. Enlargement of the spleen, with the accompanying interference to the normal circulation, together with deteriorated condition of the blood itself, favouring transudation through the uterine capillaries, is probably the explanation of it. Quinine and arsenic are our most reliable remedies in these cases.

Albuminuria, more especially in our large towns, is a not uncommon cause of profuse menstruation. The blood—poor, thin, watery—containing much less albumen and fewer red corpuscles than in health, readily becomes exuded. Encourage vicarious action of the skin and bowels, and give digitalis and iron.

Hæmophilia, or, as more generally understood, the hæmorrhagic diathesis, is an occasional cause of menorrhagia. Dr. Wickham Legg, in his recent work on the subject, mentions several instances. In one, the hæmorrhage lasted 472 days, and it was estimated that over 3,000 ounces of blood must have been voided. Iron, ergot, and oil of turpentine, seem to have been the most successful remedies.

The Exanthemata, Cholera, Fevers, etc.—Profuse menorrhagia is often one of the earliest symptoms in females of the advent of one of these maladies, and, from the deteriorated condition of the blood, is often a very serious complication, and determines the fatal issue in cases that would otherwise have pulled through. Hippocrates observed that gastric fevers tend to produce menorrhagia.

Anæmia, although generally the effect, is at times the cause of menorrhagia; and, as Dr. Matthews Duncan observes, affords a well-marked instance of Nature working in a vicious circle. Chalybeates and tonics, with proper attention to hygienic conditions, are the means most to be relied upon.

Scurvy has been noticed to favour menorrhagia. Dr. Byford, of Chicago, mentions that, in an epidemic of this disorder, menorrhagia was a very troublesome symptom. Lime- and lemon-juice prove very serviceable.

Lead-Poisoning.—Among workers in lead-factories, menorrhagia is a frequent symptom. Sulphuric acid lemonade, with sulphate of mag-

nesia and iodide of potassium, and attention to cleanliness, are generally successful in arresting it.

Period of Sexual Involution at Change of Life.—Floodings at this time are not uncommon, and often produce great alarm. Dr. Tilt mentions that, of 500 cases, 82 had a terminal flooding, and 56 incessant floodings; and in 208, Nature sought relief by hæmorrhages from different parts of the body. If only to a moderate amount, they must be regarded as beneficial; there is a certain amount of danger in stopping the critical flow too soon, particularly in those who are plethoric or who have been accustomed to lose much blood at the menstrual periods. Apoplexy may result. Supposing that flooding or profuse discharge of blood *per vaginam* occur at what would have been a menstrual period, and be accompanied by flushings, perspirations, and other symptoms met with at the climacteric, there need be no cause for anxiety or even for examination; but if it be attended by pain, is continuous, and affects the general health, an examination should be resorted to, and the appropriate treatment employed. Rest, sedatives, and astringents, preceded by a brisk mercurial purge, are often sufficient to arrest it.

ABSTRACT OF LECTURES
ON THE
SURGICAL TREATMENT OF ANEURISM IN ITS VARIOUS FORMS.

Delivered before the Royal College of Surgeons of England.

BY T. HOLMES, F.R.C.S.,
Professor of Pathology and Surgery.

LECTURE IV.—*June 10th*, 1872.

Galvano-Puncture in Thoracic Aneurism.—It was shown that in thoracic aneurism growing against the chest-wall, death is often the result of inflammatory action between the resisting chest-walls on the one hand, and the growing sac on the other. This may possibly be stopped, if the blood in the external portion of the sac can be firmly coagulated by the galvanic current, even though it should be impracticable to consolidate the whole tumour. This point was illustrated by a preparation in which the aneurism had perforated the parietes, and formed a large secondary sac under the skin. A table was produced from Signor Ciniselli's work, showing the results of all the operations of this kind hitherto practiced for thoracic aneurism, these results being much more favourable in the last few years than they had been when the method was new. Several cases have occurred in which the operation has been followed by an interval of health, extending in two cases over two years, in another twenty-one months, and in a fourth over a year. There is no evidence of absolute and permanent cure in any; and, in fact, the general coincidence of extensive atheroma renders relapse probable in aortic aneurism, even if the first tumour can be entirely consolidated. Still, it is argued, the check to the growth of the aneurism anteriorly puts the patient in better condition for the internal treatment after Mr. Tufnell's plan. The question, then, is the same as in other surgical operations undertaken for the treatment of disease certain, or almost certain, to recur; viz., whether the benefit produced, allowing it to be temporary, was worth the risk incurred. This can only be answered by experience, which hitherto seems to prove the affirmative.

The dangers of electro-puncture are chiefly from the inflammatory reaction produced in the sac and surrounding cellular tissue, from the tendency to gangrene of the punctures, and from the liability to embolism. The first may probably be diminished by coating the superficial parts of the needles with vulcanite, after Dr. Duncan's method. The second, Signor Ciniselli proposes to obviate by passing the positive stream through the needle for a short length of time before applying the negative pole. The last danger proceeds probably from the too great softness and instability of the clots formed by galvanism. This is also a frequent cause of relapse in cases where the pulsation has been temporarily suspended by galvanism. The best plan for avoiding it appears to be to use a weak continuous current for a very considerable length of time; but further experience is necessary on this point. Instances were mentioned proving that death, when imminent from the rupture of the tumour, may sometimes be averted for the time by coagulating the blood by means of the electric current; and, on the whole, it was urged that this method of treatment deserves more extended trial in thoracic aneurism presenting externally, and that it should be used at a period before the external growth of the tumour has reached such an extent as to make the disease incurable.

The treatment of subclavian aneurism by surgical operation was shown to have been hitherto hardly less unsuccessful than that of innominate aneurism. The Hunterian operation on the innominate, or the first part of the subclavian, has hitherto been practised in about twenty-eight cases, only one of which on the innominate proved successful, and that only after repeated secondary hæmorrhage. The ligature of thesecond or third part of the subclavian, which can only be done in aneurisms that are as much axillary as subclavian, has been practised in twenty-one cases with only nine recoveries. The distal ligature appears out of place here, since it throws the stress of the collateral circulation on the diseased part of the vessel, and is therefore more adapted to increase the aneurism than to check its growth. It has been practised four or five times with uniformly fatal result. To all these failures seven cases are to be added in which the operator was unable to tie the artery, and in one of these the manipulation of the parts seems to have produced the consolidation of the aneurism, which was spontaneously cured. The possibility, however, is not to be lost sight of, that by improved methods of deligation in future, whereby an artery may be tied without its subsequent division, the operation on the innominate or first part of the subclavian may be justifiable if those arteries can be found healthy. But preparations of this disease show that very commonly the artery or arteries nearer the heart are extensively diseased. This was illustrated by Mr. Collis's case from the College of Surgeons of Ireland, and Mr. O'Reilly's from the Richmond Hospital, Dublin.

Another interesting question is, whether in some cases the second part of the artery might not have been tied instead of the first, a much less dangerous operation. A preparation of Mr. Liston's appears to show that this would sometimes be feasible. The second part of the artery should also be tied in cases where the third part has been exposed and found diseased. All these operations, however, for ligature of arteries in subclavian aneurism, must necessarily be exceedingly dangerous, and this renders it the more necessary to seek for some treatment not involving cutting operations. It seems doubtful at present whether the first part of the subclavian artery can be effectually compressed for the length of time necessary to cure an aneurism situated lower down; but a trial of this method under chloroform would be advisable in appropriate cases. In the subclavio-axillary form, compression may be often successfully used. This is proved by a case recently published by Mr. Poland, and by one of Mr. Gay's still under treatment; and it is noted in several of the published cases of subclavian aneurism that the pulsation of the tumour could be stopped by moderate pressure. Direct compression may perhaps assist in the cure.

OBSTETRIC MEMORANDA.

INERTIA UTERI.

THE correspondence now going on in the JOURNAL with reference to the propriety of employing external pressure as a means of assisting delivery in cases of inertia of the uterus, points pretty clearly to the conclusion that the teaching of the class-room and the practice of the bed-side are, in this matter, not in harmony with the precepts laid down in our text-books. Ample testimony has been adduced to show that the practice is not new; and, so far as this town is concerned, I know of nothing in connection with parturition which has been more abused. It was formerly the universal custom, and is, I doubt not, now, amongst the poorer classes, to push the uterus with the flat hand from the commencement of labour, with the design of assisting delivery. Many times have I had to restrain officious friends from pushing at the uterus before the os was expanded. We may learn from this that the proceeding came into favour from the obvious advantages which had followed its use in given cases, and also that it is a practice of ancient date, handed down by example from one generation to another. It remains for us, as skilled witnesses, to defend its position as an adjunct to the parturient forces, and to guard against its abuse when employed by the unskilled. My experience leads me to the conclusion that, in selected cases, where the uterine force is not too much in abeyance, pressure with the hands is capable of rendering material assistance to the uterus, in helping it to empty itself of its contents, as where the uterus becomes hampered by obliquity, or the presence of a large child; but that if the uterine force be itself inoperative, either from constitutional exhaustion or feeble muscular power, then pressure will do little good, and it is better to rely upon ergot and the forceps. On the vexed question of the value of ergot, as raised by Dr. Steele in the latter part of his letter, I forbear to enter, time and circumstances not permitting.

JOHN BASSETT,
Professor of Midwifery in Queen's College, Birmingham.

REMARKS

ON THE

PHENOMENON OF THE NUTRITION OF TISSUES: WITH AN INQUIRY INTO THE NUTRITIVE VALUE OF BEEF-TEA.

By WILLIAM MARCET, M.D., F.R.S.,

Late Senior Assistant-Physician to the Brompton Hospital for Consumption; etc.

On considering the composition of food, and comparing it with that of the tissues to be nourished, we observe at once that the nutritive material contains albumen, phosphoric acid, potash, and magnesia, which, finding their way ultimately from blood into tissues, are assimilated or fixed, becoming bound together, by means of water, in such a way as to form a solid body, having the same structure and the same composition as the tissue, the waste of which these substances are repairing. I have shewn (see BRITISH MEDICAL JOURNAL, February 10th and 24th, 1872) that the constituents of food assume partly the colloid, partly the crystalloid condition (those which are colloid being alone directly concerned in the formation of tissues), and they may be considered as retaining this form after they have been assimilated; but these substances cannot be removed in the process of waste, unless by undergoing a metamorphosis from the colloid into the crystalloid or diffusible state. Muscular tissue acquires this new power of diffusibility from the action of potash, which blood yields to tissues in sufficient quantity, not only to assist in building them up (an extremely small proportion of potash enters into their formation, if they contain any at all), but also to transform the assimilated phosphoric acid into a crystalloid phosphate, thereby causing its elimination by a process of diffusion; at the same time, a phenomenon of oxidation effects the removal of the albuminous portions of the tissue by transforming them into kreatine, kreatinine, and sulphuric acid, these several substances being all crystalloid and consequently diffusible.

Tissues only contain very small and somewhat varying proportions of chlorine, amounting, when calculated as chloride of sodium, to a mean of 0.275 grammes of this for 200 grains of ox-flesh, and about 11 per cent. of the whole of the mineral constituents. This substance must perform some important function in muscular tissue, as it is never absent from it, although it does not actually form part of the assimilated tissue.

Blood must clearly contain the same kind of substances as we find in tissues, but their relative proportion respectively is vastly different, and no connexion can be traced between the composition of blood or of serum and that of the various solid portions of the body. We must therefore completely set aside an old idea that the serum of blood finds its way into tissues for their nutrition by a kind of process of filtration. Indeed, nothing like a filtration is possible through the capillaries, as their walls are so thoroughly impervious and homogeneous that Virchow compares them to a film of collodion. "A film of collodion is not more homogeneous nor more continuous than the membrane of a capillary." (*Cellular Pathology*. By Rudolf Virchow. Translated by F. Chance. P. 113.)

The material for the nourishment of tissues can no more find its way through the capillaries by a process of diffusion, etc., than by one of filtration or transudation, as this material is not diffusible; indeed, I can only obtain about 7.3 of diffusible material for 1000 of blood after twenty-four hours dialysis, and two-thirds of this consists of chloride of sodium, which takes no direct part in the formation of tissue. The colloid substances destined to be supplied to the tissues, therefore, find their way through the walls of the capillary vessels by some process which no known physical law can explain.

The nutritive material, having left the blood, moves about the tissues through a series of small channels, the existence of which Virchow pointed out with the microscope (*Cellular Pathology*). A very simple experiment will shew, not only that these channels exist, but that they really do contain the nutritive material. Let a piece of flesh or raw meat be immersed in water, and this water will be found, after a very short time, to contain albumen, a substance known to be required for the formation of muscular tissue. Now, albumen in solution could not possibly pass from flesh into water if it were not contained in open spaces, because it could not diffuse out of a compact mass, which would then resemble physically a jelly. ("Sur certaines propriétés physiques du tissu musculaire." *Bibl. Univ.* for 1865. By the Author.)

On the Nutritive Value of Beef-Tea.—The nutritive value of beef-tea is most difficult to establish, because we do not know for certain whether the crystalloid nitrogenised compounds, resulting from the changes which albumen undergoes in tissues, such as kreatine and kreatinine, are or are not converted into urea in the circulation; it is not unlikely that such a phenomenon takes place where there is a deficiency of albumen in the blood from disease, as kreatine can be transformed artificially into urea and sarcosine by a process of oxidation; but in health, under ordinary circumstances, such a change is very improbable, kreatine and kreatinine occurring in the blood in proportions not altogether insignificant, and also in the urine. Beef-tea, as usually made, and free from albumen, contains phosphoric acid, potash, and magnesia, colloid in the necessary proportions to make flesh; most of the phosphoric acid and potash present, however, exists in the form of crystalloid pyrophosphate, and can be, as such, of no use towards the nutrition of muscles. Albumen being withdrawn from beef-tea, the proportion of this substance required to form muscular tissue, together with the other colloid constituents of flesh, must be taken from the blood, which, I may add, contains an infinitely higher proportion of albumen than is necessary to make muscle; the excess, under ordinary circumstances, being obviously transformed into urea and excreted as such.

Supposing blood to contain the minimum quantity of phosphoric acid, potash, and magnesia in the colloid condition, or that which is available for nutrition when death is on the point of taking place from starvation; there will still be present in the circulation a considerable proportion of albumen whose nutritive power can be made available if the blood be supplied with the other constituents (mineral) the tissues require. Hence it is that, by adding to blood the substances present in beef-tea, the tissues are at once supplied with nourishment; and if the crystalloid nitrogenised constituents of beef-tea are, under such circumstances, transformed into urea, it will be readily understood that beef-tea, even free from albumen, may support life effectually for a time.

The retention of albumen in beef-tea, or the addition of some white of egg to the broth, must greatly increase its nutritive value; but, in order to preserve the albumen naturally present in it, we shall require to begin by mincing the meat, and this will have to be extracted with cold or lukewarm water, the fluid being subsequently boiled for a few minutes: this process was recommended by Liebig many years ago, although I question whether it is often adopted. Excellent beef-tea will be best prepared by mincing one pound of the best beef, mixing it thoroughly with a pint of water either cold or lukewarm, then straining and boiling the liquid for a short time, say about five minutes.

The method of immersing one large piece of beef in boiling water, and allowing the whole to boil together for several hours, must yield a very inferior kind of beef-tea, because the outside of the meat, becoming hardened from the coagulation of the albumen, prevents, in a great measure, the actual juice of the meat from passing out into the water. By heating raw meat in a closed space without the addition of water, it loses a certain quantity of its juice, which does not gelatinise on cooling. This material is certainly a highly concentrated extract of flesh, indeed it is the gravy which, under ordinary circumstances, meat gives out while it is being roasted, but it contains no albumen; and, by making beef-tea by extraction with water, as stated above, a much larger amount of nutritive material is obtained from a given weight of raw meat.

As to the absolute quantity of phosphoric acid, potash, and magnesia in beef-tea, it amounts to about one-half of the quantity contained in the whole of the meat after careful extraction; but we are mostly concerned here with the proportion of these substances in the colloid state, which can alone be available for the formation of flesh.* The mean total amount of albumen, colloid phosphoric acid, and colloid potash in 200 grammes of beef (not in the juice in flesh only) I find to be

Albumen (soluble and assimilated)	...	...	...	33.815
Phosphoric acid	,,	...	...	0.301
Potash	,,	...	...	0.103

while the total amount contained in beef-tea prepared from 200 grammes of raw meat, but free from albumen, will only amount to nearly

Phosphoric acid ...	...	...	...	0.037 grammes
Potash ...	....	...	...	0.013 ,,

or one-tenth the quantity originally present in the beef. Now, the albumen required to make flesh with these proportions of phosphoric acid and potash would only be 4.23 grammes, which may apparently be taken from the blood without robbing it to any very serious extent. The clear beef-tea from one pound of meat would, according to this estimation, yield, therefore, only one-tenth of the whole amount of nutritive material which it contains, and no albumen. The proportion of

* The crystalloid phosphate of potash in beef-tea probably acts also a part in the phenomenon of nutrition.

albumen required to make flesh with this beef-tea and which the blood must have to supply would amount to 149 grains (9.64 grammes). Now, twenty pounds of blood would contain (at 90 per 1000) 12,600 grains of albumen ; so that blood may be expected to be able to continue supplying albumen to the material of beef-tea to make flesh some time after any food has been taken. This length of time must be regulated by the rate of the formation of urea and that of the waste of tissues.

A CASE OF FEIGNED DISEASE.*

By ANDREW AITCHISON, M.B., Wallsend.

THE history of this case is somewhat obscure ; but I shall give it as nearly as I can remember, having heard it from the female who was the subject of disease. The case is rather interesting, as the woman lay in bed for twenty-two years, never being up during that period even to have her bed made. She also vomited for seventeen years matter having a fæcal character.

J. H., aged 19 at the time of attack, was seized with a fit in the summer of 1850 while making hay, which the medical man who was called pronounced to be hysterical. From this time, she never was strong. About six months after this fit, she was attacked with an inflammation of the chest, which left her very weak. On recovering from this attack, she attended the Newcastle Infirmary regularly for some time, as she still suffered from hysterical fits ; but, as she did not receive any benefit from the medicines she took, and seemed to grow weaker, her medical adviser recommended that she should lie in bed until she was stronger. As she appeared to be no better in bed, she was advised to get up and try to go about again ; but this, she said, she was unable to do, so there she remained. About five years after the commencement of her illness, she was seized one day with vomiting and violent pain in the bowels, and at the time the pain was very severe she thought she felt something give way. The pain left in a few days, but the vomiting continued, and no medicine she took relieved it in the slightest.

She came under my father's care, on the death of the parish surgeon who attended her, in the summer of 1862. She then complained of a tightness over the chest with pain shooting through to the back, and a severe cough, occasionally attended with spitting of blood. There was great tenderness over the abdomen. She vomited several times a day, the vomited matter having a very offensive and fæcal odour. Her bowels were moved, she said, about once in five weeks. I may as well mention that at each visit the vomited matter was shown, and it always had the appearance of being newly ejected. The stench, also, was unbearable. On examining the patient, no tumour or anything abnormal was discovered in the abdomen. The chest was dull on both sides, and she had all the signs of incipient phthisis. After having tried various drugs with a view to check the vomiting, and seeing that she got no better, but that the sickness seemed to be aggravated by taking medicine, the conclusion arrived at was that the patient might be suffering from gastro-colic fistula, although the case was entered in the pauper-book as one of doubtful character. During her illness she was seen by several medical men to whom I had mentioned the case. Nearly all had some doubt as to where the vomited matter came from, and two said that they did not believe she vomited at all; but as she had been seen to vomit on several occasions, that doubt was removed.

About two years ago, I asked Dr. Philipson to see her with me. He examined the patient and the vomited matter very carefully, and in the vomited matter he found large quantities of cotton-wool mixed with articles of food, and he then expressed his opinion that the patient swallowed cotton-wool in order to cause the vomiting and the peculiar character of the vomit ; and that her object was to deceive, in order to obtain sympathy and charity from her neighbours. On being told that she was accused of eating cotton-wool in order to cause the vomiting, she denied it, and said that she would never give herself so much pain as that caused by the vomiting if she could help it. The symptoms continued without variation for seventeen years ; and about three weeks before her death she was seized with obstinate diarrhœa, and the vomiting and sickness suddenly ceased. The diarrhœa lasted for three weeks, when she died as from consumption.

After death, I made a *post mortem* examination of the body. Great difficulty was experienced in opening the chest, owing to its sternal portion being firmly bound down by the pleuræ. The pericardium was firmly attached to the pleura and ribs of the left side, and also to the diaphragm. Both lungs were firmly attached to the walls of the chest by old adhesion. Both lungs were infiltrated throughout by tubercle, and in the upper lobe of the left lung there existed a cavity of large size. The pericardium was thickened, and contained about two ounces of serum. The heart was exceedingly small. The abdomen was carefully examined. No communication existed between the stomach and colon. The stomach itself was healthy, and of normal size. The liver was enlarged and slightly fatty. The bowels appeared to be healthy throughout, with the exception of a little redness of the mucous membrane. The uterus with its appendages and all the other organs were perfectly healthy. It was very satisfactory after so many years of doubt to find out the true nature of the case. Instead of its turning out to be one of gastro-colic fistula as it had been supposed to be for many years, it was found to be one of hysteria, as revealed by the *post mortem* examination. It is also very remarkable that she should have deceived her friends so long ; even her own mother, who waited on her day and night, seemed to be perfectly ignorant of her deception.

* Read before the Northern Branch.

ADDISON'S DISEASE.

By JOHN F. NICHOLSON, F.R.C.S., Stratford.

A. W., aged 14, was seized on September 14th, 1871, with vomiting of food and bile. His bowels had been freely moved by effervescing magnesia the day before. His illness could not be traced to any cause except having eaten some ripe red plums. Diarrhœa was epidemic. The vomiting continued more than a week, in spite of the most careful diet and medical care. Turpentine stupes were applied, and ice was freely given. Beef-tea was the first thing retained ; brandy and water was most unpalatable. I had ordered it, as his pulse was very low and the exhaustion great. He looked of a dull, leaden hue, reminding me of cholera collapse. His extremities were cold, his tongue clear and red, and he had great thirst. His skin, naturally dark, had on it several black-coloured mole-spots, chiefly on the neck and arms ; the lips were not red, but of a dark purplish hue. All the other members of his family were fair and healthy. He had an attack of phlegmonous erysipelas in the left arm in 1860, when two years old ; tetanic symptoms set in ; free scarification gave relief, being followed by abundant purulent discharge and sloughing of the cellular tissue. He recovered, and had since enjoyed tolerably good health ; but his mother said he had always been of a very sensitive nature, and highly emotional. The scar left where I made the incision was now of a dark coppery colour, and his shoulders were also striped with a band of the same dark hue, where they had been chafed by his braces and the basket which he carried as a baker's lad. The genitals were almost black, like those of a mulatto. The mole-spots were perfectly black, melanotic, varying in size from a dot to that of a shilling. His ankles were scarred by marks of the same dirty coppery colour, where his boots had chafed the skin. His bowels were costive ; but simple aperients acted well, the fæces being healthy, with abundance of normal bile. His urine was acid, always in all respects healthy, without a trace of albumen. His abdomen was flat, and, on careful examination, gave no positive indications of disease. His sleep was tranquil, but his head swam when erect. The vomiting generally came on when he awoke and attempted to stand ; it was preceded by giddiness. Nothing but a little froth or phlegm was voided ordinarily, excepting what might have been swallowed immediately before. He improved a little, but lost flesh rapidly. He was able to take a little mutton occasionally ; but beef-tea and milk were the staple articles of his food. There had been no pain in the loins, nor any sense of fulness or tenderness. The tongue remained very clean and moist, the skin generally cold ; but his pulse was about 80, and small.

October 8th. Dr. Sutton kindly saw the case with me, and said all the abdominal organs seemed sound ; but as to Addison's disease, he felt doubtful. The discoloration he considered too general, the wasting unusual, and the age of the patient younger than any case he had seen in marked disease of the suprarenal capsules. The patient was obliged to keep the recumbent posture ; his bowels became more constipated. The saline alkaline aperients suited best ; the mineral acids did not agree. A little tincture of calumba, and then of bark, with carbonate of potash and sal volatile, sat best on the stomach.

November 6th. He had improved for the last ten days. There had been no vomiting. The appetite improved ; the bowels acted fairly ; His complexion was better ; but the skin on the back looked coppery ; and immediately above each knee there was a streaked space about an inch and a half wide, as if it had been brushed over with a purplish colour. This had been noticed during the last four or five days. He said he was not giddy, and wanted to go out.

March 30th, 1872. He had been able to do a little work in the bake-

house, but was soon exhausted. During the last week he had looked dull, and his lips were returning to their former bluish colour. He slept restlessly, starting much; felt sick, and had vomited bile. Milk and beef-tea turned sour. He had grown much, his head swam, and he seemed confused on awaking. He sat moping over the fire, being very chilly. His pulse was miserably small.

April 2nd. He had kept his bed for some days, and appeared very weak, gasping often, without appetite. The skin was cold and pale, without fresh spots. I was hastily summoned in the afternoon, and found that he had broken out into a cold clammy sweat; gasping for breath, with a vacant fixed stare; and had expired, just before my arrival, without a groan or movement.

At the necropsy, April 3rd, twenty-seven hours after death, the body was pale and emaciated; the lips had a dark bluish, almost purple, colour, but not the interior of the mouth. The skin was generally rough, and of a bronzed tint, particularly over the genitals. The cicatrix in the arm was of a dark brown colour; and over his shoulders and ankles the skin was of the same dark coppery tint. The abdomen was flat. Not a trace of disease was observable, except some enlarged mesenteric glands; and in these there was no scrofulous deposit, merely hypertrophy. The kidneys were healthy. The suprarenal capsules were removed with great difficulty, being firmly bound down by dense cellular tissue. They were both considerably enlarged, hard, cartilaginous, with calcareous deposit in parts. The right was triangular, about half or three-fourths of an inch in thickness and an inch and a half long—very red externally, and covered with strong adhesive tissue. On being cut into, it exhibited several partitions filled by lardaceous, cheesy, semipurulent matter. The left was crescentic in shape; being longer, but of the same dense gristly texture, and with similar contents. On April 10th, I showed the right capsule to Drs. Sutton, Ramskill, and Hughlings Jackson, who all agreed that the specimen was one of well marked Addison's disease. Dr. Sutton said there were present the two stages—the recent whitish waxy semifibrous tissue; and the more advanced yellow cheesy calcareous deposit. Yellow points could be seen in different parts of the surface, which on section showed the same characteristics. The heart was flabby, with fluid blood in its cavities; there was no effusion in any of the serous cavities. In each lung, about the centre, was felt a hard cretaceous puckered body, as large as a bean, which seemed like a shrivelled tubercle; but not a trace of a tubercle could be discovered in any other part of either lung. Three or four bodies of the size and flat shape of melon-seeds were seen lying on the lumbar vertebræ under the peritoneum, which could be moved readily, as if floating under it. They were quite black, like flakes of melanotic pigment moulded into oval bodies, resembling small glands.

REMARKS.—The above case is of great interest, as it seems to me to confirm the English view of the pathology of Addison's disease, much doubted by the German school. It occurred in a young subject, and proved fatal from its intrinsic intensity, before the constitution was broken down by other concomitant disease. The only organic change observable in this case was enlarged suprarenal capsules; their natural structure being completely changed into dense cartilaginous tissue, divided into compartments, some filled with soft lardaceous matter, others with materials of various consistency, from semipurulent to rough calcareous deposit. The mesenteric glands were also enlarged, as commonly found in abdominal diseases of childhood; but there was no specific change in their structure. The distressing symptoms seem in the present case to have been due to the slow and steady progressing disorganisation of the suprarenal capsules. No other complication was found; in fact, the other organs of the body might have been pronounced perfectly healthy. The remarkably small pulse, exhaustion, chilliness, vomiting, constipation, acidity, and indigestion, have been referred to irritation of the solar plexus; and the dense character of the cellular tissue, in which the branches going to the suprarenal capsules were imbedded, the result of chronic inflammatory action, seems to confirm this opinion. Much stress has been laid upon the amount and character of the discoloration of the skin. It appears to me that we are in the dark as to the cause of this unusual pigmentation; at any rate, we know no definite rules or principles upon which deposit of the colouring matter of the blood takes place. We may have much or little, and we cannot tell why the tint may vary in all parts; but those portions of the skin which have been abraded, chafed, or irritated, by friction, are most darkly marked, and especially the genitals. The startlings, semi-convulsive twitchings of the extremities in this case, especially during sleep, show that the spinal system of nerves is affected; but, as Dr. H. M. Tuckwell has well observed, in his able paper in the *St. Bartholomew's Hospital Reports* (1871), "The more decided cerebro-spinal symptoms are, as a rule, later manifestations in the disease, and seem to succeed to the more strictly sympathetic troubles." Again, "The neurosis and the pigmentation are explained by a long-continued irritation of the sympathetic nerve at its great centre." I would refer all who are interested in this subject to this valuable contribution to science, as well as to Dr. Greenhow's exhaustive treatise in the *Transactions of the Pathological Society* (1866). "The result of these labours was", Dr. Tuckwell observes, "to show that there exists a definite relation between a certain train of constitutional symptoms, attended by discoloration of the skin, and one particular organic lesion of the suprarenal capsules; and further, that the careful observation of these symptoms will lead to the diagnosis of the presence or absence of this particular lesion, with as much certainty as can be attained in the diagnosis of any other organic lesion."

A CASE OF FRACTURE OF THE SPINE.

BY GEORGE ALEXANDER GLOAG, L.K.Q.C.P.

— GREENWAY, aged about 50, by occupation a cab-driver, first came under my notice on April 30th, 1872. He was suffering from the effects of a fall he had received a day or two previously. He stated that, while in the act of climbing to his box-seat, the horse became restless, and moved suddenly forward, throwing him violently to the ground. He found himself unable to walk, and was removed to his home in a cab. When I first saw him, he complained of some pain across the loins, extending down the back of the thighs and legs, and of having been severely shaken by the fall. There were no apparent signs of fracture; he had perfect use of his limbs, and did not complain of tenderness or pressure in any particular part. His pulse was of average frequency, and normal in character. His most urgent symptom was a severe cough, from which he had suffered for a considerable period. The bowels being costive, I ordered him some purgative medicine and prescribed expectorants. On my next visit, he described himself as being much better; the pains were not so severe; his cough was soft and less urgent. Nothing occurred during the next week or ten days to retard his apparent progress towards recovery. In about a fortnight from the time the accident occurred, he felt well enough to walk up and see me, and to take moderate exercise in the open air. He continued to visit me every few days; his general health was good; all pains had left him, and the only inconvenience of which he complained was muscular stiffness. On June 20th, he sent a message requesting me to visit him. On my arrival, I found him in bed. He complained of numbness in the legs and inability to walk. I found, on examination, that the lower half of the body was partially paralysed. He could move his legs, but was unable to draw them up without the assistance of his hands. Sensation was impaired in them; pricking or pinching the skin gave little pain; still he was able to distinguish what part of the thigh, leg, or foot was touched by the hand without the aid of sight. The paralysis of motion became complete, sensation diminished daily, and urine passed constantly without his knowledge.

On July 2nd, he was removed into the Bristol Royal Infirmary. Soon after his admission, he began to complain of numbness in his arms, then loss of power in the upper extremities. His breath became short, mucus accumulated in the bronchial tubes, which he was unable to cough up, and he died rather suddenly on July 6th.

By the courtesy of Dr. Shingleton Smith, I am enabled to give the result of the *post mortem* examination. The three lower lumbar vertebræ were fractured transversely through the bodies, the transverse processes were uninjured, and there was no displacement. The cord and its membranes appeared uninjured. Some congestion of the membranes was found, but no blood or lymph had been effused, and there was no manifest softening. No change visible to the naked eye could be distinguished in the cord.

The history of this case furnishes some points of considerable interest. It is remarkable, considering the nature of the injury, that complete paraplegia was not the immediate result, and that the patient was able to walk without pain or difficulty soon after receiving it; and it is strange that no positive cause could be discovered after death to account for the paralysis which set in secondarily in the lower limbs, and gradually involved the upper extremities. It appears probable that local myelitis was the result of the injury, and the cause of the paraplegia, and that some minute change in the nerve-tissue rapidly extended from the lumbar to the cervical region, paralysing the muscles of respiration. I am inclined to think that, if this patient had remained in bed for four or six weeks after the accident, he would have made a good recovery. A long period of perfect rest seems to be of the utmost importance in spinal injuries.

CASES OF HÆMOPHILIA.

By CHARLES A. BRIGSTOCKE, Esq., Calne.

An account of some cases of hæmophilia, by Dr. J. West Walker, having appeared in the British Medical Journal of June 8th, perhaps the following case at present under treatment, with the family history, may prove interesting.

H. C., aged 13, a somewhat anæmic but tolerably well nourished boy, had, when born, large extravasations over both shoulders. In a few days after birth, one of the ankles became distended by effusion. When about eight months old, he suffered from such profuse epistaxis that it seemed doubtful whether he could survive the loss of so much blood. Ever since that time, he has suffered at intervals from effusion into the joints. Sometimes the ankles are affected; at other times the knees, and sometimes the elbows or wrists; the effusion not even sparing the small joints of the fingers and toes. He also suffers from extravasations of blood over different portions of the cutaneous surface, produced at times by very trivial causes, and sometimes occurring in an apparently spontaneous manner. A short walk will frequently produce discoloration of the calves of the legs. The affected joints are, during the attacks, the seat of acute pain, and are somewhat discolored; the pain at times even produces delirium; and the effusion lasts sometimes for weeks, although the pain subsides. He has had no hæmaturia, hæmoptysis, or hæmatemesis, and has apparently no organic disease. He has been vaccinated, and has had measles. About a twelvemonth ago, such profuse hæmorrhage followed the extraction of a tooth that he lost a considerable quantity of blood before medical assistance could be procured. At present the left knee and left elbow are the joints affected. His appetite is good; the bowels regular; there is no albumen in the urine.

A brother, H. C., aged 12, who died about ten years ago from internal hæmorrhage distending the abdomen, had suffered in a precisely similar manner, with the addition of hæmatemesis and hæmaturia. Another brother, A. C., who died twelve years ago, aged 3½, had suffered almost constantly from epistaxis; and the ostensible cause of death was hæmorrhage from the gums.

There are seven children now alive—three boys and four girls—all of whom are in good health, with the exception of the eldest boy (*i.e.*, the first mentioned case): the six younger ones have never shown any symptom of the disease. The mother, aged 39, enjoys good health, and has never shown any hæmorrhagic tendency. The father, aged 41, is rather a weakly man. He suffers from occasional epistaxis, sometimes severely; and nearly lost his life about five months ago though rupture of a varicose vein. The mother's father, mother, one brother, and three sisters, died of dropsy. Two sisters are alive in weakly health, and one brother in good health. On the paternal side, the father lived to the age of 76, the mother died early of consumption, and four brothers are alive in good health.

Remarks.—In this case, as in the one referred to by Dr. Walker, external applications have appeared worse than useless. Warm fomentations have to some extent alleviated the pain during the onset of attacks. Believing the case to be allied in character to scurvy (at least to some extent), I have given the boy a liberal diet, with fresh vegetables, ripe fruit in moderation, warm clothing, etc. As to medicines, he has been now taking for some time the citrate of iron and quinine, with an excess of citric acid, as well as cod-liver oil. His general health has certainly improved, although the tendency to local effusion still exists.

Recovery after Trephining for Cerebral Abscess.—The operation of making an opening into the dura mater for the relief of intracranial suppuration is one which is rarely successful. A case recorded in the *Nashville Medical Journal* by Surgeon J. T. Weeds of the United States Army, in which trephining was successfully performed for cerebral abscess following gun-shot wound, is therefore of interest. After removing a portion of bone nearly an inch to the left of the mesial line, and an inch over the superciliary ridge, the coma from which the patient was suffering still remained unrelieved. On closer examination, the dura mater at that part of the opening nearest the middle line appeared to have a bluish tinge, and to bulge a little more than natural; and he imagined that he detected obscure fluctuation. He therefore incised the dura mater, and plunged his knife into the brain, giving exit to half an ounce of dark green and somewhat fœtid pus. The patient was put to bed with the head and shoulders somewhat elevated, and a refrigerant lotion was applied to the head. After some time, the patient became conscious; not a single unfavourable symptom supervened; the wound healed rapidly; and in a fortnight the patient was convalescent.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

MIDDLESEX HOSPITAL.

CASE OF ACUTE RHEUMATISM, WITH HEAD-SYMPTOMS AND HIGH TEMPERATURE, SUCCESSFULLY TREATED WITH BATHS.

(Under the care of Dr. Henry Thompson.)

Richard L., aged 21, a pale, delicate, nervous-looking lad, was admitted under Dr. Thompson's care on March 16th, 1872. His father, three brothers, and one sister, were all alive, but not strong. His mother died of consumption, and his grandfather was said to have had gout. The boy himself had always been in feeble health. About ten years ago he had an attack of rheumatism, and since that date he had suffered from shortness of breath on any extraordinary exertion. About two years ago he had a severe cough, with slight hæmoptysis. A week before admission, he experienced pain, accompanied by redness and swelling, in the left foot.

On admission, his pulse was 108, temperature 101 deg. There was no definite murmur over the præcordia—only a feebleness and roughness, with deficient accentuation of the first sound. He had pain, redness, and swelling, in the hands and ankles. He was ordered a mixture containing fifteen minims of tincture of perchloride of iron every four hours; nitre poultices to the affected joints; and five grains of compound soap pill in the night. From this date until March 26th, the pains in the joints were extremely variable, coming and going in the most capricious manner; they were never at any time remarkable for their severity. The chest-complications, however, were severe in the highest degree. The signs and symptoms of pericarditis with large effusion developed rapidly: there was unquestionable evidence of sharp pleurisy and extensive pneumonia on the right side, and evidence enough to arouse the suspicion of a limited pneumonia on the left. During this period, the maximum of the pulse-rate amounted to 120, that of the respirations to 60, and that of the temperature to 103.3 deg.* There was no albuminuria. During the same period, two leeches were applied to the right lower ribs, the seat of the pleuritic pain; and two to the præcordia, which was subsequently blistered. The diet was liberal under the circumstances; but no stimulants were administered before the 25th, when four ounces of brandy were allowed.

March 26th. Morning pulse, 126; respirations, 60; temperature, 101.2 deg. Evening pulse, 132; respirations, 66; temperature, 102 deg. The face was exceedingly pale. The pain in the right side continued; the pain in the joints was entirely gone. His breathing was laboured. The præcordial dulness reached the first interspace; laterally, it extended one inch beyond the mammary line, at the level of the nipple. He was ordered to have one grain and a half of iodide of potassium in a mixture containing senega, carbonate of ammonia, and squills; two leeches to the painful part of the chest; six ounces of brandy daily; and a sixth of a grain of acetate of morphia to be injected beneath the skin. For diet, he was allowed two pints and a half of milk, two eggs, two pints of strong beef-tea, a custard pudding, and twelve ounces of bread, daily.

March 27th. Morning pulse, 126; respirations, 42; temperature, 101.8 deg. Evening pulse, 138; respirations, 42; temperature, 102 deg. Præcordial friction was audible over the whole of the præcordia.

March 29th. Pain had returned to all the joints. Evening temperature, 103.8 deg.; pulse, 138; respirations, 48.

March 30th. He slept ill. He passed urine frequently during the night. The friction-sounds were much subdued. He was ordered a draught containing ether and twelve minims of sedative solution of opium. Morning pulse, 126; respirations, 48; temperature, 103.8 deg. Evening pulse, 120; respirations, 42; temperature, 104.2 deg.

March 31st, 10 A.M. He had again slept ill. He wandered a good deal during the night, and continued to wander in the morning. The bowels had been open three times; the motions were ochre-coloured, semi-solid, acid. A profuse red miliary eruption appeared over the whole body. The area of præcordial dulness was slightly diminishing.—1 P.M. The temperature, which hitherto had been taken

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* The temperature in this case is always referred to the axilla where it is not otherwise specified; and the difference between the temperatures in the rectum and the axilla is always assumed to be Wunderlich's average, seven-tenths of a degree, although it is exceedingly probable that, after removal from the bath, the difference might be much greater. Fortunately, this is of no practical moment for the most part in the calculations given.

twice daily, was now ordered to be taken every two hours. The maximum to-day was 103.8 deg., at 10 A.M. and at 9 P.M. Twenty minims of solution of hydrochlorate of morphia were given at once, and a pill prescribed containing three grains of quinine and half a grain of digitalis, to be administered three times daily.—7.30 P.M. Thirty minims of solution of hydrochlorate of morphia were administered, and at 9 P.M. twenty grains of hydrate of chloral.—At midnight, chloral was again administered to the amount of fifteen grains; and a draught ordered every six hours, containing three grains of quinine and ten minims of tincture of digitalis, in lieu of the pill.

April 1st. He slept at intervals after the draught, without wandering. Maximum temperature, 104.2 deg., at 3 A.M.; minimum, 102 deg., at 11 P.M.—1 P.M. He wandered from time to time. There was no albuminuria. He was ordered to have a starch and opium enema, to control diarrhœa; and an occasional draught containing aromatic spirit of ammonia with ether and syrup of tolu, to relieve dyspnœa. The quinine and digitalis were repeated.—At 9 P.M., fifteen grains of chloral were administered, and at midnight ten grains.

April 2nd. Maximum temperature, 103.8 deg., at 9 P.M., when the pulse marked 132; minimum temperature, 102.6 deg., at 4 and 10 A.M. His diet consisted of three pints of milk, two eggs, a pint of strong beef-tea, and twelve ounces of bread, daily.

April 3rd. He slept badly, and wandered much during the night. Subsultus tendinum was noted for the first time this morning. The pericardial friction was subsiding. There were renewed pains in the hands. Sonoro-sibilant *râles* were heard throughout both lungs, except over the left infraspinous fossa and in the left axillary region, where there were moist sounds of high pitch. Maximum temperature, 103.5 deg. in the evening, when the respirations marked 54, and the pulse 132. Minimum temperature, 102.2 deg., at 5 A.M. Six minims of tincture of opium were added to each dose of the quinine and digitalis mixture.

April 4th. He wandered during the night, but slept three or four hours. There was no subsultus. Maximum temperature, 103.2 deg., at 9 P.M., when the respirations amounted to 68; minimum temperature, 102 deg., at 7 A.M.

April 5th. He had slight delirium during the night, but slept fairly at intervals. Again there was subsultus. The patient picked the bedclothes, and the muscles of the mouth were in constant agitation. Maximum temperature, 103.2 deg., at 2 and 9 A.M., and at 10 and 11 P.M.; minimum, 102.2., at 6 A.M.

April 6th, 10 A.M. The subsultus continued; the hands were exceedingly tremulous; the tongue was dry and brown. The quinine was increased to six grains (double the former dose), and an ice-bag was applied to the forehead. This day, the temperature throughout maintained an unusually high standard. At 4 A.M., it had reached 104.6 deg.; and, although it fell somewhat from time to time, at 4, 5, and 9 P.M. it amounted to 105 deg. At 10 P.M., it was 105.5 deg. in the axilla; and at 11.23 P.M., 107.2 deg. in the rectum. At the same time, the pulse numbered 150, and the respirations 54. The subsultus was now excessive; the delirium and the floccitation continued; and there were extreme pallor and prostration. At 11.25 P.M., the patient was put into a bath.

First Bath.—Temperature of bath, 90 deg., cooled down to 67 deg.; duration, forty minutes. The temperature in the rectum at the commencement was 107.2 deg.; at close, 101.8 deg.; minimum temperature after bath, 97 deg. in axilla; amount of after-fall, 4.1 deg.; period of after-fall, fifteen minutes; amount of aggregate fall, 9.5 deg.; period of aggregate fall, fifty-five minutes. In the bath, the symptoms abated slightly, and there was less pallor. On removal, he seemed to be clear in mind, and said that he felt comfortable. He shivered, however; and it was at least half an hour before the shivering was subdued, after the application of hot bottles and bags to the trunk and extremities. He was ordered brandy and port wine, of each eight ounces. From 12.20 A.M. on April 7th—the date of the minimum degree—the temperature rose gradually until, at 5.30 A.M., it reached 105.1 deg. in the rectum, when he was again put into the bath. At this time, it was impossible to count the pulse.

Second Bath, April 7th.—Temperature of bath, 90 deg.; cooled down to 78 deg.; duration, twenty-five minutes. Pulse at 5.40 A.M., 150; at close of bath, 138. Temperature in rectum at commencement, 105.1 deg.; at close, 103 deg. Minimum temperature after bath, 99.8 deg. in axilla. Amount of after-fall, 2.5 deg. Period of after-fall, twenty-five minutes. Amount of aggregate fall, 4.6 deg. Period of aggregate fall, fifty minutes. During the second bath the intellect became much clearer, although the subsultus continued in full force. Twenty minutes after removal the pulse fell to 116, and its characters shewed great improvement. At 6.40 A.M., the pulse marked 96; at 6.55 he was quite rational, and conversed with his father about family affairs. At 10.45 A.M., the temperature rose to 103.6 deg.; and at 11.0 he was ordered ten grains of quinine, with ten minims of tincture of digitalis every six hours. At 12.10 P.M., the thermometer stood at 104 deg.; and at 12.30 he was again put into the bath.

Third Bath.—Temperature of bath, 82 deg.; cooled down to 76 deg.; duration, thirty minutes. Temperature in axilla just before commencement, 104.8 deg. Minimum temperature after bath, 98 deg. in axilla. Amount of aggregate fall, 6.8 deg. Period of aggregate fall, fifty minutes.

Fourth Bath.—At 8.15 P.M., seven hours and a quarter after removal from the last bath, he was again immersed, the temperature in the rectum standing at 104.9 deg., and the pulse marking 144. Temperature of bath, 90 deg.; cooled down to 79 deg.; duration, twenty-five minutes. At 8.20 the temperature in the rectum rose to 105.4. At 8.40 the patient was removed from the bath and rubbed with a warm dry towel. At the time of removal, the temperature in the rectum amounted to 102 deg.; in five minutes afterwards it fell to the minimum, 98 deg. in the axilla, while the pulse marked 108. Amount of after-fall, 3.3 deg. Amount of aggregate fall, 6.2 deg. Period of aggregate fall, thirty minutes. On this occasion the temperature rose rapidly from the minimum, and at 1.40 A.M., April 8th, within five hours, reached 104.8 deg. in the rectum. It was thought that the shortness of the after-fall and the rapidity of the succeeding rise might be connected with the dry rubbing of the patient; hence this proceeding was discontinued ever afterwards.

Fifth Bath.—At 1.40 A.M., April 8th, the bath was again administered. Temperature of bath, 89 deg.; cooled down to 78 deg.; duration, twenty minutes. Temperature in rectum at commencement, 104.8 deg.; at close, 102.5 deg. Minimum temperature after bath, 99 deg. in axilla. Amount of after-fall, 2.8 deg. Period of after-fall, ten minutes. Amount of aggregate fall, 5.1 deg. Period of aggregate fall, thirty minutes. He wandered much during the first five minutes, and said he felt cold and chilly. He had an occasional short cough, and at the close a slight fit of shivering. Immediately after removal the extremities were warm, but the pulse could not be counted. Brandy was given freely, and in twenty minutes he was asleep. The temperature rose slowly until 10 A.M., April 8th, when it stood at 103 deg. He had slept well for four hours, and now answered questions rationally. The subsultus and tremors also had abated considerably, but the cough was severe.

Sixth Bath.—At 4.15 P.M., the temperature reached 104.9 in the rectum, and at 4.35 he was placed in the bath. Temperature of bath, 88 deg.; cooled down to 76 deg.; duration, twenty minutes. Temperature in rectum at commencement, 104.9 deg.; at close, 103 deg. Minimum after bath, 97.8 deg. in axilla. Amount of after-fall, 4.5 deg. Period of after-fall, ten minutes. Amount of aggregate fall, 6.4 deg. Period of aggregate fall, thirty minutes. He complained of cold soon after immersion, shivered, and asked for brandy. Two fluid ounces and a half were given. He seemed to be amused and to enjoy the whole proceeding. After removal he looked bright and cheerful. He slept well during the night and rarely wandered.

April 9th. At 8 A.M., the thermometer marked 103.6 deg., and at 10 A.M. 103.2 deg. By this time the pain and stiffness had returned to the joints. There was no subsultus. Pulse 120, regular, and of much better volume. At 1 P.M. the subsultus reappeared, and there was slight deafness. He was ordered eight ounces of brandy and four ounces of port wine daily.—10 P.M. He had slept much and was now quite rational. The cough was considerable; the expectoration scanty.

April 10th. He passed a fair night, but talked in his sleep. He perspired freely; seemed drowsy, but clear in intellect. The urine was abundant; diarrhœa continued. From 10 A.M. on the 9th the temperature had fluctuated a good deal, on the whole maintaining an average of 102.8 deg. At 8.35 P.M., on the 10th, it rose to 104.8 deg., and at 8.40 the patient was again immersed.

Seventh Bath.—Temperature of bath, 91 deg.; cooled down to 76 deg.; duration, twenty minutes. Temperature in rectum at commencement, 104.8 deg.; at close, 103 deg. Minimum after bath, 97.4 deg. in axilla. Amount of after-fall, 4.9 deg. Period of after-fall, twenty minutes. Amount of aggregate fall, 6.7 deg. Period of aggregate fall, forty minutes. On immersion, the patient was sensible to a certain extent. During the bath the tremors abated, and at last disappeared. The pulse became steadier and stronger; and, although there still remained some incoherence at the close, the mind on the whole was clearer than before. Fifteen grains of chloral hydrate were administered at 10 P.M. He was ordered for diet a quarter of a chicken; milk, one pint; strong beef-tea, half-a-pint; and two eggs daily.

April 11th, 10 A.M. He slept well after the draught, but wandered in night. He was rational this morning; complained of vertigo. His

appetite was good. There was no pain or swelling in the joints. There was dulness over the lower third of the right back; delicate crackling sounds were heard at the left posterior base. The vocal resonance was loud and the breathing bronchial near the spine of the right scapula. The skin was abraded over the extremity of the sacrum. There were still some diarrhœa and subsultus. Temperature, 103.4 deg.; pulse 120; respirations 44. He was ordered a water-bed and an enema of starch mucilage with ten minims of tincture of opium.—9 P.M. He was perspiring moderately; again delirious. At 9 38 the bath was repeated.

Eighth Bath.—Temperature of bath, 90 deg.; cooled down to 76 deg.; duration, twenty-seven minutes. Temperature of rectum at commencement, 103.8 deg.; at close, 102 deg. Minimum after bath, 98 deg. in axilla. Amount of after-fall, 3.3 deg. Period of after-fall, twenty-five minutes. Amount of aggregate fall, 5.1 deg. Period of aggregate fall, fifty-two minutes. During the bath the tremors subsided; after removal the hands and feet were cold, but the body was warm. Two ounces of brandy were given in the bath, and one ounce twenty minutes afterwards. The patient then seemed inclined to sleep.

April 12th, 10 A.M.—Pulse, 120; respirations, 52; temperature, 103 deg. He slept well without chloral. There was much subsultus, but less delirium. There was marked general hyperæsthesia. The pulse was thrilling and dicrotous. Pericardial friction was still audible, though faintly, and the area of præcordial dulness was still more than normally extensive.—At 1 P.M., champagne was ordered in place of port.

April 13.—Since last note the temperature had never risen to more than 102.6 deg. He slept well after chloral, but wandered slightly when awake. He was quite sensible, but drowsy. He complained of pain in the left elbow and knee. Three motions were passed involuntarily and unconsciously. The pulse was steadier; there was very slight subsultus.

April 14, 10 A.M.—Maximum temperature in the last twenty-four hours, 103 deg.; minimum, 100 deg. He slept well after the draught, but wandered now and seemed drowsy. Subsultus continued. He had had one motion, passed naturally. No friction was heard over the præcordia. He was ordered eight ounces of brandy and a pint of champagne daily.

April 15.—Maximum temperature in last twenty-four hours, 100.8 deg.; minimum, 99.8 deg. at 3 P.M. of the 14th. There was no subsultus, except when the patient was questioned or disturbed. His mind was clear. He took abundance of nourishment, including oysters and chicken, and slept much. There was nothing abnormal in the heart-sounds.

From the 16th of April the temperature, which, during the administration of the baths, had been taken every two hours, and, since their omission, on an average every three hours, was now taken four times a day, and recorded twice only—at 10 A.M. and 9 P.M.

April 18. Morning pulse, 120; respirations, 44; temperature, 99.6 deg. Evening temperature, 100.6 deg. There was considerable hyperæsthesia of the legs, which were very rough, and greatly emaciated. There was no twitching of the face; he had slight tremor of the hands. From this date until the 27th of April, he remained in much the same condition. On the 22nd, the quinine was reduced to six grains every six hours, and the brandy to four ounces daily. At this time the diet consisted of a chop, four oysters, two eggs, half-a-pint of strong beef-tea, one pint of milk, one pint of pale ale, and twelve ounces of bread daily. On the 26th, in addition to the quinine mixture, a drachm of cod-liver oil and half-a-drachm of syrup of iodide of iron was ordered to be taken once in the day.

April 27.—Evening pulse, 114; respirations, 36; temperature, 99.8 deg. For the first time since his admission, except after the bath, the evening temperature fell below 100 deg. It was noted that he ground his teeth during the night. This symptom had been observed by the ward-sister for a fortnight before, but had never been reported. The quinine was reduced to four grains every six hours. Cod-liver oil and syrup of iodide of iron were ordered to be taken twice daily. On the following day the quinine was given in three-grain doses, and the quantity of oil and syrup doubled.

May 2.—Morning temperature, 98.8 deg.—for the first time since admission below 99 deg., except after the bath. He ground his teeth last night. He had ceased to do so since the 27th. He appeared to be gaining some flesh.

May 15.—He had slight vomiting with headache and coated tongue. He stated that he was subject to frequent "bilious attacks." The quinine was reduced to two grains twice daily; the oil and syrup were omitted.

May 18.—Morning pulse, 90; respirations, 20; temperature, 98.2 deg. He was ordered one grain of quinine and five minims of tincture of digitalis twice daily, one drachm of cod-liver oil and half-a-drachm of syrup of iodide of iron once daily.

May 19.—He was wheeled about the ward in a chair for an hour and a half.

May 20.—Pulse, 78—for the first time below 90 since admission; respirations, 18; temperature, 98.2 deg. He was ordered two drachms of cod-liver oil and one drachm of syrup of iodide of iron after dinner daily; and the draught to be repeated. Evening pulse, 96; respirations, 20; temperature, 98 deg.

May 21.—Morning pulse, 84; respirations, 20; temperature, 97.8 deg.

May 30.—Citrate of iron and ammonia was administered in an effervescing mixture. This agreed well, and was continued until the end.

June 17.—The heart's apex was found beating under the fifth rib, an inch and a half below the nipple and one inch within the mammary line. The first sound was muffled and wanting in accentuation; there was no increase in the area of præcordial dulness; the resonance was good, and the breathing simply weak throughout the lungs.

From May 23rd until the date of discharge the pulse ranged from 76 to 102, and the temperature from 96 deg. to 99.4 deg. The convalescence was exceedingly slow, in consequence of the patient's timidity and unwillingness to venture upon the free use of his limbs.

On June 22nd he left the hospital for Eastbourne; fifteen weeks after the invasion of the rheumatism, eleven weeks after the first bath, and ten weeks after the last.*

LOCK HOSPITAL AND ASYLUM.

Female Department, Westbourne Green. Mr. Lane's Ward.

By the kind permission of Mr. J. R. Lane, we were enabled to attend his ordinary visit at the female department on July 15th. This hospital forms the female part of the charity known as the Lock Hospital and Asylum. The hospital was established in the year 1746, and was removed from Grosvenor Place to its present site in 1842. It contains 182 beds. A separate male hospital was opened in 1862, in Dean Street, Soho, and contains 20 beds. The name "Lock" is probably derived from the Saxon word "Lok", in reference to the seclusion of the patient in consequence of the infectious nature of the complaint. There was at one time an institution called the "Loke" or "Lock" in Southwark, and there have been other institutions bearing a similar name in London for the treatment of leprous or syphilitic cases.

The Female Department is under the able care, as house-surgeon, of Mr. F. J. Marshall, to whose kindness and courtesy we are indebted for many of the following details. It is hardly necessary to mention that, since the passing of the Contagious Diseases Act, a large addition has been made to this hospital for the purpose of affording accommodation for the large number of patients sent by the Government officials from Woolwich, Greenwich, and other districts placed under the Act. The treatment of these patients is undertaken by the authorities of the Lock Hospital under an arrangement made with Government. Of the 182 beds in the female hospital, 150 were formerly set apart for the reception of Government patients, but in consequence of the diminution of disease under the operation of the Act, not more than fifty or sixty are now usually occupied. The patients under treatment at our visit in the Government wards were sent by Dr. Stuart from the Woolwich district. It would be erroneous, however, to suppose that all these patients were actually furnished by this district; for it appears, on inquiry, that about ten per cent. sent from this district travel from various parts of the country, and many from London, to obtain admission for treatment into the hospital. This is owing to the inadequate means afforded in London and the neighbourhood for properly treating this class of cases. There are other causes at work, however. For instance, a somewhat peculiar case presented itself in a woman who had been admitted into that part of the hospital set apart for the so-called voluntary or casual patients. She had, however, been dismissed for infringement of the rules, and was, therefore, not admissible into this part of the building as a patient again. She, however, went to Woolwich, and was re-admitted as a Government patient, the police authorities looking upon disease alone as the certificate of fitness for admission. This, of course, is quite an unusual case. Many prostitutes who walk the London streets, and, indeed, every town, frequently carry on their trade while they are attending as out-patients at some hospital. In consequence of the limited means of treating these cases in our hospitals, only a small number can be admitted, and, accordingly, the others continue their

* For the clinical remarks on this case, see page 113.

prostitution to earn a livelihood. That many of these women would voluntarily seek admission to hospital if proper provision were provided for them, and thus cease to be a danger to society, for the time at least, is apparent from the large number who travel long distances to be admitted into the Government hospitals. It must be allowed, however, that many women leave the voluntary ward uncured, against advice and with the full knowledge of the infectious character of their malady.

The table employed for carrying out the examination of the patients is the simple flat table, with a pillow for the head and loops for the feet, and is uncomplicated by the unwieldy and complex machinery recommended by some authorities. A more efficient table we cannot imagine. The speculum in use is the ordinary glass reflecting one, and answers the purpose well. It can be easily cleaned, and does not become corroded by the acids and other strong local medicaments employed.

Speaking generally of the impressions left on our mind by our visit, we could not fail to observe the extreme mildness of the symptoms presented by the Government cases. It might be expected that, as the police authorities send every infectious person in the district, the general average character of the cases would be necessarily mild ; but it is, at the same time, surprising that so small a number should present signs of serious mischief. This, however, is the case ; for out of about forty-five patients, only one presented slight ulcerative disease of the skin ; none of the others showed any disease of the bone, rupia, or other tertiary symptoms. In the casual wards, however, containing about fifty patients, were several instances of extensive disease of the bone ; one involving the whole tibia ; another a large part of the same bone ; a third the tissues of the face, the upper maxillary, ethmoid and nasal bones, forming a large open cavity, reaching to the fauces ; while a fourth patient was the subject of extensive and obstinate rupia ; and a fifth had sloughing phagedæna of a bad character. There were several other severe cases, such as were not to be found in the Government wards.

The majority of the cases in the Government wards were women suffering from chronic recurrent discharge. Mr. Lane expressed his doubts as to the propriety of sending these cases into hospital, as the affection recurs easily after they are sent out as cured. We saw one woman, for instance, who had been following her trade at Woolwich for six years, and had been sent to hospital with chronic recurrent discharge as many as eleven times. A large amount of expense might, by their refusal, be saved : moreover, it has been shown that gonorrhœa amongst men has not materially diminished in consequence of the Act, so that there is ground for expressing the opinion that the hospital expenses of these patients do not afford any commensurate advantage to the population. The vaginal discharge in these cases is not difficult of at least temporary cure ; but as the lining membrane of the cervix uteri is also involved, they require frequently prolonged treatment ; the discharge of the cervix continuing, as proved by examination by the speculum, often for a considerable time after the vaginal discharge, and after the patient fancies herself free from disease. Injections in these cases have been found by Mr. Lane to be insufficient ; the fluid does not reach the canal of the cervix properly. It is necessary, therefore, to pass medications into the canal by means of cotton-wool or some such medium, using for the operation a long forceps.

A considerable number of cases of acute vaginitis or gonorrhœa presented themselves. These patients were chiefly young girls of sixteen or seventeen. These cases are often very obstinate, lasting for several months. The treatment adopted was in all cases the local application, every day, by the aid of the speculum, of a piece of lint soaked in a solution of sulphate of zinc, three grains to the ounce. The lint is left in the vagina. This method offers the advantage of keeping the inflamed parts separated.

In the voluntary wards were a few children suffering from vaginitis. Several of these cases were supposed by the police or by their parents to have found their origin in criminal offences ; and, indeed, the supposed criminal in the case of one of the children had, a few days previously, received a most severe sentence. The very frequent occurrence of vaginitis amongst children, and the difficulty of proof without actual witness to the offence, renders it very likely, in the present state of the popular mind on the subject, that sentence is not seldom unjustly passed. In the present instance, there was no evidence whatever of penetration ; the hymen being perfectly intact, and there being no external marks of violence of any medico-legal value ; nor was there, we believe, any eye-witness to the crime.

The treatment adopted in cases of warts is cutting them off with scissors ; unless, of course, there be an infecting sore in the neighbourhood, which is allowed to heal first before the warts are interfered with.

Mr. Lane has formed the opinion that, the more purulent the gonorrhœal discharge, the more infecting it is generally found to be.

Amongst the Government cases, we saw several examples of indurated sore, but none in the voluntary wards. Mr. Lane, in pointing out these cases, observed that hard sores in women were more frequent than is commonly supposed ; their alleged rarity arises from the fact of the cases not being seen early enough, the hard sore giving them so little trouble that the women generally do not come within the notice of the surgeon until the local symptoms have disappeared or become altered.

Mr. Lane believes that the suppurating bubo is not so frequently followed by constitutional symptoms ; but it is generally connected with freely suppurating or soft chancres, and the more suppuration the less chance of constitutional symptoms, but the greater likelihood of lymphatic absorption and suppurative bubo.

The cases affected by constitutional syphilis were mostly being treated by small doses of the blue pill of the British Pharmacopœia, combined with about a tenth of a grain of opium. Mr. Lane does not allow the gums to become much affected. The treatment by pill gives much less trouble than, and is believed by him to be as efficacious as, fumigation or inunction ; moreover, he considers it to be less debilitating than fumigation. In tertiary affections, when the iodide of potassium disagrees, Mr. Lane prescribes often the iodide of sodium instead, commencing with about five-grain doses. He has found this salt less likely to produce iodism and skin-eruptions than the potash preparations.

Since the number of Government cases has diminished, there is a large number of vacant beds in this hospital. These could be at once filled by voluntary patients, did the resources of the hospital admit of it. It is found so difficult, however, to obtain contributions from the public for a hospital of this character, that fifty patients is the utmost that the hospital authorities are able to maintain.

LONDON HOSPITAL.

SEQUEL OF A CASE OF SUPPOSED TUMOUR OF THE MIDDLE LOBE OF THE CEREBELLUM.

(Under the care of Dr. HUGHLINGS JACKSON.)

IN our reports, July 20th, page 67, is a note of several cases of intracranial tumour. We can complete the history of one of the cases, the first mentioned. The boy died July 24th ; and at the necropsy next day, a tumour of the size of a billiard-ball (supposed to be a tubercle) was found in the middle lobe of the cerebellum extending into the right lobe. The head, as mentioned in our last report (p. 67), was very large ; the parietal bones at the sagittal suture were found, *post mortem*, separated for more than half an inch ; the cause of the enlargement of the head was hydrocephalus. Eighteen ounces of limpid fluid were obtained from the lateral ventricles ; some was lost. There was no tubercle in any other part of the body. It should have been mentioned in our last report, that the boy had strumous disease of the right foot and of one hand.

For the reasons given with the notes of the case, and in comments on a case strikingly like this one, which was published by Dr. Hughlings Jackson in this JOURNAL on November 4th, 1871, the diagnosis of the position of the disease in these cases is not difficult. We must refer our readers to those comments. But there is one point which Dr. Hughlings Jackson wishes to urge again ; viz., that in cases of tumour of either the cerebrum or cerebellum, it is as important to note the almost constant *absence* of deafness, as it is to note the almost constant *presence* of blindness.

HULL GENERAL INFIRMARY.

CASES OF ANEURISM.

FOR the records of these cases, we are indebted to Mr. Plaxton, House-Surgeon.

Popliteal Aneurism cured by Digital Compression of Femoral Artery at the Pubes.—John Philips, aged 25, a labourer, was admitted under the care of Mr. Craven on October 26th, 1871, with an irregular swelling filling up the right popliteal space, and extending to the head of the fibula. The tumour was elastic, and indistinctly pulsating ; a loud *bruit* could be heard in it. It did not perceptibly diminish, but the pulsation and *bruit* ceased on compressing the femoral artery at the pubes. The history which he gave was as follows. He had felt several twitchings in the popliteal space, but did not notice any swelling until a month before admission, when he was struck in his ham by the end of a pole, whilst at work. He continued working the rest of the day, although in great pain ; and, on arriving home, he found a tumour, of

the size of a pigeon's egg, in his ham. This was painful, prevented his working, and gradually increased in size.

On Sunday, November 5th, at 10.30 A.M., digital pressure was applied to the femoral artery at the pubes, completely cutting off the supply of blood to the limb, and continued unceasingly until 8 P.M., when, pulsation on remitting the pressure having been absent in the tumour between four and five hours, the pressure was stopped, and the limb wrapped in cotton-wool. At this time, the tumour, though pulseless, was undiminished in size, slightly harder, but elastic; there was no *bruit* to be heard, and pulsation was absent in the tibial arteries.

The patient was kept in bed a fortnight, and under observation until January 4th, 1872, when he was discharged; the man had then perfect use of his limb, except that it was somewhat stiff at the knee; the tumour, but little diminished in size, occupied the ham.

On May 29th, when Mr. Craven recounted his case to the East York and North Lincoln Branch, the patient attended, and it was then seen that the aneurism had almost disappeared. A slight fulness only distinguished the affected part; there was no pulsation or *bruit* to be felt or heard; and but for very slight stiffness, the limb appeared to be, and the patient declared was, as good as the other limb. The patient seemed to suffer remarkably little distress from the operation. About the end of the first half-hour, he had a rigor, and afterwards broke into a cold sweat; the limb was numb, painful, and cold; he was given a glass of brandy and forty minims of laudanum, and the symptoms quickly passed off. The pressure of the thumbs caused very little inconvenience.

Wound of Superficial Femoral Artery: Diffuse Aneurism: Ligature of Artery at Seat of Injury.—Thomas R. Walker, aged 36, was admitted March 8th, 1872, under the care of Dr. King. He stated that, eighteen days before, whilst cutting the bands of wheat-sheaves with a pocket-knife, the blade projecting beyond the ulnar side of his hand, and being pulled through the band towards him, a band gave way suddenly, and the point of the knife entered his left thigh, towards the inner side, and a little below the middle. There was a profuse escape of blood, and he fainted. He was treated in the union workhouse by compress, and twice there were losses of blood. He was brought to the Infirmary on March 8th, when there was found some swelling surrounding an aperture in the skin of the thigh, an inch long, rounded in form, and in situation as above. The tumour was hard, and did not pulsate or fluctuate. The anterior tibial artery was pulsating. On the 12th, sharp, sudden hæmorrhage occurred, to the extent of an ounce or two. On the 16th, a pulsating tumour having formed at the seat of injury during the past two days, the artery was cut down upon by enlarging the wound, and tied, under chloroform. A large quantity of firmly laminated fibrin was turned out of the wound, and the edges were brought together by wire sutures. At first, during the operation, the bleeding was controlled by pressure of the finger on the artery at the pubes; but the operation being somewhat prolonged, the tourniquet was tightened, which occasioned some venous hæmorrhage. The man was placed in bed, apparently little the worse, as there had been very little loss of blood. The ligatures were drawn out of the wound on April 6th, the twenty-second day. The middle ligature drew out with it about three-quarters of an inch of the artery.

The temperature of the limb, which regularly rose and fell with that of the body, was, during the first two days, between three and four degrees less than that of the axilla; the two temperatures gradually approached one another until the 3rd of April, when the temperature of the foot was within half a degree of that of the axilla, and the latter being normal.

He was discharged cured on June 19th. The wound was then healed, and both tibial arteries were pulsating. The cure was delayed by troublesome œdema of the leg and by suppuration in the thigh, which eventually needed an opening to be made on the inner aspect of the thigh, for the evacuation of the pus. Healing then rapidly followed. The man walked away from the Hospital with the aid of a stick.

NOTES ON BOOKS.

Notes on the Treatment of Skin-Diseases. By ROBERT LIVEING, M.D. Second edition, with additions. Longmans, Green, and Co.—If brevity and clearness be merits in medical writing, Dr. R. Liveing's little book is certainly meritorious. No one can complain that it is either long or ambiguous. Within a hundred small pages is condensed almost all that is certainly known with regard to the treatment of the common forms of skin-disease met with in this country, and careful directions are given where, from the nature or the disease, these directions are needed. We commend the wisdom of not making the "additions" to the second edition too numerous, and in strictly retaining the original character of the work as being notes chiefly on treatment, with just enough of collateral information on the etiology of each disease to make the book readable, as well as useful. We strongly recommend Dr. Liveing's little book to busy practitioners who have not time to search through larger works for hints on the treatment of cutaneous affections.

Medical Women, by Miss SOPHIA JEX-BLAKE, consists of a historical and argumentative essay on the subject; and of a lecture, delivered before a London audience, detailing the progress and present state of the particular movement in Edinburgh, which Miss Jex-Blake has herself instigated and directed. The first of the two papers gives a succinct account of the more remarkable women-practitioners and teachers of medicine of former times, and refers briefly to the modern instances and to the increasing consideration with which the demand for the medical education of women is being treated, more particularly abroad. So far as regards general principles, we need not say that Miss Jex-Blake argues with ability. The lecture, treating of the movement in Edinburgh, with the copious appendix of newspaper extracts which supplements it, affords a lucid, and, on the whole, temperate, view of this protracted contest, the most recent of the many romantic episodes of which that highly favoured city has been the scene. Those who have interested themselves in the progress of the movement may be recommended to this small volume as containing an account of it, compiled with considerable literary skill; and the future Buckles who will write this strange chapter of our modern progress, and of the not unnatural opposition to it, will, we believe, find the volume little, if at all, wanting in historical accuracy.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

ICHTHYOSIS TREATED BY OINTMENT OF SULPHATE OF COPPER.—M. A. Lailler relates (*Répert. de Pharmacie*) the case of a man aged 72, a patient in an asylum, under the care of M. Dumesnil, suffering from dementia, who was attacked with ichthyosis of the nose and face. Various remedies—ointments of *huile de cade*, of sulphur, white precipitate and other mercurial preparations, arsenic given internally, etc.—were used without success. An ointment of four parts of sulphate of copper in thirty parts of benzoated lard was then prescribed. Under its use, the cutaneous affection disappeared in about three weeks. It returned, however, a month later, and was again removed by the same remedy, which this time was persisted in, with the result of rendering the patient free from the disease up to the date of the report—nearly two years after the remedy was first applied.—*Journal de Médecine de Bruxelles*, May 1872.

BROMIDE OF POTASSIUM IN EPILEPSY.—Dr. Legrand du Saulle has published the results of the administration of bromide of potassium in two hundred and seven cases of epilepsy. Headache, gastric disturbance, disturbance of sensation, and other troublesome symptoms, have been described as following the use of the remedy; but these he has not found to occur when the drug has been pure. When the quantity taken daily reaches 4 *grammes*, the reflex sensibility of the fauces, epiglottis, and root of the tongue, and the sensibility of the generative organs, are diminished. Acne then also appears; which is not, however, as has been represented, of critical importance. Dr. Legrand du Saulle commences with a *gramme* and a half or two *grammes* daily, and increases the dose gradually to 6 or 9 *grammes* a day: in one case, in the course of twenty-six months, the increase was to 14½ *grammes* daily. In men, no result may be observed till the daily dose reaches 4 or 5 *grammes*; in women, 3 or 4½ *grammes* daily will sometimes produce distinct effects. Of 207 epileptic patients treated with bromide of potassium, all symptoms of epilepsy ceased in 17, who were under observation during three or four years; 28 remained free from one to two years; in 33, there was marked improvement; in 19, the intervals between the attacks were increased, and these were less severe; in 110, there was no result. Dr. Legrand considers that it is not safe to entirely omit the use of the bromide, even when there has been no epileptic attack for a year. The patients, however, must be watched; for, under the prolonged use of the bromide, mental disturbance, stupor, confusion of ideas, impotence, and acne, are apt to set in. The last named affection has sometimes disappeared under the use of arsenic simultaneously with the bromide of potassium.—*Gazette des Hôpitaux*, 21 and 22, 1872.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 3RD, 1872.

THE APPROACHING GENERAL MEETING.

NEXT week will be held the Fortieth Annual Session of the Association in general meeting. It will meet once more in a locality which has always been regarded as its especial home, and in some sense its cradle. The Committee of Council have for some years found it convenient to hold their quarterly meetings in Birmingham; and Birmingham has not only furnished always a large contingent to the general force of the Association, but, from the activity and initiative energy of the large Branch of which it is the seat, and the capacity and devotion to the interests of the Association of its representatives in the Committee of Council, it has assumed with advantage a leading position of usefulness in the profession.

The invitation to Birmingham was therefore, last year, accepted with cordial satisfaction, and with the most fully sanguine anticipations of a session which would be earnest, profitable, and agreeable. The importance of the public medical institutions of the midland metropolis, its hospitals, colleges, and schools, the number, ability, and public spirit of the members of the Birmingham and Midland Branch, and the certainty that they would give no lukewarm reception, but a right cordial welcome to their great body of fellow-Associates, afforded the fullest guarantees that the Birmingham meeting of 1872 would not be inferior in importance, in completeness of organisation, and in general attractions, to the meetings of late years. The efforts made by the profession in Birmingham to afford a hearty welcome to the Association have not in any way fallen short of these great expectations. It will have been observed that a large and very liberal local subscription was at once opened for the payment of expenses incurred in the reception. The list has been well filled, and no feature which has proved successful in the organisation of previous meetings will be missing, while many will be enlarged and improved, and some reforms will be effected which experience has suggested. In the first place, the use has been accorded of a building sufficiently large to accommodate all the sections, and provided with a hall for the general meetings; so that all the business of the Association will be carried out under one roof, and no loss of time will be incurred in running from place to place. We believe that this will greatly conduce to the success of the Sections: members will thus be able to pass easily from Section to Section, and to attend, without effort or loss of time, to the particular subjects which interest them in each Section. The sumptuous private hospitalities which have often drawn off large contingents of members to social enjoyments which interfered with attendance to sectional business, will be replaced by a public luncheon, offered by the Birmingham and Midland Counties Branch to all the members present at the meeting, and so arranged as not to interfere with the course of business. Nor shall we hear again of the Presidents and Vice-Presidents of a Section having abandoned it *en masse* to take part in a delightful excursion, of the Secretaries being absent, and of the unaccountable disappearance of the vicarious trustee of the key of the MSS. box. There will be no lack of agreeable excursions to mines, castles, ruins, works, and gardens; but they will be arranged for Friday and Saturday, after work well performed has given a just right and a fresh zest to lighter pleasure well earned.

The committees of organisation have exerted themselves successfully to arrange satisfactorily the minor matters, attention to which is needed in order to ensure success. The Annual Museum will be developed, and will furnish to visitors an useful means of reviewing the most recent appliances, instruments, inventions, and books relating to the science and practice of medicine and surgery and the collateral departments of knowledge, as well as specimens and preparations. The numerous literary institutions and great industrial works of Birmingham will be kindly opened for inspection, and the great neighbouring proprietors have shown equal courtesy, so that those who have quite determined, as many seem to do, to make the occasion one of pure holiday, may alternate between steel-pen factories and mediæval castles, pass from the works of the great pin-maker to the castle of the great king-maker, study in turn modern small-arms and ancient coats of mail, change Gillott of Birmingham for Guy of Warwick, and choose between iron-works or a flower-show.

The Addresses are only two this year: by Dr. Wilks in Medicine, and by Mr. Pemberton in Surgery. Some wishes have already been conveyed to us from influential quarters, that there should have been an Address in Obstetrics for the third day. Such an address could not fail to greatly interest a large proportion of members; and it is worthy of consideration whether an hour might not always be found on the third day of the meeting which should be devoted in successive years, and in rotation, to Obstetrics, Public Medicine, and Psychological Medicine, subjects of vast interest to science and to humanity, which claim the allegiance in some form or other of an immense majority of our members, and of which all would be glad to promote the progress, and to listen to a triennial review. The Sections have never been more strongly officered than this year. Sir William Fergusson, the Rev. Dr. Haughton, Dr. Bell Fletcher, Dr. Evory Kennedy, and Dr. Maudsley, are the Presidents of Sections; Dr. John Ogle, Dr. Wade, Mr. Southam, Mr. Solomon, Mr. Berry, Dr. J. Matthews Duncan, Dr. Birt Davies, Dr. Heslop, Dr. Batty Tuke, and Dr. Crichton Browne, the Vice-Presidents; and a most active and able body of secretaries has been appointed. Thus there is, we think, every reason to expect that the meeting which commences on Tuesday next will be not less successful in its scientific aspects, and not less agreeable and satisfactory in all respects, than those which have preceded it. In respect to the completeness, the intelligence, and the liberality with which it has been organised, it certainly yields to none.

THE CONJOINT SCHEME.

WE regret to state that the Scotch licensing bodies have at length determined to take at present no further steps in the formation of a conjoint examination scheme; while the Irish authorities, although in general apparently sufficiently favourable, are placed by the bearing of the Queen's University in a position rendering it difficult for them to adopt a plan including the whole of the licensing bodies. It is greatly to

be feared, too, that difficulties are likely to arise in the early working of the English scheme. It was originally proposed that a Committee to superintend and regulate all matters connected with the examinations should be appointed by the various bodies. A series of recommendations, however, recently prepared by the Joint Committee which prepared the scheme, would seem to recommend the charging of this Committee with duties far exceeding those at first contemplated. These recommendations have been modified by the Council of the College of Surgeons, who have at the same time guarded themselves by a resolution that the College would not be bound by any proceedings of the Committee of Reference which were not in accordance with the original scheme The propriety of submitting these recommendations to the consideration and approval of the College of Physicians, was discussed at a meeting of the Comitia, held on Thursday of last week, when it was determined by a small majority to leave the matter as it stood. The representatives of the Universities of Oxford and Cambridge, who were present at the meeting, stated that they were altogether ignorant of the recommendations ; and one of them pointed out the discrepancies which existed between them and the scheme itself. It will be thus seen that, if the so-called recommendations be acted on by the Committee of Reference, they will be undertaking duties which they were never intended to perform ; and, by passing beyond the principles laid down and agreed upon in the original scheme, will probably place its success in peril. We regret that the subject has not been more fully and deliberately considered ; but we hope that good counsel will yet prevail, and that the danger which now appears to threaten the success of the English conjoint scheme will prove to be but transient.

TEA-DRUNKARDS.

A propos of the recent grave discussions concerning the abandoned class of persons stigmatised by learned writers as "tea-drunkards," it may be interesting to state the conclusions of an elaborate research by Dr. Angel Marvaud, which has recently attracted much attention in France, on the physiological and therapeutical effects of coffee, tea, coca, matè or guaranà (Paraguay tea), and alcohol, which he classes together as aliments of economy, or antiwaste foods. He considers their influence on nutrition from two points of view : as stimulants to the nervous system ; as antiwaste foods, or antiassimilators. Alcohol acts directly on the sensory apparatus of the spinal cord, and indirectly on the motor apparatus. Coca acts directly on the motor apparatus, which it excites in the same manner as strychnine. Coffee, tea, and matè act principally on the brain. Alcohol and coca excite the exercise of the muscles ; coffee, tea, and matè, the exercise of thought. Further, by lessening the waste of the tissues, counteracting organic oxida- and diminishing loss by means of the secretions, they all act as aliments of economy. In this way is explained their action in stimulating to work in the evening, in partly supplying the want of solid food, and in moderating vital combustion. Hence arises their increasing consumption, and their more general use as articles of daily *régime ;* hence, too, their utility in alimentation, and their important place in hygiene. The abuse of these aliments has, it is true, two principal inconveniences. In the first place, the excitement of the nervous system which they cause is liable to be followed by fatigue, weakness, and even inertia. In the second place, by their interference with and reduction of the processes—indispensably necessary to life—of combination, transmutation, and decomposition, they may cause arrest, suspension, or even complete suppression of the nutritive changes in the cellular elements, and may produce as results, torpor, atony, fatty degeneration, and necrobiosis of the tissues. Thus are explained alcoholism, coffeeism, theinism, and cocaism. The therapeutic properties of these substances result from their physiological effects. Medicine is capable of deriving great power from them as stimulants of the nervous system, as anticalorifics, and as retarders of waste. They ought to find a place in materia medica among the medicaments that excite the function of the nerves of relative life, and depress those of organic life. The second of these properties may be regarded as a consequence of the first, if the mode of action of the nervous system be considered. Those centres which preside over nutrition and its principal phenomena (assimilation and decomposition) act with less energy in proportion as the centres which regulate the intellectual, sensory, and motor powers, are subjected to a more lively and lasting stimulation.

THE Library of the Royal Medical and Chirurgical Society will be closed from August 12th to September 12th, both days inclusive.

DR. GERHART of Jena has been appointed successor to Dr. Bamberger as Professor of Clinical Medicine at Würzburg.

THE meeting of the Social Science Congress will be held in Plymouth and Devonport, in the week from September 11th to 18th. The Right Honourable Lord Napier of Merchistoun will preside.

DR. O. LIEBREICH, to whom medicine is indebted for the discovery of the action of chloral, has been appointed ordinary Professor of Materia Medica in the University of Berlin.

IN consequence of the illness of Mr. W. Foster White, the Treasurership of Christ's Hospital has been placed in commission, represented by Alderman Sir B. S. Phillips, Mr. Helps, and Mr. Whitbread.

DR. BROWN-SÉQUARD has resigned the Chair of Comparative and Experimental Pathology in connection with the Faculty of Medicine in Paris, which he has occupied several years. M. Vulpian has applied for the Chair.

THE MIDDLESEX HOSPITAL.

THE Middlesex Hospital is closed for a month, in order that thorough repairs and a new system of drainage may be carried out. The greater number of the cancer-patients have been received by Mrs. Gladstone into her Convalescent Hospital at Clapton, while the remainder have been sent to the All Saints' Convalescent Hospital at Bournemouth.

THE HOTEL DIEU IN PARIS.

A NOVEL proposal has been made by two medical men in Paris—Drs. Thulié and Marmottan—for the utilisation of the Hôtel Dieu. They suggest that the old portion of the hospital, on the left bank of the river, should be retained as a hospital, for 200 patients ; and that the new portion should be sold to a company—French or foreign—for the purpose of forming docks like those which exist on the borders of the Thames in London. They further point out, that of twenty-two *octroi* barracks around Paris, four are unoccupied, and may be readily put into repair as hospitals capable each of containing 100 beds. To make up the number of 800 beds which are required, they propose the erection of a new hospital to receive 200 patients. Whether this plan would be attended by the financial success which its promoters allege that it would have, we do not pretend to judge ; but there can be no doubt that, in a sanitary point of view, the distribution of eight hundred patients would be preferable to their aggregation in one building.

WATER-POISON.

IT cannot, we think, be doubted that one moral will be finally drawn from the difficulties of the southern districts of London as to their water-supply. An adequate supply of drinking water to a crowded part of a great city is of as great importance as a supply of fresh air ; and it may reasonably be doubted whether any pains or penalties will suffice to protect a great population from the shortcomings of companies who undertake to furnish a water-supply on purely commercial grounds, and who neither have nor can be expected to have any benevolent interest in the health and comfort of their customers. The water-companies of the metropolis hold in their hands the lives of a very large mass of people ; and very slight *lâches*, as in the case of the East London epidemic of cholera, suffice to slay hundreds of helpless and perfectly innocent water-drinkers. It is very well worthy of the

consideration of all classes of statesmen and of electors, whether the water-supply of great cities such as London should be left to the tender mercies of companies, whose opinions as to the importance of "living organisms" and "previous sewage contamination" are notoriously sceptical, and are much influenced by the annual arguments presented by the auditors. The Permissive Bill advocates should logically hold this to be a consideration claiming precedence even of their proposals; and the licensed victuallers should not be callous to the additional risks to which they expose their customers when the bucket, which adds so much to the value of their cellar, contains unintended zymotic as well as intended and chemical abominations. The Lambeth Water Company is alike a terror to drunkards and to teetotallers; it adds a fresh terror to adulteration, and another curse to the list of those that afflict great cities. It is some gain to the public that Mr. Kay Shuttleworth has succeeded in transferring the powers of the Metropolis Water Acts (1852 and 1871) from the Board of Trade to the Local Government Board. The new authority is more highly instructed, and is likely to be more efficient, than the old; but the theory of action and the powers conferred by these laws are both defective.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE Quarterly Court of Directors of the Society was held on July 10th, at 53, Berners Street. The chair was taken by Charles Hawkins, Esq., V.P. Fifty-eight widows and forty children made applications for grants, and the sum of £1,312 10s. was distributed amongst them, the amounts varying according to the wants of the respective applicants. Five widows were added to the list of annuitants. A donation of £100 was announced by the acting Treasurer, James T. Ware, Esq., as having been received from Dr. Hare, to whom a vote of thanks was unanimously passed. The Directors again appeal to their professional brethren for assistance to enable them to meet the increasing demands on the funds of the Society.

THE CHOLERA IN AFRICA.

AT a recent meeting of the Epidemiological Society, Inspector-General Smart, R.N., read a paper on the occurrence of cholera in Africa. He remarked that Africa, from its geographical features and social conditions, possesses four epidemiological regions. 1. Egypt and Tripoli; 2. The western basin of the Mediterranean, so far as Algeria and Morocco form part of it; 3. The west coast south of the Sahara; 4. The east coast from Abyssinia to the Portuguese Settlements. Egypt has not suffered invariably when Arabia has done so; and its visitations have been of short duration. It has on one occasion only (in 1865) been the source of European infection; and, on the other hand, it would appear to have been infected from Europe in 1854. Tripoli has generally had its visitations concurrently with those of Egypt. Tunis has generally followed Algeria after a year's interval: in 1859-60, it escaped, when Algeria was infected. Egypt was also then untouched, Arabia being infected. The western basin of the Mediterranean, except in 1865, when it received its infection from Egypt, has participated in the epidemics of northern Europe imported into its Atlantic States; but in 1853, and again in 1859, its epidemics are said by some to have had regional origin and growth in the Peninsula. Algeria and Morocco have been always indebted—the former mostly to France, and the latter to Spain—to the European shore for the "contagium" of cholera. Morocco was free in 1865 when Spain was severely visited; but this was reversed in 1868, Spain being then free and Morocco diseased. Both Morocco and Tunis excluded cholera by quarantine in 1865, but they failed later on their land frontiers. The West Coast of Africa was visited for the first and only time in 1868-69, when the disease appears to have been carried from Fez across the Sahara to an upper trading state on the river Senegal by caravans. It then extended to the Gambia and Rio Grande through the inland stations, and was at the same time present in the State of Boradoo, 800 miles inland, betwixt the watersheds of the Niger and Gambia. The East Coast of Africa, from Abyssinia to the Portuguese Settlements, has had a series of epidemics entirely apart from those of Egypt. Abyssinia is in constant communication with Arabia; and during the season of the north-east monsoon, from December to March inclusive, Zanzibar has many arrivals from India, the Persian Gulf, and Arabia, from either of which cholera might be conveyed, to be spread from it southward by means of the native trading craft. It has been five times visited by cholera; in 1836-37, 1856, 1858-59, 1865, and 1869-70. This last visitation has been traced by Dr. Christie as far as the Galla country, travelling slowly southward among pastoral tribes. It seems not impossible that it may have been conveyed into Africa by the negro pilgrims of Soudan. In 1870, cholera spread southward as far as Quillimane, and seaward to the Comoro Islands and Madagascar, and also to Mauritius, an island that had on previous occasions been infected direct from India, or had had its own epidemics of cholera. A remarkable feature of the epidemics of the East Coast of Africa is, that they have (with the exception of that in 1865) arisen in the apogee of the great epidemic cycles when about to cease beyond the limits of Asia, and not when first issuing forth from them. The history of cholera in Africa bears very strong evidence to the theory that its spread is entirely regulated by human intercourse, and timed relatively to the rapidity or slowness of that intercourse. Africa in this respect presents the very antithesis of what is shown where mankind travel by steam-power; consuming years in effecting as much as is there completed in months. In the African epidemics, the native negro races have suffered incomparably more severely than the Arabs, Indians, or Europeans present with them. On the Mediterranean shores of Africa there have been repeated instances of the abortive introduction of the contagium of cholera, and others where epidemic intensity has speedily followed on apparently trivial importations. In Algeria, the outbreaks have always followed on a history of importation, and they have been manifested in crowded hospitals, prisons, and barracks, and in camps; and evacuation of these, wherever it has been applied to such foci, has been invariably successful in cutting short the epidemic. Ample proofs have been amassed of the efficacy of strict quarantine in excluding cholera on the seaboard, although it has appeared in parts thus temporarily exempted after suspicion had ceased and quarantine relaxed; being introduced by a slower land intercourse.

UNINHABITABLE DWELLINGS.

AN appeal case tried before the Middlesex General Quarter Sessions last week was an important one, as being the first appeal since the passing of the "Artisans and Labourers' Dwellings Act of 1868." By that Act, power is given to the local authority to order that houses which are reported by a properly appointed officer of health to be unfit for human habitation and dangerous to health should be destroyed; and the Act provides for compensation for the same to the freeholder of the property. The property in question was Nos. 4 and 15, Russell Place, Bloomsbury, and had been inspected by Dr. Ross and Mr. Treherne, the medical officer and surveyor for the district; and, they having pronounced them to be thoroughly dangerous to health by reason of their improper drainage, their imperfect structural condition, and the entire absence of ventilation, an order was made for their demolition on the 17th of May last. This appeal was against that order; the appellant, who was executor under the will of the late freeholder, alleging that the houses were capable of structural improvement. In support of the order, Mr. Poland called the various officers of health for the district, who stated that the houses were of the lowest description of labourers' dwellings. The rooms on the ground floor were several inches below the court, and the consequence was, that in wet weather, owing to imperfect drainage, a quantity of filth oozed into the houses, and rendered them unfit for human habitation. The apertures that did duty for windows were wholly inadequate for the purpose of ventilation, and they deemed that the dwellings were incapable of structural improvement, and that they ought to come down. The county surveyor, Mr. Pownall, had been appointed by the Court to in-

spect the premises, and he confirmed this opinion. After a long legal argument and examination of surveyors, the Court confirmed the order, but adjudged each party to pay their own costs.

MR. FOSTER WHITE.

WE are pleased to hear that Mr. Foster White, Treasurer of St. Bartholomew's Hospital, who was seized with serious illness from overwork on the eve of the opening of the Convalescent Home at Highgate, is progressing satisfactorily. He has gradually improved, and has been able to take a short walk in the square of the hospital.

CLERKENWELL BREEZES.

THERE are some requests so unreasonable that even the most intelligent and liberal-minded individuals, and the least niggardly and uninformed of public boards, may be excused for meeting them with surprise and indignation. Such a request was brought before the Clerkenwell Vestry recently, when the surveyor informed the vestry that Dr. Lankester had applied to have scales and weights provided at the mortuary, and to have the windows made to open and shut. Mr. Hurren moved that scales and weights be provided, as *post mortem* examinations could not be well performed without them. Mr. Johnson seconded the motion, but objected to the skylights being made to open. Mr. Wilcock said he was in a position to state that the effluvium arising from the deadhouse was intolerable, and all the surrounding inhabitants were compelled to keep their windows shut during the hot weather. The doctors had broken some of the panes in the skylight for ventilation. Mr. Saywell said he should like the whole matter referred to the Works Committee. Dr. Lankester put the county to more expense than any other coroner. The indignation of Mr. Saywell will be shared by all true economists. To desire to ventilate a deadhouse in the dog-days is to ask for an unnecessary piece of luxury, which argues an excessive delicacy of the olfactory organs, and a sensitiveness to epidemic and zymotic diseases, such as no patriotic or rightly constituted coroner should possess. As, however, the county might object to pension the families of a rapid and numerous succession of coroners, it was thought better to incur this first expense, and ventilators were ordered, but not without a struggle. While the vestry are deciding to ventilate the deadhouse, it is not inappropriate for us to ventilate the subject, with a view to prevent the vestry from giving themselves unbecoming airs in the future.

TAXATION OF MEDICINES IN FRANCE.

AMONG other luxuries denied to the French, will be cheap medicines. In the articles to be subjected to the additional duties specified by the raw materials bill, are included ipecacuanha, Peruvian bark, and other pharmaceutical articles, which ordinary persons would have supposed any Government would feel it its duty to render as cheap as possible. The *Journal de Paris* remarks, it would seem as though M. le Président wanted to deprive his fellow-citizens of the luxury of taking physic. We may be sure that the imposition of these duties will lead to frauds, adulterations, and the use of cheap substitutes, from which the public health will suffer.

HINTS TO FOREIGN TOURISTS.

THE German mineral spring stations, which are at this season most thronged by visitors, have been severely handled by Dr. Gubler, who gives some hints which may be useful to English and to other tourists. Moved, as he declares, by mingled feelings of patriotism and love of scientific truth, that eminent physician denounces the shams of some of the resorts most thronged. He derides the little thread of sulphurous water which attracts to Weilbach a numerous throng of English, Americans, and Russians; the painted blue cabinets of Schlangenbad, which give to the water a reflected azure hue, and to the skin a marbly whiteness which makes superannuated dames believe that they have rediscovered the fountain of youth; Kissingen, which offers seriously to the drinkers of the famous Rakoczy the benefits of seaside air, by making them breathe an atmosphere scented in passing over faggots over which drops salted water; and Canstatt, which procures for its invalids a combination of the most famous sources by the simple and ingenious device of inscribing on each successive tap the name of Wildbad, Carlsbad, Plombières, or Vichy. To these miracles of German humour he opposes the sulphuro-sodic springs of the Pyrenees, Amélie, Baréges, Bonnes, Cauterets, Luchon, Vernet; the alkaline waters of Vals and of Vichy; the arsenical waters of Bourboule; the *eau verte* of Vacqueiras (Vaucluse), a purgative or sulphated sodo-magnesic water, which he declares superior to the bitter *wasser* of Pullna and of Friedrichshall.

QUEKETT MICROSCOPICAL CLUB.

THE seventh annual meeting of this club was held on July 26th, at University College, when the retiring president, Dr. Lionel S. Beale, F.R.S., gave his valedictory address. This club, which was established to afford young microscopists that assistance in working out the various details of microscopical science which only association with the more experienced can give, now numbers over 540 members, and its career has been attended by great success. The president for 1872-3 is Dr. Robert Braithwaite, F.L.S., whose labours in bryology are appreciated by all students of botany. The four vice-presidents are Dr. L. S. Beale, F.R.S., Mr. Arthur E. Durham, Mr. Henry Lee, and Dr. Matthews. The following gentlemen have been re-elected to serve during the ensuing year. As treasurer, Mr. Robert Hardwicke, F.L.S.; as secretary, Mr. T. Charters White; and as secretary for foreign correspondence, Mr. M. C. Cooke, M.A.

THE FRENCH PAUPER.

WHILE we are employed in reforming and amending our system of Poor-law relief, the French are preparing to apply some parts of our system. A meeting of the twenty *maires* of Paris was, we learn, summoned last week to consider the details of a scheme elaborated by M. Husson, the Head of the Department of Public Relief, for the establishment in each district of relief-offices for the sick poor, modelled after the leading outlines of the union poorhouses and Poor-law dispensaries of London. M. Husson personally studied these during some prolonged visits to London, during one of which, it will be remembered, he was denied admission to the Shoreditch Workhouse, although fortified with letters from the President of the Poor-law Board, Mr. Villiers. In most places he was, however, received with great courtesy and attention. The infirmaries of our workhouses were made the subject of a detailed report some time since by M. Blondeau, the deputy of M. Husson. Since then they have, however, been greatly reformed.

THE PROGRESS OF CHOLERA.

WE understand that, during the voyage of a ship which recently arrived at Falmouth from Odessa, some deaths from cholera occurred on board.—At St. Petersburgh, from June 23rd to July 25th, there had been 1,295 cases, with 307 recoveries and 573 deaths; 415 remained under treatment on the latter day. The number of deaths on July 24th was 34, and of recoveries 50. Advices from Kiew state that, on July 24th, cholera had almost entirely ceased its ravages in that town. Even at Kievo Petchersky, which was the principal seat of the epidemic, owing to the large congregation of pilgrims there, the number of fresh cases has become quite insignificant. During the short period in which cholera has been prevalent, its victims reached nearly half of the whole number of sick from all kinds of diseases.—In an elaborate report by M. Fauvel on the cholera as it affected the Mecca pilgrims of 1871, the French Commission points out that it was far less severe than that of 1865; and that the means adopted by the Eastern authorities at the instance of the International Sanitary Commission have thus far proved very successful. He concludes with the following comfortable summary. The situation with respect to cholera is today far less threatening than it was last year at the same date. We are now only in presence of a single focus of disease, confined within a region where it has remained permanently during the last four years—a

focus of little violence, and not expansive up to this date, and which, to judge by preceding facts, may well be extinguished in its present territory, without extending to the rest of Europe.

THE MORTALITY OF THE SIEGE OF PARIS.

ALTHOUGH much has been written concerning the mortality of the civil population of Paris during the twenty-eight weeks of the siege, there has been little that is either accurate or complete. An elaborate research by Dr. Henry Sueur presents for the first time these desirable qualities. Figures are so little attractive, that few people are probably even yet aware that the siege cost upwards of 50,000 lives to the civil population. He ascertains that 300,000 Parisians left Paris by rail before the investment; but 190,000 regular troops and 170,000 refugees from the suburbs entered the city; so that the population of Paris, on the whole, was raised from 1,890,000 to about 2,000,000, the excess consisting chiefly of men between twenty and forty years of age. The mean mortality of the four preceding years and of the following year for these twenty-eight weeks was 24,928; that for the twenty-eight weeks of 1870-71 was 77,231—an excess of 52,303, this being apparently the toll which death demanded, and the price which the Parisians paid, for the glory of resistance to Bismarck and Von Moltke. The mortality fell unevenly on persons of various ages. Between fifteen and twenty-five, it was multiplied sixfold. The general mortality was tripled. The mortality was least among men from forty to sixty; they took no part in active service, and had comparatively greater facilities for resisting cold and privation. The diseases which contributed chiefly to the immense mortality were six—small-pox, bronchitis, pneumonia, typhoid fever, diarrhœa, and dysentery.

ROYAL COLLEGE OF PHYSICIANS.

AT the ordinary quarterly meeting of the College, held on July 25th, Dr. Risdon Bennett was re-elected representative of the College in the General Medical Council. Dr. Pitman, Dr. Risdon Bennett, Dr. West, and Dr. Whyte Barclay, were elected representatives on the Committee of Reference for an Examining Board for England. The following officers were nominated by the Council:—*Censors:* Sir W. Gull, M.D., F. Sibson, M.D., W. Munk, M.D., and G. Fincham, M.D. *Treasurer:* F. J. Farre, M.D. *Registrar:* H. A. Pitman, M.D. *Harveian Librarian:* W. Munk, M.D. *Examiners: Anatomy and Physiology:* F. W. Pavy, M.D., and J. Burdon Sanderson, M.D. *Chemistry, Materia Medica, and Practical Pharmacy:* A. S. Taylor, M.D., and W. H. Dickinson, M.D. *Medical Anatomy and the Principles and Practice of Medicine:* Herbert Davies, M.D., and G. Johnson, M.D. *Midwifery and the Diseases peculiar to Women:* J. Braxton Hicks, M.D., and W. S. Playfair, M.D. *Surgical Anatomy and the Principles and Practice of Surgery:* Campbell de Morgan, F.R.C.S., and G. W. Callender, F.R.C.S. *Curators of the Museum:* F. J. Farre, M.D., T. B. Peacock, M.D., W. Wegg, M.D., and F. Sibson. M.D.

A HOLIDAY NEAR HOME.

"LONDON is emptying fast;" by which, in ordinary parlance, is meant that some thousands out of its millions are escaping from the tear and wear of the town, many of them leaving the battle of life at home to fight it in another shape with German waiters or with lodging-house-keepers at the seaside. For the multitudes who have not so extended a holiday open to them, and who do not avail themselves of the mountainous scenery of our own country, there are yet charming, and perhaps quieter, recreations reserved. Chief among our home holiday-grounds, the valley of the Thames is at hand to all; and the quiet loveliness of its scenery, but too little known and appreciated, may well be resorted to by those in want of rest.

> "Thames, the most loved of all the Ocean's sons!
> Godlike his unwearied bounty flows;
> First loves to do, then loves the good he does."

To the excursionists who may decide to visit the beauties of our great English river, we are fortunate in being able to recommend a very elegant and most complete guide to it from Oxford to London, which has just been published by Mr. Taunt, photographer, of Oxford. An admirable series of maps, executed by Stanford from surveys by the author, a brief commentary, and an elaborate table of distances measured along the towing-path, will be found to be invaluable to the excursionist; while the large number of very neat photographs affixed to the maps will make the work valuable as a *souvenir*, and will ensure, what is perhaps more than half the benefit derived from any pleasant excursion, the reminiscences of it when we are again hard at work.

COUP DE SOLEIL.

SEVERAL cases of sunstroke were admitted last week into the London hospitals. The only fatal case, so far as we know, occurred at St. George's Hospital. One of the boys belonging to the *Goliah* training ship was struck down just after being reviewed by the Prince of Wales in the Horticultural Gardens on Thursday week. He was brought to the hospital, and died in a few hours in spite of treatment: his temperature before death exceeded 109 deg. The necropsy shewed nothing but very fluid blood and a somewhat congested brain; the lungs and other organs were healthy. The absence of prodromata is remarkable in these cases. A strong looking labourer of middle age was admitted also into St. George's Hospital on the 26th. He had been at work all the morning, and became suddenly unconscious just as he was going off to dinner; he declared that he had not been at all inconvenienced by the heat, had taken nothing to drink, and felt perfectly well till the moment of the attack. That "precaution is better than cure" is no doubt a stale and trite proverb; but in this, as in many other instances, it is as true as it is trite.

LEAD-POISONING IN A FACTORY.

IN an analysis of the Report of the State Board of Health for Massachusetts, given in the *American Journal of Medical Sciences* for July, reference is made to a very interesting account of extensive and unaccountable lead poisoning occurring among the operatives in a gingham factory. It was only after several weeks of research that the source of the symptoms was discovered in a yarn dyed with chromate of lead. A needless amount of the pigment was used in this instance; and the weavers habitually threaded their shuttles by sucking the yarn through the eye of the shuttle with their mouths. A hook was devised and ordered to be used for threading; and the dyeing was ordered to be more carefully conducted. The epidemic speedily ceased.

RAILWAY CASES.

THE following case, tried lately at the Norfolk Circuit at Huntingdon, before Mr. Baron Pigott, derives its interest from the satisfactory mode of settlement adopted. It was an action for damages for injuries sustained by Julia, wife of Mr. George Mann, farmer, of Marholm, near Peterborough, whilst a passenger on the North-Western Railway from Northampton to Stamford, on the 30th November, 1871. When the train came to Bowden Junction, on the Midland Railway, a collision took place, owing to a wrong signal having been hoisted. The carriage of the passenger train next the engine was smashed to pieces and tossed upon the engine, and the other carriages were more or less injured. Mrs. Mann was thrown out of her seat, knocked from one side of the compartment to the other several times, and sustained injuries which resulted in a "severe nervous shock." She had to keep her bed nine weeks, and, remained seriously disabled. The Midland Railway Company accepted the liability, and there were negociations for a settlement. These being ineffectual, it was agreed that Mrs. Mann should be submitted to medical examination by Dr. Russell Reynolds and Mr. Hart, and that their report should be accepted as evidence. This report stated that these gentlemen found distinct evidence of much functional derangement of the nervous system; that the symptoms complained of by Mrs. Mann were due to the accident; that she, having previously been a healthy and active woman, was now disqualified for the active life she previously led; and that she required rest and medical treatment, and would probably do so for some time to come.

Further, they believed that Mrs. Mann would recover in six months. This prospective term, together with the eight months of suffering already endured and the attendant expenses, was placed before the jury, the real issue being the amount of damages to be assessed. The jury returned a verdict for the plaintiffs, damages £300.

THE PUBLIC MEDICINE SECTION.

THIS section, the youngest, but already one of the most important, of the sections of the annual meeting, will this year have the advantage of the presidency of our eloquent and learned Associate the Rev. Dr. Haughton, and is likely, therefore, to be not less popular and successful than hitherto. The sections commence their sittings next week, at 2 P.M on Wednesday. Dr. Haughton proposes to open the section by a short address, confined to the following subjects. 1. The Duty of the Public and the Medical Profession with regard to Epidemics, illustrated by the recent cases of Cholera and Small-pox; 2. The question of Medical Evidence in Courts of Law in Civil and Criminal Cases.

MILK AND BUTTER FOR THE LONDON PAUPER.

A WHILE ago we called attention to the wretched condition of the milk supplied to the large London hospitals, and cautioned the physician that, when he prescribed milk for a hospital-patient, milk and water, *minus* the cream, would be administered. The results of a Government inquiry into the condition of the workhouse diet has been published. The milk and butter supplied to the twenty-nine London unions have been specially examined. In nearly every instance the milk had been skimmed either wholly or partially, and in most cases water had been added. In the worst cases, as much as one volume of water had been added to one volume of milk. The butter was in many instances very bad in quality, and in some cases diluted with salt and water. Good butter should not contain more than some fifteen per cent. of salt and water, but some of the workhouse-butter contained forty per cent. We observe that the inquiry was entrusted to Mr. Wanklyn, who has paid considerable attention to subjects of this description. We cannot, however, omit mentioning a striking circumstance in connection with the official inquiry. The names of the individual unions, and of the vendors, are suppressed. The *Milk Journal* published names and addresses. We published the name of the hospital opposite to the analysis of its milk. Why does not Government enter into like particulars?

FEEDING BY THE RECTUM.

WITH reference to the use of the pancreas of animals in the formation of nutrient enemata, noticed in the JOURNAL of July 6th, a further communication on the subject by Dr. Leube appears in the *Centralblatt für Medizin. Wissenschaft.* (July 20th). He says that the plan of obtaining the pancreas in the ordinary way from the butcher succeeds very well in the autumn and winter. In the warmth of summer, however, the gland very soon begins to undergo decomposition, and in consequence loses its digestive power, and becomes irritating to the intestine, producing rapid expulsion of the material injected. These mishaps may be easily avoided by making a glycerine extract of the pancreas. This extract is quite equal in digestive power to the fresh pancreas, and will remain good for several weeks. Dr. Merkel of Nuremberg has made several trials of this modification, especially in the case of iodine-poisoning above mentioned; and the results have been equally favourable with those following the use of the pancreas itself. He describes the following as the best mode of making the pancreatic injection. The pancreas of a bullock (which is sufficient for three enemata) is finely chopped, and rubbed with 250 *grammes* of glycerine; and to each third of this, when about to be used, are added from 120 to 150 *grammes* of finely divided meat. This mass is digested in the bowel as completely as the meat and pancreas mixture already described. It is important that the mixture of pancreas and glycerine with meat should be injected into the rectum as soon as it is made; for, if it be allowed to stand, the meat swells up, and the injection is thereby rendered difficult.

BRITISH MEDICAL BENEVOLENT FUND.

AT the usual monthly meeting held on Tuesday last, the sum of £115 was distributed in grants among thirteen cases, twenty-two applications for assistance being before the Committee. Donations were reported of thirty guineas from the Merchant Taylors' Company, and of fifty guineas from the Drapers' Company; also a new annual subscription of £20 from Sir Richard Wallace. Warm votes of thanks were passed in each instance.

DR. C. J. B. ALDIS.

THE members of the Association, and especially of the Metropolitan Counties Branch, will read with no small regret the announcement of the death of Dr. Aldis, long associated with them in works of public usefulness, and in furthering the general interests of the profession and the Association. Dr. Aldis was well known to all as a very zealous and intelligent medical officer of health; and his exertions in this regard brought him frequently into contact with the sufferings of the poorer classes, and the ills which result from a neglect of the laws of hygiene. Dr. Aldis was particularly prominent in his endeavours personally to secure, within his sphere, an amelioration of the conditions of life among the poor, and to aid in all the enlarged efforts of the Association to secure an amendment of the public health laws of the country. He was an observant and intelligent physician, an agreeable and kindly companion, well known to a large circle of medical friends, whose society he hospitably cultivated, and by whom he will be deeply and long regretted.

THE PREVENTION OF CHOLERA.

AT a recent meeting of the Court of Common Council of the City of London, Mr. Alderman Lawrence, M.P., moved that it be referred to the Commissioners of Sewers to make the necessary arrangements for carrying out the provisions of the Public Health Bill when it became law. Mr. W. S. Gover seconded the motion. It was desirable that not a moment should be wasted, and that the Corporation should put in force whatever powers were conferred on them. Mr. Bedford said the Bill had come out of Committee in a different shape from that in which it entered it. The Corporation was now made the sanitary authority for all purposes in the river, and they would have to inspect every vessel in the same way as houses were inspected in the City of London. He thought the work was too much for the Commissioners of Sewers, who had already enough to do, and he believed the expenditure would be larger than was anticipated. The *Remembrancer* said there had been no alteration in the Bill as to the powers to be conferred on the Corporation. Eventually it was resolved, on the motion of Mr. Scott, that the matter should be referred to a Committee, consisting of representatives selected from the various wards of the City.

RATING OF CHARITIES.

THE local authorities have decided to rate St. Thomas's Hospital at £10,900, the result of which will be to mulct that charity in the annual sum of £3,000. It appears from a letter of Sir Francis Hicks, the Treasurer, published in the *Times*, that of 3,072 in-patients since the opening of the hospital, fully one-third have been from the parish of Lambeth; and that 10,000 out-patients belonging to that parish have been relieved. It seems perfectly monstrous that an income wholly devoted to purposes which relieve the rates, and to works of mingled charity and good, should thus be mulcted; and that a great charity, mainly supported by the benefactions of an illustrious philanthropist of the past, should be thus maimed and disabled, and made to contribute to the relief of the ratepayers, even if they were chiefly, as has been suggested in reply, sixteen-pound ratepayers. The Albert Hall, a building erected for far different purposes, although purposes in themselves respectable, is reduced to £1,250 by the same tribunal. The assessment committees of other places have behaved in a far more just and intelligent spirit to hospitals; and we cannot but regard the action of the Lambeth Committee as an iniquitous stretching of the powers conferred by a very doubtful Act of Parliament to defeat the

noble intentions of the beneficent dead, and to rob the poor for the benefit of the middle-class ratepayer, under the pretext of justice. This annual tax of £3,000 a year on the revenues left by Guy for the relief of the suffering is one of the scandals of an economic age, which vainly attempts to cloak a cowardly meanness under the guise of economic principles.

THE HAMPSTEAD SMALL-POX HOSPITAL.

AT a meeting of the Metropolitan Asylums Board held on Tuesday, it was stated that the Local Government Board had declined to accede to the suggestion that the Small-pox Hospital at Hampstead should be used for the reception of harmless persons of the chronic or imbecile class. It is held that it would not be expedient to divert the institution from the purpose for which it was originally designed, "and which it has so admirably fulfilled."

THE BRITISH ASSOCIATION.

THE meeting of the British Association at Brighton promises to be a great success. It commences on August 14th, and continues till the 22nd ; Dr. Carpenter, F.R.S., filling this year the Presidential Chair. Our Associate, Mr. Cordy Burrows, at present Mayor of Brighton, is showing his usual energy, and means to lose none of his character for hospitality on the present occasion. He has caused a large number of invitations to be issued to foreign celebrities in science, and in every way has exerted himself in promoting the objects of the meeting. The Brighton Aquarium will be opened, and numerous *soirées* and excursions will take place during the meeting.

FOR AND AGAINST XYLOL.

DR. MOFFETT of Philadelphia reports, in the *Philadelphia Medical Times* for June 15th, the case of a German woman, aged 42, who had confluent variola. She was fast sinking under his usual method of treatment. On April 8th, her pulse was 155, respiration 50 ; the ends of the fingers and nails were purple, and in every way her condition was unfavourable. He prescribed a mixture containing 100 drops of xylol, with gum arabic, and an ounce each of syrup and water ; a teaspoonful to be taken every two hours. The next day, all the graver symptoms had disappeared ; and on April 19th she was able to go about the house. Dr. Moffett states that he tried this remedy in a number of cases, always with the most happy results. On the other hand, the *Boston Medical Journal* is assured by Dr. Webb, Physician to the Small-pox Hospital in that city, that, after a faithful trial of xylol, he has become convinced that it is not only useless as a curative agent in variola, but that it does positive harm. He found that it produced such gastric irritability, as to preclude the taking by the patient of a sufficient amount of nourishment ; and, to secure the latter most important point in the treatment, he was obliged to suspend the drug, before the close of the disease, in all except the mildest cases.

CONCERNING ALCOHOL.

THE French Association against the abuse of alcoholic drinks has decided on the subjects for the prizes which it proposes to award in 1873-74. The following is the programme. 1. A prize of 500 *francs* will be awarded to the author of a work, in the form of either a novel, a tale, or illustrated sentences or publications, capable of being put into the hands of persons of every age and of both sexes, which shall give the most impressive picture of the dangers of drunkenness. 2. A prize of 500 *francs* will also be given for researches on the practical means of substituting for the use of alcoholic liquors, in the ordinary habits of the people, the employment of beverages which are not only harmless, but even salutary, such as tea and coffee. 3. The third subject proposed is the determination, by the aid of chemical analysis, clinical observation and experiment, of the analogies and differences which, under the double relation of their composition and their effects on the organism, exists between the spirit of wine and alcohols of every kind current in commerce as drinks or as liqueurs. The prize for this will be 1,500 *francs*. The two orders of very distinct facts which this third question embraces may be treated separately. The essays on the first two questions must be addressed, not later than March 31st, 1873, to the General Secretary, Dr. L. Lunier, 62, Rue Jacob, Paris ; that on the last question not later than December 31st of the same year.

SCOTLAND.

MR. D. P. STEWART and Dr. William Whitelaw have been appointed medical officers to the Glasgow Convalescent Hospital, Lenzie. The home will be open for the reception of patients in about a month.

AT a meeting of the contributors to the Glasgow University Lying-in Hospital, a proposal to amalgamate with the City of Glasgow Lying-in Hospital was remitted to the Directors.

ENIGMATIC.

IN the House of Commons on Wednesday, Sir D. Wedderburn, on the part of Sir Robert Anstruther, gave notice that on the civil service estimates he would move a reduction of £1,317, being the salaries of professors of the medical faculty in the University of Edinburgh.

THE SCOTTISH MIDLAND AND WESTERN MEDICAL ASSOCIATION.

THE annual meeting of this Association was held on the 21st instant in the Clarence Hotel, Glasgow, Dr. Boyd, of Slamannan, presiding. The reports of the Treasurer, Dr. Goff (Bothwell), and the Secretary, Dr. Moffat (Falkirk), were satisfactory. It was stated that the influence of the Association had been brought to bear on members of Parliament on the Masters and Servants Wages Bill, and it was further resolved that further communications should be addressed to both masters and servants in collieries and other works, with the view of securing increased remuneration to the medical officers. The members afterwards dined in the hotel. The meeting passed off successfully.

THE LADY MEDICAL STUDENTS AND THE EDINBURGH UNIVERSITY.

LORD GIFFORD has issued the following interlocutor in the action, at the instance of Miss Jex-Blake and others, against the Senatus and the Chancellor of the University of Edinburgh. His lordship has appended a careful note of unusual length, giving his reasons for his opinion.

Edinburgh, 27th July, 1872.—The Lord Ordinary having heard parties' procurators, and having considered the closed record, statutes, charters and writs founded on, and whole process : Repels the first plea in law stated for the defenders, the Senatus Academicus of the University of Edinburgh, that all parties are not called : Finds that the resolutions or regulations passed and enacted by the University Court of the University of Edinburgh, dated 10th November, 1869, and approved of by the Chancellor of the said University, of date 12th November, 1869, form part of the regulations now in force in the University of Edinburgh, and must receive effect as such : Finds that according to the existing constitution and regulations of the said University of Edinburgh, the pursuers are entitled to be admitted to the study of medicine in the said University, and that they are entitled to all the rights and privileges of lawful students in the said University, subject only to the conditions specified and contained in the said regulations of 12th November, 1869 : Finds that the pursuers, on completing the prescribed studies, and on compliance with all the existing regulations of the University preliminary to degrees, are entitled to proceed to examination for degrees in manner prescribed by the regulations of the University : Finds that the defenders, the Senatus Academicus of the said University, are bound, on the pursuers completing the prescribed studies, and complying with said regulations, to admit the pursuers to examination as candidates for medical degrees, and on the pursuers being found qualified, to recommend them to the Chancellor of the University for having such degrees conferred upon them ; and finds that the defender, the Right Hon. John Inglis, as Chancellor of the said University, is bound, upon such recommendation being made by the Senatus Academicus, to confer medical degrees upon any or upon all of the pursuers who are found qualified therefor, and recommended as aforesaid : And in terms of the above findings, and to the effect thereof, finds, decerns, and declares under the declaratory conclusions of the summons : Farther decerns and ordains the defenders, the Senatus Academicus, on the pursuers respectively completing the prescribed studies and complying with the existing regulations of the University preliminary to degrees, to admit the pursuers to examination as candidates for medical degrees, and on the pursuers being found qualified, decerns and ordains the said Senatus Academicus to recommend the pursuers to the Chancellor of the said University for having such degrees conferred upon them, and decerns and ordains the defender, the said Right Hon. John Inglis, as Chancellor of the said University, on receiving the requisite recommendation from the Senatus Academicus, to confer upon the pursuers

respectively the medical degrees for which they are recommended. *Quoad ultra* dismisses the remaining conclusions of the action, excepting the conclusion for expenses. Decerns: Finds the defenders, the said Senatus Academicus, liable to the pursuers in expenses, subject to modification, and, in the circumstances, modifies the same by deducting one-fourth from the taxed amount. Remits the account of said expenses when lodged to the auditor of the Court to tax the same, and to report, and reserves all questions of relief as between the minority and majority of the Senatus Academicus: Finds no other expenses due in the cause, and decerning. (Signed) AD. GIFFORD.

IRELAND.

THE LORD-LIEUTENANCY OF LEITRIM.

MR. BRADY, M.P. for Leitrim, is spoken of as the probable successor to Lord Granard as the Lord-Lieutenant of that county. Mr. Brady was mainly instrumental in obtaining the Poor-law Medical Officers (Ireland) Superannuation Act. The appointment would afford pleasure to the medical profession in that county. He possesses large estates in Leitrim.

MILITIA SURGEONS.

ATTENTION is called in another column (page 137) to the subject of militia surgeons, with the view of securing a meeting at Birmingham for the further consideration of Mr. Cardwell's Bill. It is to be hoped that English and Scotch militia surgeons will actively support their Irish brethren in the matter; and to do this best, the formation of an association is almost necessary.

SALARIES OF IRISH CIVIL SERVANTS.

THE Poor-law medical officers of Ireland will endeavour to bring before the notice of the Civil Service Commission, which will shortly sit, the question of their pay and emoluments. Their pay at present is utterly inadequate, considering the immense increase in the price of all the necessaries of life; and there has been no revision of it for the last twenty years. The Marquis of Hartington, in reply to the Hon. David Plunket, M.P. for Dublin University, said on last Monday night that the Government had been enabled to secure the services of three gentlemen to act as Commissioners; and that they were Lord Monck, Mr. O'Reilly, and Mr. Blackwell.

PAYMENT FOR SANITARY REPORTS (IRELAND).

THE Poor-law Commissioners have informed the medical officers of the Limerick Union that it is within the scope of the medical officers' duties under the Dispensary Regulations to furnish reports of the sanitary condition of their various districts. They also add, "If a special inquiry and report is required, provision is made by the 14th Section of the 23rd and 24th Vict., cap. 77, enabling the Board of Guardians to pay the medical officer a reasonable compensation for his services." The words of the Act are, "The guardians of any union, or parish not within a union, may at any time employ one of their medical officers to make inquiry and report upon the sanitary state of their union or parish, or any part thereof, and pay a reasonable compensation for the same out of the common fund." It will be important to bear this decision in mind, as the Local Government Board (Ireland) Bill has passed the second reading in the House of Lords, and will probably receive the Royal assent in a few days.

THE CHOLERA.

BY advices received, on going to press, we learn that there have been cases of cholera in Cronstadt amongst the British shipping. The number of cases is, we believe, small, though the cases of cholera in Cronstadt have numbered, we believe, 150, a third of which at least have been fatal. The rumour that cholera has appeared at Berlin is stated to be incorrect.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
FORTIETH ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held in Birmingham, on the 6th, 7th, 8th, and 9th days of August next.

President—JOHN WHIPPLE, Esq., F.R.C.S., Consulting-Surgeon to the South Devon and East Cornwall Hospital.

President-elect—ALFRED BAKER, Esq., F.R.C.S., Senior Surgeon to the General Hospital, Birmingham.

An *Address in Medicine* will be delivered by SAMUEL WILKS, M.D., F.R.S., Physician to and Lecturer on Medicine in Guy's Hospital.

An *Address in Surgery* will be delivered by OLIVER PEMBERTON, Esq., Surgeon to the General Hospital, and Professor of Surgery in Queen's College, Birmingham.

The business of the Annual Meeting will be conducted in *five* Sections, viz.:—

SECTION A. MEDICINE.—*President:* Dr. Bell Fletcher, Birmingham. *Vice-Presidents:* Dr. J. W. Ogle, London; Dr. Wade, Birmingham. *Secretaries:* Dr. Sutton, 9, Finsbury Square, London; Dr. Johnston, 9, Easy Row, Birmingham.

SECTION B. SURGERY.—*President:* Sir William Fergusson, Bart., F.R.S., London. *Vice-Presidents:* George Southam, Esq., Manchester; J. Vose Solomon, Esq., Birmingham. *Secretaries:* Furneaux Jordan, Esq., 22, Colmore Row, Birmingham; T. Vincent Jackson, Esq., Darlington Street, Wolverhampton.

SECTION C. MIDWIFERY.—*President:* Dr. Evory Kennedy, Dublin. *Vice-Presidents:* Samuel Berry, Esq., Birmingham; Dr. J. Matthews Duncan, Edinburgh. *Secretaries:* Dr. Underhill, Summerfield, West Bromwich; Lawson Tait, Esq., Great Charles Street, Birmingham.

SECTION D. PUBLIC MEDICINE.—*President:* The Rev. Dr. Haughton, D.C.L., F.R.S., Dublin. *Vice-Presidents:* Dr. Birt Davies, Birmingham; Dr. T. P. Heslop, Birmingham. *Secretaries:* Dr. Arlidge, Newcastle-under-Lyme; Dr. Alfred Hill, Winson Green, Birmingham.

SECTION E. PSYCHOLOGY.—*President:* Dr. Maudsley, London. *Vice-Presidents:* Dr. J. Batty Tuke, Cupar, Fife; Dr. J. Crichton Browne, Wakefield. *Secretaries:* Dr. G. F. Bodington, Sutton Coldfield; Dr. J. Thompson Dickson, 59, Queen Anne Street, Cavendish Square, London.

All the meetings in connection with the Annual Meeting will be held at King Edward's School, New Street.

The five Sections will be held—A. *Medicine:* Governors' Room, King Edward's School. B. *Surgery:* Lecture Room, King Edward's School. C. *Midwifery:* Upper Class Room School House, King Edward's School. D. *Public Medicine:* Classical School Room, King Edward's School. E. *Psychology:* Lower Class Room School House, King Edward's School. Microscopes will be provided for the use of members in this Section.

The General Meetings and the Addresses in Medicine and Surgery in the Classical School Room.

The Annual Museum will be held in the English School Room.

TUESDAY, *August 6th.*

1 P.M.—MEETING OF COMMITTEE OF COUNCIL—Governors' Room.
3 P.M.—MEETING OF GENERAL COUNCIL—Governors' Room.
8 P.M.—FIRST GENERAL MEETING—Classical School Room.
Business—
President resigns Chair to President-elect.
Vote of thanks to Ex-President.
The President's Address.
REPORT OF COUNCIL and discussion thereon. Election of General Secretary; election of Auditors.

WEDNESDAY, *August 7th.*

9.30 A.M.—MEETING OF NEW COUNCIL—Governors' Room.
11 A.M.—SECOND GENERAL MEETING—Classical School Room.
Business—Appoint place of meeting for 1873, and President-elect. Presentation of Hastings Medal.
11.30 A.M.—ADDRESS IN MEDICINE, by SAMUEL WILKS, M.D., F.R.C.P., F.R.S., Physician to Guy's Hospital.
1 P.M.—PUBLIC LUNCHEON (by invitation of the Birmingham and Midland Counties Branch)—Exchange Assembly Rooms.
2 P.M.—MEETINGS OF SECTIONS—King Edward's School. Adjourn at 5 P.M.
8 P.M.—PRESIDENT'S SOIRÉE—Town Hall.

THURSDAY, *August 8th.*

10 A.M.—THIRD GENERAL MEETING—Classical School Room. Reports of Committees.

11 A.M.—ADDRESS IN SURGERY, by Professor OLIVER PEMBERTON, Surgeon to the General Hospital.

1 P.M.—PUBLIC LUNCHEON (by invitation of the Birmingham and Midland Counties Branch)—Exchange Assembly Rooms.

2 P.M.—MEETINGS OF SECTIONS—King Edward's School.

6.30 P.M.—PUBLIC DINNER OF THE ASSOCIATION—Exchange Assembly Rooms.

FRIDAY, *August 9th.*

10 A.M.—MEETINGS OF SECTIONS.

1 P.M.—PUBLIC LUNCHEON (by invitation of the Birmingham and Midland Counties Branch)—Exchange Assembly Rooms.

2 P.M.—CONCLUDING GENERAL MEETING.

RECEPTION-ROOM.—The upper Corridor, King Edward's School, will be fitted up as a Reception-Room, and will be opened at 10 A.M. on Tuesday, August 6th, and on the following days at 8 A.M., for the issue of tickets to members and for supplying all necessary information.

*** *It is particularly requested that gentlemen, on their arrival, will at once proceed to the Reception-Room, which is within one minute's walk from the London and North-Western Railway Station (New Street), and less than six minutes' walk from the Great Western Station (Snow Hill). At the Reception-Room, each visitor should* (1) *enter his name and address, and obtain his tickets and programme;* (2) *inquire for letters;* (3) *consult the list of lodgings and hotels, etc.*

The Offices of the General Secretary, of the Editor of the JOURNAL, and of the Honorary Local Secretaries, will be found in connection with the Reception-Room.

The Honorary Local Secretaries are—

T. H. BARTLEET, Esq., 8, Old Square.
Dr. BALTHAZAR FOSTER, 16, Temple Row.
J. F. WEST, Esq., Bingley House, Broad Street.

GENERAL ARRANGEMENTS.—*Reception-Room.*—Provision will be made for the receipt and postage of letters, and for the care of parcels, etc. A writing-room and lavatories will be provided.

The General Post Office is in New Street, and the Postal Telegraph Offices are in Stephenson Place and in Cannon Street, both near King Edward's School.

Gentlemen intending to visit Birmingham during the meeting are requested to send their names as soon as possible to the Secretaries of the Visitors' Committee—Dr. Mackey, Newhall Street; and Mr. Lloyd Owen, Newhall Street.

Members requiring Private Lodgings are also requested to apply at once to either of the Secretaries of the Visitors' Committee.

HOTELS.—The following are the chief hotels: "The Hen and Chickens", New Street; "The Queen's", attached to the London and North-Western and Midland Railway Station; "The Great Western", attached to the Great Western Railway Station; "The Union", Union Street; "The Stork", Old Square; "The Swan", New Street; "The Royal Hotel", Temple Row; and at Edgbaston, "The Plough and Harrow".

The new Club Masonic Hall, New Street, will (by the kindness of the Committee) be open to members of the Association during the meeting.

EXCURSIONS.—*Friday.* I. Black Country Excursion. A train will leave Birmingham at 1.20 P.M. for Dudley. The Earl of Dudley's Iron Works at Round Oak will be visited, and the manufacture of iron in all its details shown to the visitors. The Dudley Caverns will be illuminated by Lord Dudley for the visit of the Association, and their geological formation described by E. Hollier, Esq., of Dudley. The Ruins of Dudley Castle will be visited, and a historical account of the Castle given by Frank Underhill, Esq., Tipton; and, in the town of Dudley, the Geological Museum will be open for inspection.—The Medical Practitioners of South Staffordshire and East Worcestershire invite the visitors to dinner at the "Dudley Arms Hotel" at 6.30.

Friday. II. Worcestershire Excursion. A train will leave Birmingham about 2 P.M. for Stoke Prior, where Mr. Corbett's Salt Works will be open to the members. The members will thence return to Blackwell by train, where the site of the new Sanatorium will be visited. Thence the members will walk to the Lickey Hills. Hewell Grange, where the grounds and gardens will be thrown open by the kind permission of Lady Mary Windsor Clive, can be reached by walking or driving from Blackwell Station. Members who may select this part of the excursion, are invited to luncheon by Mr. J. S. Gaunt of Alvechurch, whence they can easily visit Redditch and return by ordinary train to Birmingham.

Mr. Prosser of Bromsgrove invites all members of the Association who join this excursion to Luncheon at the Rose and Crown Hotel, Lickey, whence members will return by train to Birmingham.

Friday. III. Members desirous of visiting the Needle and Fish-hook Manufactories at Redditch can leave Birmingham by any of the ordinary trains on Friday morning, and will be shewn all local objects of interest by Mr. William Smith, by whom the visitors are invited to luncheon.

Saturday. Warwickshire Excursions. Trains will leave Birmingham at 10 A.M. on Saturday, to enable members to visit (1) Leamington, Kenilworth Castle, and Warwick Castle; and (2) Stratford-on-Avon.

(1) At LEAMINGTON, the Town Sewage Works and Lord Warwick's Sewage Farm will, by the permission of the Local Board and Lord Warwick, be open for inspection. The Pump Rooms and the Jephson Gardens will repay a visit.—Mr. Ebbage, President of the Birmingham and Midland Counties Branch, invites members to luncheon at his residence.—Kenilworth can be readily reached by ordinary train from Leamington, where the ruins of the Castle can be visited. Members can proceed on the return journey to Warwick by train, or, if they prefer it, by an easy and picturesque walk passing Guy's Cliff.—At Warwick, the noble Castle, St. Mary's Church, the Beauchamp Chapel, and the Leicester Hospital, form objects of great interest.—Dr. Tibbits of Warwick invites members to luncheon.

(2) The excursion to Stratford-on-Avon will enable members to visit Shakespeare's House; the remains of New Place; the poet's monument in the fine parish church; and the churchyard, beautifully situated on the banks of the Avon. Excursions will be made to Ann Hathaway's Cottage, and to Charlecote, by kind permission of Mr. Spencer Lucy.—In the town, Messrs. Flower and Sons have kindly offered to allow members to inspect their extensive breweries.—Dr. Nason invites members visiting Stratford to luncheon at the Town Hall.

*** *It is especially requested that all gentlemen who intend to avail themselves of these excursions, will send in their names to Mr. W. C. Garman, Honorary Secretary of the Excursion Committee, at the Reception Room, King Edward's School, not later than Wednesday, August 7th, at* 4 P.M., *for the Friday excursions, or than Thursday, August 8th, at* 4 P.M., *for the Saturday excursions.*

On Friday, a Flower Show will be held at the Botanical Gardens, Edgbaston, to which members of the Association will be admitted on presenting their cards.

The following places of interest in the neighbourhood may be conveniently visited by the members during the meeting:—Lichfield city and cathedral; Worcester city and cathedral, with the Malvern Hills; Coventry, with its Guildhall and churches; Sutton Park; Burton-on-Trent, where Messrs. Bass and Co.'s breweries will be open to members of the Association. Messrs. Chance Brothers' Glass Works at Spon Lane will be open to a limited number of members on Thursday and Saturday mornings of the meeting: early application must be made by letter to Dr. Balthazar Foster, at the Reception-Room.

During the meeting, the following institutions and manufactories will be open to the members of the Association on presenting their cards of membership:—The Free Library, the Shakespeare Library, and the Art Gallery, Ratcliff Place.—The Midland Institute News Room and Museum, Ratcliff Place.—The Old Library News Room, Union Street.—The Deaf and Dumb Asylum and the Blind Asylum, Church Road, Edgbaston.—Mr. Mason's Orphanage, Erdington.—Messrs. Elkington and Mason's Electro-Plate Works.—Messrs. Winfield's Brass Foundry, Cambridge Street; Messrs. F. and C. Osler's Glass Chandelier Factory, Broad Street; Messrs. McCallum and Hodson's Papier Mâché Works, Summer Row; Messrs. Edelsten and Williams's Pin Factory, George Street; Messrs. Hardman and Co.'s Stained Glass Mediæval Furniture Manufactory, Newhall Hill; Messrs. Gillott's Steel Pen Works, Graham Street; Messrs. Bragg's, Jewellers, Vittoria Street; Messrs. Hammond, Turner, and Sons' Button Manufactory, Snow Hill; Messrs. Stone, Fawdry, and Stone's Glass Works, Dartmouth Street; Messrs. Tonks and Sons' Brass Foundry, Mosely Street; Messrs. Blews and Sons' Bell Foundry, Bartholomew Street; Messrs. J. and E. Wright's Wire Rope Works, Garrison Lane; the Stephenson Tube Works, Liverpool Street; the Proof House (10 A.M. to 12, and 3 to 5 P.M.), Banbury Street; the Small Arms Factory (9 A.M. to 12, and 1 to 6 P.M.), Small Heath; the Borough Gaol; the Borough Lunatic Asylum; the Training Institution for Nurses, Crescent; and all the Medical Charities. Messrs. Cornish Brothers publish a useful *Guide to Birmingham and its Manufactures*, with map.

The Honorary Local Secretaries regret that up to the present the railway companies have refused to grant any extra accommodation to the members of the Association visiting Birmingham.

THE ANNUAL MUSEUM.—The Committee invite contributions of the following articles.

1. New or improved Surgical Instruments or Apparatus.
2. New Drugs or Pharmaceutical Preparations.
3. New Articles of Diet for Invalids.
4. New Medical Works.
5. Pathological Specimens, wet or dry; and Casts, Photographs, Drawings, or Diagrams, illustrative of Pathological Conditions.
6. Preparations, etc., illustrative of Diseases of the Organs of Circulation; and Instruments employed in their detection and treatment. It is the intention of the Committee to arrange these in a separate department of the Museum.

Contributors are requested to send a description of the matters which they propose to exhibit to the Honorary Secretaries before July 13th, as it is intended to issue a printed catalogue.

The Honorary Secretaries for the Annual Museum are—

CHARLES J. BRACEY, Esq., M.B., Old Square, Birmingham.
ROBERT JOLLY, Esq., M.D., Newhall Street, Birmingham.

NOTICE OF MOTION by DR. A. B. STEELE.

That the Treasurer be authorised to pay the travelling expenses of members attending the meetings of Committee of Council, and of its Subcommittees in all cases in which provision for such payment does not already exist.

ALTERATION OF LAWS.—Notice of Motion by Dr. A. B. STEELE.

That Laws 15 and 16 be so altered as to read as follows.

1. The subscription to the Association shall be one guinea *per annum*, which shall entitle each member to receive the publications of the Association for the current year. The subscription shall date and be considered due in advance on the 1st of January in each year, except in the case of a member admitted on or after the 1st July, when the subscription for such part of a year shall be half a guinea in advance.

2. Any member whose subscription shall not have been paid on or before the 31st December of the current year shall be suspended from all privileges of membership; and at the end of the succeeding year, if the arrears be still unpaid, he shall cease to be a member, and shall be ineligible for readmission until he shall have paid all arrears due at the period of his suspension.

3. Any member wishing to withdraw from the Association shall give written notice of his intention to the General Secretary on or before the 1st December of the current year; and neither withdrawal, suspension, nor erasure of a member's name from the books of the Association, shall be deemed either in honour or equity to relieve such member from his liabilities to the Association.

PAPERS.—The following papers have been promised :—

A. B. Steele, L.R.Q.C.P. On the Treatment of Puerperal Eclampsia.

W. F. Teevan, F.R.C.S. 1. On the Treatment of the Impassable Stricture.—2. Clinical Remarks on Stone in the Bladder.—3. On Impotence.

W. Macdonald, M.D. Embryonic Circulation.

Reginald Harrison, F.R.C.S. On the Relative Value of Certain Methods of Treating Stricture in the Urethra.

A. E. Sansom, M.D. The Disinfection of Air.

E. J. Tilt, M.D. On Uterine Inflammation after the Change of Life.

Protheroe Smith, M.D. Fibroid Degeneration of the Uterus, and the Best Way of Treating it.

J. Althaus, M.D. On the Treatment of Rheumatic Gout by the constant Galvanic Current.

A. R. Simpson, M.D. On the Removal of Portions of Morbid Tissue in Cases of Carcinoma Uteri.

William Adams, F.R.C.S. Three Additional Cases of Subcutaneous Division of the Neck of the Thigh-bone: with Remarks.

James F. West, F.R.C.S. Syphilitic Constriction of the Œsophagus.

Lawson Tait, F.R.C.S. 1. Ovariotomy. 2. Intrauterine Therapeutics. 3. Statistics of Lying-in Institutions.

Alfred Wiltshire, M.D. On the plan of Treatment of Cancer proposed by Professor Simon of Heidelberg: with Cases.

Charles Warden, M.D. 1. On Polypus of the Ear and Perforation of the Membrana Tympani, and the Instruments used in the Diagnosis and Treatment of Diseases of the Ear, at the Ear and Throat Infirmary, Birmingham; also, upon a new form of Artificial Drum. 2. Spinal Curvature, Club-Feet, and other Deformities, and the Instruments used in their Treatment at the Birmingham Orthopædic Hospital.

W. Acton, F.R.C.S. Treatment of the advanced stages of Constitutional Syphilis.

William Stokes, M.D., F.R.C.S.I. Reduction of Dislocation by a modification of Jarvis's Adjustor.

Edward Lund, F.R.C.S. Removal of both Astragali in a Case of severe Double Talipes.

Charles Steele, F.R.C.S. On Colotomy for Intestinal Obstruction.

T. H. Bartleet, M.B., F.R.C.S. Two Cases in which the Femoral Artery was tied for unusual Pathological Conditions.

Balthazar Foster, M.D. 1. The Lactic Acid Treatment of Diabetes. 2. Notes on Diseases of the Heart.

J. W. Eastwood, M.D. The Use of Alcohol in Health and Disease.

W. R. E. Smart, M.D., C.B., Inspector-General R.N. Notes towards the History of the Medical Staff of the English Army prior to the Accession of the Tudors.

James Thompson, M.B. 1. Remarks on the Mineral Waters of Leamington. 2. Remarks on the use of Secale Cornutum in cases of Labour complicated with Feeble Action of the Heart. 3. Details of a Case of Necrosis of the major portion of the Clavicle in a Child.

George Southam, F.R.C.S. Dislocation of the Patella on its Edge.

S. M. Bradley, F.R.C.S. Tricœlian Human Heart.

John Bassett, M.R.C.S. Secondary Uterine Hæmorrhage.

A. C. C. de Renzy, M.R.C.S., Surgeon-Major Indian Army. Sanitary Improvement in India.

Andrew Fergus, M.D., Glasgow. Deranged Soil-pipes as a cause of Diphtheria, Typhoid, and other Diseases.

Furneaux Jordan, F.R.C.S. 1. Removal of the Tongue. 2. Lithotomy in the Female.

Charles B. Taylor, M.D. The Modern Art of Tinting Opacities of the Cornea.

Thomas Chambers, M.R.C.P. Case of Retroflexion of the Uterus: Progressive Hemiplegia with great loss of Temperature: Replacement of the Uterus: Recovery.

Alfred Hill, M.D. 1. Drinking Water and its Analysis. 2. The Use of Arsenical Colours.

George Cordwent, M.D. The first Stages of Progress of the late Epidemic of Small-pox at Taunton.

James Ross, M.D. The Graft-theory of Disease.

Edward Woakes, M.D. Scarlet Fever and Syphilis: a Suggestion.

S. Spratly, M.D. A Case of Convulsions resembling Tetanus, occurring periodically.

Martin G. B. Oxley, L.K.Q.C.P.I. A Case of Skin-Disease of Uncertain Type.

James Johnston, M.B. A Case of Cyanosis with Deficiency of the Interventricular Septum.

J. Batty Tuke, M.D. Morbid Specimens and Microscopic Slides demonstrating certain Forms of Cerebral Disease.

C. H. F. Routh, M.D. 1. Further Remarks on the Treatment of Uterine Cancer, more especially by Gastric Juice. 2. The Use of Raw Beef-Juice in the Treatment of Disease.

J. Lockhart Clarke, M.D., F.R.S. A Case of Mania.

W. Moxon, M.D. The Conduction of Sensation of Heat in Progressive Locomotor Ataxy.

T. S. Clouston, M.D. The Local Distribution of Insanity.

J. Crichton Browne, M.D. 1. Erysipelatous Encephalitis. 2. Instruments for Measuring the Depth of the Grey Matter of the Brain.

E. B. Adams, M.R.C.S. On the Sloughing of Large Phosphatic Calculi through the Scrotum.

C. Holthouse, F.R.C.S. A New Kind of Truss-pad for the Retention of certain Difficult Herniæ.

H. Horton, M.R.C.S. 1. Removal of long-standing Inverted Uterus by Ligature, with Satisfactory Result. 2. Unusual Wound of Abdomen, with Injury of Intestine: Recovery.

T. J. Dyke, F.R.C.S. The Downward Intermittent Filtration of Sewage, as now carried on at the Filtering Areas at Merthyr Tydfil.

Robert Martin, M.D. 1. On the Induction of Premature Labour. 2. On the Medical Declaration respecting Alcohol.

W. P. Bain, M.D. The Cure of Fractured Patella without Confinement.

D. Toler T. Maunsell, M.B. Provident Dispensaries from a Practical Point of View.

J. Henry Bennet, M.D. The External and Internal Orifices of the Uterus: their Anatomy, Physiology, and Pathology.

Gentlemen desirous of reading papers, cases, or other communications, are requested to forward the titles to the General Secretary, or to one of the Secretaries of the Section in which the paper is to be read. All papers should be forwarded to one of the above named officers *on or before the 1st of August.*

No paper must exceed *twenty* minutes in reading; and no subsequent speech must exceed *ten* minutes.

All speeches at the General Meeting must not exceed *ten* minutes each.

FRANCIS FOWKE, *General Secretary.*

General Secretary's Office, 37, Great Queen Street, W.C.,
July 3rd, 1872.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held in the board-room of the Workhouse, Merthyr-Tydfil, on Wednesday, July 17th. Twenty-eight members were present.

The New President.—Dr. PADLEY, the retiring President, said he rose to make his last dying speech and confession. As a confession, it would be a cheerful one to acknowledge that he had had pleasant meetings with his medical brethren, whom, without this association, he would not have had an opportunity of meeting. He had had a deal of satisfaction in meeting them, and hoped such meetings would long prevail. As to his last dying speech, it would not be of so grave a strain as generally attended such speeches, and in this instance was converted into cheerfulness from a consciousness that he could not resign the chair to more worthy hands than those of Mr. Dyke.

Mr. DYKE, in assuming the chair, said he rose with mingled feelings of regret and satisfaction—regret to part with the able services of the late President, who had served the profession so admirably. The example he had set would be an exceedingly difficult one to follow. He (the speaker) trusted the earnestness with which he would endeavour to do so would meet at the end of the year with the cordial approbation of the members. He would ask them to express most heartily their thanks to Dr. Padley for the efficient way in which he had conducted the business of this Branch of the Association within the last year and a half.

Mr. PROBERT seconded the resolution, which was carried with applause, and acknowledged by Dr. PADLEY, who said that, although he had made his last dying speech and confession, he trusted there was sufficient vitality left in him to assist the Society for some time to come.

The Report of Council was read by Mr. A. DAVIES, one of the Honorary Secretaries.

Officers and Council.—Mr. EVANS (Narberth) proposed, Dr. PADLEY (Swansea) seconded, and it was resolved—"That George J. Hearder, M.D., of Carmarthen, be requested to act as president for the ensuing year."

The following gentlemen were elected members of Council:—P. R. Cresswell, Esq., E. Davies, Esq., and J. G. Hall, Esq. As representatives on the General Council of the Association were elected: P. R. Cresswell, Esq., T. J. Dyke, Esq., J. G. Hall, Esq., J. Probert, Esq., D. Yellowlees, M.D.

A vote of thanks was given to the secretaries, Mr. A. Davies and Dr. Sheen, for their past services, and they were reappointed.

New Members.—The following gentlemen were elected members of the Branch:—H. V. Ellis, M.B., Penmaen; T. W. Parry, Esq., Aberdare; C. P. Skrimshire, Esq., Brynmawr; John James, Esq.; John C. North, M.B., Brecon; T. J. Gabe, L.K.Q.C.P. (Merthyr Tydfil; O. D. Thomas, Pontypool; W. Lloyd, M.B., Carmarthen; and Evan Powell, Esq., Aberdare.

President's Address.—Mr. DYKE delivered an interesting and valuable address, taking as his subject the utilisation of sewage, and giving an account of the results of the system followed at Merthyr.

A vote of thanks was given to Mr. Dyke for his address.

Dinner.—The members afterwards dined together at the Bush Assembly Rooms. Mr. Dyke presided, and was supported on the right by Dr. Padley (Swansea), Rev. John Griffith (Rector of Merthyr), Messrs. William Jones, Cyfarthfa, and William Harris; and on the left by the Rev. Canon Jenkins, Messrs. J. C. Fowler, James Hall (Swansea), W. Simons, Captain Russell, etc.

CORRESPONDENCE.

THE BRITISH MEDICAL BENEVOLENT FUND.

SIR,—I am anxious to take the opportunity afforded by the approaching meeting of the British Medical Association, to submit to the profession, through the medium of your JOURNAL, the cause of the British Medical Benevolent Fund, which, I venture to believe, if more fully understood, would be more generally supported.

The objects of the fund are:—1. To afford immediate pecuniary relief to distressed qualified medical men, their widows, and orphans. 2. To grant annuities to such after sixty years of age. It is open to all in need, from every part of the united kingdom; and has, moreover, these special features, to which I would beg to draw attention. First, *it gives at once* to deserving necessity; whether by the relief of immediate and pressing want; the re-establishment, where practicable, of those reduced by illness or misfortune; or the assistance of the widow and orphan in their difficulty. Secondly, both this form of aid and that by annuity are free of all expense to the recipient; and are neither restricted to the condition of membership or assurance on the one hand, nor liable to the contingencies of competition by election on the other; the sole essential preliminary being a careful consideration of each case on its own ascertained merits, by the Committee.

The amount of work done by the fund, with its comparatively small means, may be learned from its reports. Those means, however, are so far inadequate to the claims made upon it, that the Committee are too often obliged to pass over distressing and deserving cases with very insufficient aid; and, in the matter of annuitants more especially, we have a list of twenty-eight candidates, waiting at nearly the so-called "age of man" (the average at appointment is nearer seventy than sixty years), a turn which to many of them, in the course of nature, can never arrive.

I trust that a consideration of these facts may sufficiently commend them to the kind feeling of our brethren in general, and lead to an increase in the list of subscribers which will render it less disproportionate to the number and influence of a great and generous profession, in whose hands we confidently leave our mutual cause.

I am, etc., CHARLES S. WEBBER,
Honorary Financial Secretary, British Medical Benevolent Fund.
1, Upper Berkeley Street West,
Connaught Square, W., July 31, 1872.

MILITIA SURGEONS.

SIR,—Will you kindly permit me through the medium of your JOURNAL to call the attention of the English Militia Surgeons to the example of our Irish brother officers? I beg to suggest that, as in all probability a great number of Militia Surgeons will attend the meeting of the British Medical Association in Birmingham, a preliminary meeting should be convened on Thursday, the 8th August, to consider our position under Mr. Cardwell's Bill, and to organise a similar Association to that formed in Dublin.

I am, etc., A MILITIA SURGEON.

THE REMAINS OF HARVEY AT HEMPSTEAD.

SIR,—All that relates to Harvey having especial interest for members of the medical profession, we shall be pleased if you can give insertion to the following particulars of a hurried visit which we lately paid to the place of burial of the great physiologist. The day had been still and sultry when, after a two hours railway journey, we found ourselves at 6 P.M. at Saffron Walden, and met by appointment Mr. H. Stear, who has courteously directed the steps of other travellers to Harvey's tomb, and who kindly drove us to Hempstead, a distance of eight miles.

Upon entering the church at Hempstead, we found its walls whitewashed, the tall wooden pews bearing evidence of great age, and all things indicating a repose not yet invaded by the reformer's hand. The representatives of the Harvey family own almost all the village of Hempstead, and a large estate in the neighbourhood; and their pew in the church, which is at least ten feet square, lies to the north of the chancel, elevated two or three feet above the rest of the floor. The walls around it are covered with monuments and tablets; that which is first seen being the monument of William Harvey. It comprises a fine bust of the Doctor, and a tablet on which is inscribed in Latin a record of his great services to mankind, and the intimation that "Improles obdormivit, Annorum et Famæ satur." Close to this is the monument to Admiral Harvey, who commanded the "Brave old *Temeraire*" at the battle of Trafalgar.

We next passed out of the pew into the vestry, thence into the churchyard, in which, at the foot of the north wall of the church, lies a wooden trap-door. This, being raised, disclosed stone steps leading to a vault beneath the pew of the Harvey family. The door at the lower end of the steps opens into a large dimly lighted room, built by Sir Eliab Harvey, the eldest brother, chief friend, and sole executor to the Doctor, in which are ranged, with very slight regard to order, forty-six coffins containing the remains of a like number of Harveys, deceased at all ages. All the coffins are leaden; but thirty-three, which are of the usual shape of modern coffins, are enclosed in an outer covering of wood. The remaining thirteen are not so encased, and are peculiar in their shape. Eight of them are ranged side by side, with their feet against the eastern wall, in which is an opening recently partly bricked up, and guarded by a modern grating. The coffin at the southern end of this line is that of Sir Eliab Harvey himself; next comes that of his wife; then, that of a child; and the seventh in this series is the coffin

of William Harvey. This and Sir Eliab's differ from all the others, in that they once exactly fitted the body. Harvey was "lapt in lead;" "the cerements that surrounded the body being immediately invested in their turn by the lead." The eleven other coffins only partly fitted the body. In the Doctor's coffin the shape of the head and shoulders is still preserved, and on the front of the head are inartistic representations of the eyes, nose, and mouth. Below the waist the coffin is flattened, but the rise at the lower end over the feet remains perfect. The legs are both enclosed in the same continuation of the coffin; but at the centre of the surface between the legs is a ragged opening about six inches long and one inch broad, in which rests water. We conjecture, therefore, that the coffin is filled with water, which probably fell as rain through the before-mentioned opening in the wall above. All the other coffins are perfect, except that of a small child, which has an opening opposite the back of the skull; and the coffin adjoining the Doctor's is completely flattened opposite its centre by the pressure (we presume) of people standing upon it at different times to read upon the breast of the Doctor's coffin the following simple record:—"DOCTER WILLIAM. HARVEY DECESED. THE. 3. IUNE. 1657. AGED. 79. YEARS."

A doorway in the southern wall conducts to a smaller vault, in which lie six coffins, one of which is of huge proportions. It is said to be composed of thirteen shells, one within the other, enclosing the remains of a Harvey who died last century in India, at the age of 19, and who was brought hither for burial. Over the doorway we read the following:—"This inner vault was built in the year 1766 by Eliab Harvey, Esq., for the reception of his family." This and other points we deciphered by means of a small lamp, as the sun was going down. A bank of dark clouds which had been slowly collecting was now illuminated by frequent flashes of lightning, which, with the distant rumble of thunder, warned us to beat a precipitate retreat.

Harvey's name is immortal; but scant reverence has hitherto been accorded to his ashes, which remain in much the same state as when the tomb was visited in 1858 by Drs. Quain and Stewart at the request of the Fellows of the College of Physicians.

We are, etc.,
J. COOPER FORSTER.
London, July 30th, 1872. GEORGE EASTES.

MEDICAL NEWS.

THE INTERNATIONAL OPHTHALMOLOGICAL CONGRESS: MEETING IN LONDON.

THE Congress met at the Royal College of Physicians for the arrangement of preliminaries on Wednesday evening, at eight o'clock. The attendance was very considerable, the ophthalmological talent of France, Germany, Italy, Spain, England, and other European countries, and America, being well represented, although no actual business, excepting that of admitting members and issuing cards, was transacted. On Wednesday evening, the interchange of preliminary courtesies and introductions formed a fitting commencement of the proceedings. Amongst foreign ophthalmic surgeons who are expected to attend, most have already arrived; viz., Dr. Thomson, Philadelphia; Dr. Hermann Pagenstecker, Wiesbaden; Dr. Doiger, Leyden; Dr. Dyer, Philadelphia; Dr. H. W. Williams, Boston; Dr. Gama Lobos, Rio Janeiro; Dr. Green, St. Louis; Dr. Mannhardt, Florence; Dr. Buller, Canada; Dr. Gosse, Adelaide; Dr. Roberts, Sydney; Dr. Agnew, New York; Dr. Michaelis, Berlin; Dr. Rider, Rochester, U.S.A.; Dr. Hess, Mayence; Dr. Vogelsang, Hanover; Dr. Galezowski, Paris; Dr. Duwer, Brussels; Dr. Woixow, Moscow; Dr. Bribosia, Namur; Dr. de Wecker, Paris; Dr. Osio; Dr. Roosa, New York; Dr. Deloppez, Brussels.

A practical difficulty in such a congress presents itself at the outset, in securing intelligible communication between the members, many of whom are acquainted with their own language and none other. A compromise is of course to some extent necessary. It has been agreed, and we think properly, to conduct the business, as far as possible, in French. On the whole, the plan has worked fairly well.

The admirable arrangements made by Mr. Critchett, the Chairman, and the members of the Executive Committee, and Mr. Soelberg Wells, the Honorary Secretary, have hitherto answered exceedingly well, and promise to bring the Congress to a most successful issue. They include a visit of the members to the Ophthalmic Hospital, Moorfields, in the morning, at nine o'clock; the meeting of the Congress from 11 A.M. to 1 P.M., and from 3 P.M. to 5 P.M.

During the afternoon, the Central London, the Royal South London, the Royal Westminster, and the Western Ophthalmic Hospitals are open to the members of Congress; while visits to the ophthalmic departments at the general hospitals are also included in the programme.

The very important feature of these meetings—viz., social gatherings—has not been neglected. Mr. Bowman gave on Thursday evening a brilliant *conversazione* to a most distinguished assemblage, including all the members of the Ophthalmological Congress, and many leading metropolitan and provincial medical men and others.

This evening (Friday) Mr. Critchett will extend his well known hospitality to the Congress and others at a *soirée musicale;* while the proceedings of the International Congress of 1872 will be wound up by a dinner at the Crystal Palace on Saturday.

Thursday, August 1st.—The Congress was opened at 11 o'clock. Mr. Critchett, Consulting Ophthalmic Surgeon to the London Hospital, and Surgeon to the Royal London Ophthalmic Hospital, was voted to the Chair. Mr. Critchett, who spoke in French, said that he took the Chair as President of the Committee of Organisation. When at Heidelberg last year, at the German Ophthalmological Congress, he had proposed that the International Ophthalmological Congress should so far depart from arrangements previously made as to hold its next triennial meeting in London. This proposal he made on behalf of himself and his colleagues in London; it had been enthusiastically received; and he had no doubt that the meeting now commenced would be successfully carried through, and would materially contribute both to the advancement of their science and to the promotion of good feeling and fellowship. Mr. Critchett then nominated, amidst much applause, M. Donders as President of the Congress; Dr. Williams of Boston, and Dr. Warlomont of Brussels, as Vice-Presidents; and Messrs. Zehender and Soelberg Wells as Secretaries.

M. Donders, on taking the Chair, made a few remarks, after which he nominated the following Honorary Vice-Presidents: Messrs. White Cooper, Critchett, Bowman, Quaglino, Zehender, and Cervera.

Several papers were read in English, but the French language was most generally used.

The following papers were read at the morning sitting: On the Use of Ether in Ophthalmic Surgery, by Dr. Joy Jeffries of Boston; On the Surgical Treatment of Optic Neuritis, by Dr. De Wecker of Paris; Sympathetic Ophthalmia, by M. Warlomont of Brussels.

The Congress met again at 3 P.M.; the President in the Chair. Mr. Bader proceeded to show several cases—one of Photophobia, treated by sulphate of quinine; and two of Conical Cornea that had been operated on successfully. The remainder of the sitting was occupied mostly in reading and discussing papers on the Extraction of Cataract. Dr. Taylor, M. Bribosia, M. Warlomont, and M. Hansen of Copenhagen, contributed the papers on this subject.

The following papers will be read at the Sittings on Friday and Saturday:—

Mr. Bowman. 1. On new methods of dividing the Iris. 2. On new methods of excising Structures in the Pupillary Region. 3. On some new Instruments for the treatment of Lacrymal Obstructions. 4. On some uses of Eye Trephines, and on new Forceps for certain purposes. 5. On operations for Conical Cornea.

Mr. Brudenell Carter. Improved Demonstrating Ophthalmoscope and Perimeter.

Dr. Dudgeon. On Mechanism of Visual Adjustment.

Mr. Jabez Hogg. On Atrophy.

Mr. Hunt (Manchester). On Cerebral Amaurosis.

Dr. Joy Jeffries (Boston, U.S.). On Passavant's Operation.

Mr. Power. On Transplantation of the Cornea.

Dr. Argyll Robertson (Edinburgh). Case of Unilateral Irideremia. Case of division of the Superior Rectus.

Mr. Vernon. Observations on three cases of Tumour of the Eyeball.

Mr. Pridgin Teale (Leeds). Treatment of Symblepharon by Transplantation.

Mr. Spencer Watson. 1. On a convenient metbod of applying cold to the Eye. 2. On Intraorbital Dermoid Cysts.

Dr. Wolfe (Glasgow). On Traumatic Cataract.

Mr. Cooper. The Ophthalmoscope as an Optometer in Astigmatism.

HARVEY TERCENTENARY (1878) MEMORIAL.

THE first meeting of the London General Committee was held on Monday last, at the Royal College of Physicians. Dr. Bence Jones, F.R.S., the treasurer of the fund, was elected chairman of the meeting; and the following gentlemen were invited to become members of the executive committee, viz., Dr. Burrows, Sir W. Gull, Bart., Dr. Sibson, Dr. Munk, Sir James Paget, Bart., Dr. R. Quain, Mr. John Simon, the Rev. W. F. Erskine Knollys, Mr. N. Montefiore, Sir F. Hicks, Mr. Foster White, Mr. T. Turner, and Mr. Drummond. Mr. George Eastes, M.B., 5, Albion Place, Hyde Park Square, W., was elected Honorary Secretary to the London General Committee. An appeal for

donations will be made to the members of the British Medical Association at Birmingham, when we hope a considerable addition to the funds of the committee will be received. £500 have already been subscribed in London and Folkestone. It ought to be distinctly known that the object of the Tercentenary Committee is the erection of a statue of Harvey, at Folkestone, his birthplace; and that the cards and circulars on behalf of another object, which the Vicar of Folkestone continues to send to members of the medical profession, are not issued by the authority of the Harvey Tercentenary Committee.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At the ordinary quarterly meeting of the College, held on the 25th of July, the following members were elected Fellows.

Ballard, Edward, M.D., Compton Terrace, Islington
Begley, William Chapman, M.D., Hanwell
Brewer, William, M.D., M.P., George Street, Hanover Square
Cayley, William, M.D., Welbeck Street
Cormack, Sir John Rose, M.D., Rue d'Aguesseau, Paris
Fayrer, Joseph, M.D., Calcutta
Heslop, Thomas P., M.D., Birmingham
Liveing, Robert, M.D., Manchester Square
Lush, John Alfred, M.D., M.P., Salisbury
Mackay, Alexander Eugene, M.D., Admiralty
Madden, William Herries, M.D., Torquay
Murray, William, M.D., Newcastle-upon-Tyne
Robertson, William Henry, M.D., Buxton
Seaton, Edward Cator, M.D., Surbiton
Tetley, James, M.D., Torquay

The following were admitted members of the College.

Chepmell, Isaac Dobree, Brook Street, Grosvenor Square
Ferrier, David, M.D., Somerset Street, Portman Square
Fothergill, John Milner, M.D., University Street
Hayes, Thomas Crawford, Wimpole Street
Taylor, Frederick, M.D., Kennington Park Road

The following candidates for the College licence, having conformed to the by-laws and regulations and passed the required examinations, had licences to practise physic granted to them.

Bridgman, Henry Edward. M.R.C.S., West London Hospital
Canton, Frederick, M.R.C.S., Great Marlborough Street
Evans, Francis Morse, M.R.C.S., St. George's Hospital
Evans, Maurice Griffith, M.R.C.S., Narberth
Fagg, Thomas Henry
Fernie, Henry Mortlock, M.R.C.S., Park Green, Macclesfield
Goldsmith, Septimus Jesse, M.R.C.S.E., St. George's Hospital
Hacon, Walter Edward, M.R.C.S., Guy's Hospital
Harrison, Napoleon Augustus Rogers, Guy's Hospital
Hayes, Thomas Crawford, Wimpole Street
Hill, Frederick Adolphus, M.R.C.S., Springfield Road, South Hampstead.
Kibbler, William Ambrose, M.R.C.S., Mordaunt House, Hackney
Lawton, Herbert Alfred, York Road, Lambeth
Mackenzie, Lewis, M.R.C.S., London Hospital
Morgan, William Lewis, London Hospital
Newman, Alfred Kingcome, M.R.C.S., Guy's Hospital
Pye-Smith, Rutherford John, M.R.C.S., Merrick Square
Richards, John Edward, Ruabon
Taylor, Charles Lamb, M.R.C.S., University College Hospital
Turner, George, Guy's Hospital
Wardall, Joseph Augustus William, M.R.C.S., University College Hospital
Webb, Thomas Law, M.R.C.S., Queen's College, Birmingham
Welchman, Edward, St. Thomas's Hospital

UNIVERSITY OF LONDON.—Preliminary Scientific M.B. Examination, July 1872.

First Division.

Barnard, J. H., private study
Blake, W. H., University College
Blamey, J., University College
Briggs, H. B., King's College
Carrington, R. E., Guy's Hospital
Claremont, C. C., University College
Evans, C. W., University College
Fox, R. H., London Hospital
George, G. A., University College
Goodchild, F., Epsom and University College
Hellier, J. B., Leeds School of Medicine
Henderson, G. C., University College
Hopwood, W. F., Manchester Grammar School
Le Quesne, E. J., St. Bartholomew's Hospital
Lowe, H. G., Queen's College, Birmingham
Marshall, A. M., B.A., St. John's College, Cambridge
Mercier, C. A., London Hospital
Neale, J. E., University College
Stewart, H. D., King's College
Tirard, N. I. C., King's College
Whitelegge, B. A., University College
Witton, J. C., private study
Worthington, W. B., Owen's College

Second Division.

Anderson, R. J., Belfast College
Baker, A. De W., Guy's Hospital
Batterbury, R. L., King's College
Blake, H., St. George's Hospital
Bury, J. S., Owen's College
Duke, H., Guy's Hospital
Ferrier, J. C., Guy's Hospital
Finch, A., Guy's Hospital
Giles, G. M. J., St. Mary's Hospital
Gray, A., Guy's Hospital
Hancock, J. G., King's College
Hunt, J. W., University College
Jude, R. H., Christ's College, Cambridge
James, A., University College
Kidd, W. A., Guy's Hospital
Maberly, W. H., Edinburgh University
Miller, F. D., King's College
Pinnell, T. M., University College
Powell, J., University College
Roughton, J. W., King's College
Seaward, W. J., University College
Simmonds, W. A., Guy's Hospital
Snell, E. A., King's College
Vanes, A. B., Queen's College, Birmingham
Wilding, S. P., University College

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At meetings of the Court of Examiners, on July 23rd and 24th, the following gentlemen passed the required examinations for the diploma, and were admitted members of the College.

Appleyard, John, Burnley
Baker, Charles E.
Barfoot, George Harry, Leicester
Bartlett, Edward, Connaught Square
Beadnell, George David, L.R.C.P.Edin., Newton Abbott, Devon
Bell, George Pearson, Leicester
Bellingham, Joseph, Dudley
Blackburn, Charles N. A., The Mauritius
Bracey, Herbert Richard, L.S.A., Birmingham
Brown, William, Carlisle
Colgate, Henry, Eastbourne
Cripps, William Harrison, Mitre Court Buildings, Temple
Dodd, Thomas A., Newcastle-upon-Tyne
Edge, Abraham Matthewson, Manchester
Elam, Shrofield, Woburn Square
Eskell, Maurice Moses, Grosvenor Street
Fagg, Thomas Henry, Bayswater
Finzi, Judah Moses, Gower Street, Bedford Square
Glenny, George Wallis, Barking, Essex
Godlee, Rickman John, Walthamstow, Essex
Griffiths, Alfred Vavasour, Stone, Staffordshire
Griffiths, William Edwin
Hall, James Thomas, Ashbourne, Derby
Hawkins, Henry B., Topcliffe, Yorkshire
Hey, Edward, Leeds
Holder, William, L.S.A., Holderness Road, Hul
Lawton, Herbert A., York Road, S.E.
Lungley, Frank, Lewes, Sussex
Madden, W. Edward Monson, St. John's Wood
Massingham, John Payne, Warrington
Monro, Charles Edward, Hurstpierpoint, Sussex
Morgan, John Hammond, Sussex Place, Hyde Park
Morley, John Lacy, Leamington
Murray, Thomas, Her Majesty's Indian Army
Murrell, Clement F. F., Great Yarmouth
Nankivell, Charles Atkinson, Torquay
Northey, Gilbert William, Tavistock, Devon
Ottley, Walter, Twickenham
Owen, Albert J., Holloway
Peacey, William, Grange Road, Bermondsey
Phillpot, Joseph Henry, Croydon
Poignaud, Malcolm, Jersey
Robinson, Mark, Her Majesty's Dock Yard, Portsmouth
Scott, John Walter, Torpoint, Cornwall
Stirling, Edward C., Queen's Gardens, Bayswater
Strother, William H. H., L.R.C.P.Edin., Darlington
Taylor, Seymour, Burton-on-Trent
Turner, George, Portsea, Hants
Verley, Reginald Louis, L.R.C.P.Edin., Gower Street, Bedford Square
Wallace, William, Kingsland
Ward, Joseph, Warwick
Withers, Robert, Stoke, Devonport

The following gentlemen were admitted members on July 25th.

Adams, John, Kingsbridge
Armstrong, Robert Stow, Bedford
Armstrong, Thomas Britten, Leeds
Atkinson, Walter Mark, L.S.A., Cheshunt, Herts
Burgess, Edward Arthur, L.S.A., Bethnal Green Road
Dorin, Arthur F. L., L.S.A., Thistle Grove, Brompton
Greenfield, William Smith, Haverstock Hill
Godding, Charles Cane, Portsmouth
Hansall, William Charles, Caen, France
Harrison, Henry Baskcomb, St. Lawrence Road, Notting Hill
Heald, George Henry, Leeds
Irving, William George, Long Bennington, Lincolnshire
Kebbell, Alfred, Hackney
Mawson, William Arthur, Boston Spa, Lincolnshire
Smith, Henry Hammond, Devonshire Place, W.
Smithard, Charles Lawson, Manchester
Sobey, Arthur Lyne, Saltash, Cornwall
Spencer, Lawrence Wilson, Preston
Welsh, William K. B., Cornwall Road
Williams, Howell, Great Hamston, near Cardiff
Williams, William, Fishguard
Woodhouse, Henry Hammond Hall, Anstey, Dorsetshire

The following gentlemen were admitted members on July 26th.

Blackburn, Herbert Belasyse, Petworth
Brewer, Reginald E. W., Newport, Monmouthshire
Brown, James, Edinburgh
Carolan, James Frederick, Maida Hill
Cole, William James, Harrow Road
Collinson, Alfred Cockburn, Elgin Road, W.
Hex, Henry, Plymouth
Hughes, Robert Harry, Putney
Lawrence, James (M.D. Queen's University, Ireland), Portrush
Measures, John William, Spalding, Lincolnshire
Mutch, Robert Samuel, Prince Edward's Island, Canada
O'Reilly, Walter William Joseph (M.D Queen's University, Ireland), Sydney
Parry, Thomas Sharp, Mold, Flintshire
Porter, Joseph Francis, Dublin
Robinson, John Edward, Rotherham
Snell, John, Leeds
Stocker, Charles Joseph, Stratford
White, George Bentley, Nottingham
Willmott, Julius John Eardley, Penge, Surrey

Of the 153 candidates examined during last week, 24 were not approved. This is the last examination for the diploma of the College for the present session.

MEDICAL VACANCIES.

THE following vacancies are announced:—

BALLYSHANNON UNION, co. Donegal—Medical Officer and Public Vaccinator for the Ballintra Dispensary District: £70 per annum, and fees.

BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.

CALLAN UNION, co. Kilkenny—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kilmoganny Dispensary District: £100 per annum, and fees.

CARMICHAEL SCHOOL OF MEDICINE, Dublin—Joint Lecturer on Anatomy and Physiology.

CASTLEBLAYNEY UNION, co. Monaghan—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballybay Dispensary District: £100 per annum, and fees.

FEVER HOSPITAL AND HOUSE OF RECOVERY, Cork Street, Dublin—Two Resident Medical Pupils.

GORT UNION, co. Galway—Apothecary to the Gort Workhouse: £30 per annum.—Apothecary to the Gort Dispensary: £40 per annum.

GORTIN UNION, co. Tyrone—Medical Officer to the Workhouse and Fever Infirmary: £50 per annum.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Gortin Dispensary District: £100 per annum, and fees.

HALIFAX INFIRMARY AND DISPENSARY—Assistant House-Surgeon: £40 per annum, board and lodging,

HAMADRYAD HOSPITAL SHIP, Cardiff—Resident Assistant Medical Officer: £100 per annum, coal, gas, attendance, furnished cabin, and £30 per annum in lieu of rations.

HARRIS, Inverness-shire—Parochial Medical Officer.

HEREFORD COUNTY AND CITY LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, furnished apartments, rations, fire, light, attendance, and washing.

HOME FOR GENTLEWOMEN—Consulting-Physician.

HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square—Consulting-Physician.

LAMBETH, Parish of—Resident Medical Officer and Dispenser to the Workhouse: £100 per annum, board, apartments, and washing.

LISKEARD UNION, Cornwall—Medical Officer and Public Vaccinator for the Callington District: £65 per annum, and extra fees.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE—Lecturer on Comparative Anatomy and Zoology.—Demonstrator of Physiology.

LOCHCARRON, Ross-shire, and part of the parish of Applecross—Parochial Medical Officer: £145 per annum, and various perquisites.

MANCHESTER ROYAL INFIRMARY—In-door Physician's Assistant: 80 guineas per annum, with board and residence.

MATER MISERICORDIÆ HOSPITAL, Dublin—Physician.

METROPOLITAN ASSOCIATION of MEDICAL OFFICERS of HEALTH—Treasurer.

MIDDLESEX HOSPITAL MEDICAL COLLEGE—Two Entrance Scholarships: £25 and £20 per annum, for two years.

MONAGHAN COUNTY INFIRMARY—Physician: £50 per annum.

NEWBURGH, Fifeshire—Parochial Medical Officer.

NEWTOWN AND LLANIDLOES UNION, Montgomeryshire—Medical Officer for the Newtown District: £80 per annum, and extra fees.

NORFOLK AND NORWICH EYE INFIRMARY—Assistant-Surgeon.

NORTH DUBLIN UNION—Medical Officer for the Blackhall Street Dispensary, North City Dispensary District: £125 per annum.

PROVIDENT MEDICAL INSTITUTION AND LYING-IN CHARITY, 20, Pimlico Road—Consulting Physician.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Physician.

ST. GEORGE, Hanover Square—Medical Officer of Health.

ST. LEONARD, Shoreditch, Parish of—Dispenser: £120 per annum.

ST. MARY'S HOSPITAL MEDICAL SCHOOL—Scholarship: £40 per annum for three years.—Exhibition: £20 for one year.

ST. PAUL AND ST. BARNABAS DISPENSARY, Ebury Street—Physician.

SURREY DISPENSARY—Physician.

TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.

WARNEFORD LUNATIC ASYLUM, Oxford—Resident Medical Superintendent: £260 per annum, with board, furnished apartments, etc.

WESTMINSTER HOSPITAL—House-Surgeon.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGES.

*KING, Robert, B.A., M.B., of Harley Street, Cavendish Square, to Esther, eldest daughter of Robert CASE, Esq., of Inverness Terrace, Kensington Gardens, at Christ Church, Lancaster Gate, on July 31st.

POTTER, John B., Esq., of George Street, Hanover Square, to Celinas, daughter of Alfred BLYTH, Esq., of Westbourne Terrace, on July 24th.

*THOMPSON, Edmund Symes, M.D., of Upper George Street, Portman Square, to Elizabeth, younger daughter of the Rev. H. G. WATKINS, M.A., Vicar of St. John's, Potter's Bar, Middlesex, on July 25th.

DEATHS.

*ALDIS, Charles J. B., M.D., at Chester Square, on July 26th.

JOHNSTON, Charles, Esq., Surgeon, at Barnstaple, aged 61, on July 16th.

MR. TEEVAN has been elected a Corresponding Fellow of the Medical Society of Odessa.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY .... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

M.D. (Glasgow).—Our correspondent will understand that we are not in the habit, whatever our contemporaries may do, of devoting the valuable space of the JOURNAL to the repetition of news which has already appeared in the leading London and provincial papers.

BILHARZIA HÆMATOBIA.

SIR,—Dr. Cobbold, in general so exact in his statements, has fallen into an inaccuracy in his elaborate paper on the Development of Bilharzia Hæmatobia. He says: "Eleven years ago, Mr. Edwin Canton discovered some curious ova attached to the conjunctiva of a turtle's eye." It will be in Dr. Cobbold's recollection that I discovered an immature fluke-worm in the blood of the turtle, and that he kindly added some valuable observations to the description of the worm published in the *Microscopical Journal* for July 1862. Ova having the curious appendages previously described by Mr. Canton, were also found in the same blood; and this made it probable that the ova and the worms were derived from the same source. I also mentioned Mr. Canton's name as the discoverer of the ova; and this led to a communication from Dr. Hannover, of Copenhagen, requesting me to make known that the ova in question had been previously figured and described by him in his work on the *Eye*, published in 1852. In accordance with this request, a short letter appeared in the *Medical Times and Gazette*, June 1st, 1865.

I am, etc., ARTHUR LEARED, M.D.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Wilks, London; Dr. H. Thompson, London; Dr. Tilt, London; Mr. Edward Huxley, London; Mr. George Eastes, London; Mr. George R. Gesse, Edinburgh; Mr. Arthur Lattey, Willingham; Mr. F. Waterhouse, Bolton; Mr. W. H. Mence, St. Ives; Mr. Smith, Newton; Mr. G. Parnell, London; Mr. John Wood, London; Dr. Heslop, Birmingham; Dr. James Thompson, Leamington; Mr. John Bassett, Birmingham; Mr. S. M. Bradley, Manchester; Mr. George Southam, Manchester; Dr. James Ross, Manchester; Dr. C. Warden, Birmingham; Dr. Charles B. Taylor, Nottingham; Mr. Furneaux Jordan, Birmingham; Dr. Routh, London; Mr. T. Chambers, London; Dr. S. Cobbold, London; An Associate; Mr. T. Holmes, London; Dr. B. W. Foster, Birmingham; A Militia Surgeon; Mr. James R. Lane, London; Dr. Grainger Stewart, Edinburgh; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. Wanklyn, London; Mr. John M. Hart, London; Mr. H. C. Major, Wakefield; Dr. J. Hughlings Jackson, London; Dr. John Chapman, London; Mr. Soutter, London; Dr. McRae, Penicuik; Mr. Blackett, London; Dr. R. P. Cotton, London; Mr. Brown, Callington; Dr. C. Theodore Williams, London; Dr. Althaus, London; Dr. Woakes, Luton; Dr. Braxton Hicks, London; Mr. J. W. Langmore, London; Dr. Elder, Nottingham; Dr. Leared, London; Dr. Maudsley, London; Dr. Ransome, Bowden; Dr. Evory Kennedy, Dublin; Dr. Moffat, Falkirk; Dr. A. Edis, London; The Secretary of the Royal College of Surgeons, Edinburgh; Dr. Colles, Calcutta: The Rev. Dr. Haughton, Dublin; Dr. Sturges, London; Dr. Johnston, Birmingham; Mr. C. S. Webber, London: Mr. Felce, London; Dr. Matthews Duncan, Edinburgh; Dr. D. T. T. Maunsell, Dublin; Dr. Steele, Liverpool; Dr. Fergus, Glasgow; Mr. Callender, London: Dr. Murray, London; Dr. T. H. Green, London; Mr. A. Baker, Birmingham; Dr. Waters, Chester; etc.

PRESIDENT'S ADDRESS,

DELIVERED AT THE

FORTIETH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION,

Held in BIRMINGHAM, August 6th, 7th, 8th, and 9th, 1872.

BY ALFRED BAKER, F.R.C.S.,
Senior Surgeon to the General Hospital, Birmingham.

GENTLEMEN,—When, at the first meeting of this Association, Sir Charles Hastings congratulated himself that the hearers of his inaugural address included "some of the brightest ornaments of our profession," and predicted for the infant Society a vigorous adolescence; he could scarcely have anticipated for it a growth so rapid, a grasp so comprehensive, as in this short period to have embraced the representative medical men of this kingdom; or that its objects would prove so cosmopolitan as to have enlisted the interest and approval of continental nations and of our transatlantic brethren.

Sustained by the moral and material support of a large professional constituency, the action of the Society has been deliberate, untrammelled, and healthy; whilst its debates have been free, and have represented all shades of opinion.

The volumes of "Transactions" and its weekly JOURNAL have materially contributed to the spread of intelligence, to the advancement of science, to the recognition by the State of medical knowledge as affecting public health, and to the growth and guidance of general and professional opinion.

Indeed, the Association may be said to have influenced every movement—political and social—by which the heart of our profession has been stirred since its establishment.

The concluding wish of Sir Charles Hastings has been emphatically realised. Referring to the "objects" held in view by the original promoters, he said, "The contemplation of them appears to me, indeed, to open to us a vast and unbounded prospect, to beget high and lofty thoughts of our future proceedings. I may be too sanguine in my expectations, but I cannot help indulging in the gratifying, the cheering, the delightful thought that, if we engage in the undertaking—as we are bound to do by the obligations which our profession imposes upon us, with the zeal and alacrity of men anxious for the good of mankind—the Association must be of some use, must have a direct tendency to extend the empire of knowledge, and to increase our power over disease."

Permit me to congratulate you on that most important decision which was proposed and carried at a special general meeting held in this place in 1856, which changed the title from Provincial to British. The nationality of the aims which it was sought to accomplish have been thereby declared and accepted; and its name has consequently become imperial.

This is not only right in itself, but is an act of the simplest justice to our esteemed metropolitan members, who have freely joined our ranks, have aided their provincial colleagues by counsel and labour, and have exhibited deep interest in the management and success of our enterprise. Their fraternal conduct proves the soundness of the effort made to gather the army of medical practitioners in this country under one banner, to unite their strength, and to direct it into those channels in which it may be best exerted for the public good. It is also a graceful admission that, whilst London cannot fail, from its magnitude, its gigantic opportunities, and its liberal rewards, to attract and foster the ripest intellects, the most commanding genius that this country produces, it arrogates to itself no claim to a monopoly of talent, no despotic control of general medical policy.

Such deep interest did our local Physicians and Surgeons evince in the establishment of this Association, that the town may almost vie with Worcester in a claim to the honours of paternity. As attendants at the first meeting, I find names still regarded with high esteem: the Drs. Johnstone (Edward, John, and James), Booth, Darwall, Birt Davies, and J. Corrie, with Messrs. Hodgson, Alfred Jukes, William Sands Cox, Samuel Partridge, Joseph Wickenden, John Ingleby, J. Ledsam, R. Middlemore, and — Parsons.

It would scarcely become me, a Birmingham Surgeon, to estimate the moral influence and importance to any infant Society represented by these names. Suffice it to say, they constituted the local leaders of a learned profession; and many of them had a reputation so wide as to be national. Few of these primary members are left to us after the eight lustres that have passed; but their example, their labours have given brilliance to its earlier history, and their care has erected beacons by which the quicksands of danger have been hitherto avoided, and our future course may be guided in safety.

The recent list of members shews by its magnitude how uncontrollable would be the government of so large and widely spread a fraternity by any central authority, unless the federal principle were to some extent adopted in its management. It proves, too, the wisdom of those changes of law by which adequate representation is secured to every section of the Society, so that the views of each may be expounded by its representatives, and considered in the Council of the Association.

The Branches now established have added numerical strength; and being self-supported, self-governed, and in direct and perfect union with the parent trunk, have increased alike its popularity, its usefulness, and its stability.

Birmingham, according to our quaint historian, William Hutton, was reputed to have held out the hand of good-fellowship to all comers. He asserts that "she not only draws our persons but our esteem from the place of our nativity, and fixes it upon herself." Some of our visitors may demur to this statement: and without venturing upon a general endorsement of it, I may, perhaps, attribute the honour of receiving the British Medical Association on this, the third occasion of its annual meeting being held here, to the early perception by a former generation of its claims upon medical support; and to a remembrance, almost traditional, of previous hospitality and consideration. Other attractions, however, may have justly aided your decision. The central position of the town, its varied industries, the educational activity and energy of its people, and the increased commercial importance are all circumstances that might influence your resolution, and it is pleasant to think that they have had their weight.

The geographical position and the geological features of Birmingham must exert a direct influence upon its hygienic condition and its mortality. Accepting the parody of the Conservative leader, "Sanitas sanitatum, omnia sanitas," which simply acknowledges a present and very pressing necessity, I may, perhaps, usefully devote a short time to the mention of certain local peculiarities which affect the health of the inhabitants. In so doing, I shall allude to characteristics that may guide your personal observations, whilst I shall avoid even the appearance of trespass upon the technical subjects of your other addresses.

Situated at the north-western extremity of the county of Warwick, forming most probably a part of the old forest of Arden, the town is built on the eastern slope of three undulating hills, on the banks of two streams, the Rea and the Tame, and is one of the highest towns in the kingdom. All the approaches are by ascent, excepting that from the west, where the highest point of the borough is reached. This spot, at the top of the Hagley Road, is 617 feet above the sea-level, whilst the lowest point, at Saltley, on the east, is 288 feet. Between these extreme points, the ground-level of St. Philip's Church, in the centre of the town, is 462 feet, and that of King Edward's School, in which we are assembled, is only 30 feet lower. The absence of any dominant hill surmounted by a lofty public building prevents these elevations from being realised at a glance, but the height and the undulations in surface may be inferred from the fact that most of the streets pursue a diagonal course so as to lessen the declivities.

The ground is naturally poor, in an agricultural sense, and consists of sand, gravel, and clay. The substratum is of new red sandstone, which passes from the river Tees southward to Birmingham, and thence northward to the Mersey.

The southerly and oldest part of the town, running from High Street to Deritend by a deep descent, is the lowest and the dampest portion. It is here crossed by the river Rea, and has much clay in the subsoil ; this clay extends up the valley of the stream to Sparkbrook, and ceases only at Moseley, which has a higher level and a sandy subsoil. From the conformation of surface and the character of the ground, it is clear that Nature has supplied every requisite for surface drainage into the streams, and for the rapid percolation of storm-water through the porous subsoil : hence floods are rare. In former times, as the late Dr. Darwall told us in the *Medical and Surgical Reporter* of 1828, after heavy storms or unusually wet seasons, Deritend, in the neighbourhood of the Rea, was liable to inundations ; but this evil is now rectified by the strengthening of the banks of the stream, by the interception of the current for manufacturing purposes, and by the erection of bridges.

In order to render the drainage of the town more perfect, a system of deep artificial sewers has been designed and nearly completed. By means of these channels, all sewage is conveyed to a spot at the extreme east of the borough, three miles from its centre. At this outlet the mains are large in dimensions, are placed five feet above the level of the top-water of the Tame, and have storm-outlets to aid in carrying floods into the river. These sewers, constructed according to the dictates of modern science, are on the gravitating principle, so as to require neither machinery nor steam-power. The levels are so arranged between eleven, the minimum, and forty-two feet, the maximum depth, as to ensure a current that will carry refuse from the most distant part of the borough to the outlet within the space of two hours. This rapid flow is said to prevent decomposition and the generation of foul gases in the sewers ; but pedestrians in close weather may complain that unsavoury odours occasionally escape through the ventilators into the roadway, and that some contrivance for ensuring the conveyance of these gases to a higher level, where they would be speedily diluted, oxidised, and diffused by the upper currents of air, would be very acceptable, and must be contributory to health. There is one portion of the borough, the Small Heath District, which is unconnected with this system of drains. It is on the south side, consists of 930 acres of ground, of which 750 are under cultivation, has a population under six thousand, and has a daily dry weather flow of sewage of 214,000 gallons, which passes into a tributary of the river Cole.

The area of the borough, 8,420 acres, when divided between 350,164 inhabitants, the estimate of the last census, gives upwards of 124 superficial square yards to each person ; an allowance that probably accounts for our freedom from typhus, as fully as the absence of marshes and bogs explains our immunity from ague. The distribution of this area, however, is not so equal as might be wished for sanitary purposes : the space per head varies in the different wards from 695 square yards in Edgbaston to 31 yards in St. Martin's Ward. Seven other wards yield a smaller superficial area than 100 square yards for each inhabitant. The density of population in the central and older parts of the town may be comprehended, but that districts which have been built since the importance of sanitary rules has been known should have been allowed to exceed the limits of health in house-accommodation, is only to be attributed to the anomalous position of a corporate body which, whilst endowed with powers to levy rates and govern the town, has no authority to curb the crude and ignorant designs of the building speculator, who, in order to secure a large immediate return for a small outlay, is at liberty to construct a court of scanty surface, approached by a narrow alley, with rows of sheds called houses, built back to back so as to support each other: defying through-ventilation, yielding scanty space for the admission of pure air, and as little for the escape of that which has been exhausted by respiration.

From these courts, possessing not a single sanitary attribute, containing open middens of faulty construction, arise fœtid exhalations that pollute such air as enters the still enclosure ; the leakage from the ash-pits through the soil into the wells from which water is drawn, gives rise at times to an excessive mortality from scarlatina, typhoid, diptheria, diarrhœa, and other preventable diseases of a like type. Let contagion enter a space thus circumscribed, and the result may be safely predicted.

For the tenants of these defective courts, the only airing grounds are the streets, which fortunately present many open spaces in various parts. Well might Dr. Greenhow declare that "more than half our annual mortality results from diseases which prevail with a very great range of difference, in proportion as the sanitary circumstances are bad or good," and that the mortality from preventable disease in certain districts "raises the death-rate of the whole country 33 per cent. above the death-rate of the healthiest part."

The powers wanted to suppress this evil need not be vexatious. They are required only for the protection of the poor, embrace the simple questions of ventilation, space, and sewage, and might be safely dictated by a health-officer, aided by the Borough surveyor.

Before quitting this part of my subject, I must briefly refer to the disposal of our sewage, of which a large portion has been hitherto discharged into the river Tame. It is easy to accept and adopt an alliterative cry like that of "Rainfall to the river, sewage to the soil," and the application of the principle, if possible, would promise an inestimable advantage. The Town Council of Birmingham has attempted to carry out a modification of this scheme, by seeking power to enable them to purchase land for the disposal of the fluid sewage by "intermittent downward filtration," and the conversion of the more solid matters into an element of fertility to the land, instead of danger to its occupants. This intention has been thwarted temporarily by the inconsiderate vote of a small majority of our legislative assembly, but the question cannot be thus summarily settled ; it must again and speedily enforce Parliamentary attention, and, unless the value of a few acres of land is to be recklessly staked against human life, the convenience of the few must yield to the urgent necessities of the many.

Whilst sympathising with the Corporation in their efforts and their defeat on this question, there is one marked and culpable defect in the official appointments of this borough which demands severe animadversion. The imperfections that have been mentioned could not have existed unremedied, had there been a well-qualified medical officer of health possessing technical knowledge of hygienic rules ; capable of guiding the deliberations of the Council on this subject, and of framing comprehensive plans for the prevention of disease and the promotion of health. Such an officer, rendered independent by an adequate salary, freed from the cares of medical practice, exclusively devoted to sanitary science, and armed with power to exact information and aid from all the executive officers of the borough, would secure to the inhabitants that skilled care which they have a right to expect, would represent faithfully the views of our profession, and would be competent to contribute to those discussions between the "associated officers of health," which have materially advanced our knowledge of scientific hygiene. The cost of such a man would be more than compensated by a diminished rate of illness and pauperism, a more steady capacity for labour and a smaller ratio of crime. All of these points materially affect the financial expenditure of the borough.

By the Public Health Bill this defect will be remedied, and the town will be placed beyond the reach of amateur legislation, which has too often resulted in unscientific experiments, with a population as the *corpus vile* for their trial.

A sound, highly educated man should be selected from the members of that profession which has supplied those philosophical "Privy Council Reports" of the sources of disease and death that have guided our imperial Government, have formed a magnificent contribution to sanitary science, and have tended to make popular the broad rules of hygienic knowledge. This course, the only proper one, will rescue our corporate body from the humiliation of seeking, as it has done, the gratuitous gui-

dance and opinions of their medical fellow-citizens, whose special learning has been acquired by devoted labour and technical education, which are estimated in other and ordinary transactions by an equivalent money value.

The large surface over which Birmingham is spread, and which has led to its being declared by Mr. Rawlinson "the most openly built town in the kingdom," contributes materially to its healthiness. Our streets are of fair width, excepting in the old town, in the main thoroughfares of which efforts to approximate them to our present requirements will be obvious to all. The buildings are low, rarely consisting of more than three or four storeys, and therefore offering little obstruction to the currents of air, with which an elevated table-land is sure to be visited. In some thronged business parts, such as High Street and Bull Street, the increasing value of land and the necessities of trade have led to more aspiring erections, but they have not yet reached the height of the Manchester warehouses, or obscured the sky like the buildings in the old part of Edinburgh. The streets are macadamised and cleanly, being kept in good condition after they have been accepted by the Corporation. Recently formed streets in the suburbs are often defective in drainage and fouled by refuse. The danger from this source may be conceived when I mention that a thousand houses are annually added to the existing number.

The climate is dry, having a smaller rainfall, and one-third more of dry days than are experienced in Lancashire.

Four parks, forming admirable breathing spaces and yielding abundant opportunities for rational amusement and exercise, are opened to our people. On the eastern side of the borough, Aston Park, consisting of forty-three acres, has been rescued from the grasp of Building Societies by the combined subscriptions of the people and of the Corporation. The Saltley Park, presented by Sir C. B. Adderley, comprises ten acres. On the west Calthorpe Park, of thirty acres, has been the only recreation ground until lately; but within a few months an estate of fifty acres, called Cannon Hill, rurally situated, well timbered and watered, with a varied surface, has been presented to the town by Miss Ryland. It is due to this large-hearted lady to say that, by this and other deeds of kindness and humanity, she has shown a noble estimate of the duties of wealth; and a determination to mitigate the trials, ameliorate the condition, and promote the happiness and comfort of the labouring population of this town. Although placed on the outskirts of the borough, none of these parks are so distant from its centre as to overtax the physical powers of an indifferent pedestrian.

Few of our manufacturing processes are directly detrimental to health. The entire class of grinders, metal and wood polishers, and moulders, are exposed to pulmonary irritation from the inhalation of dust, whilst "wet-grinding," as it is called, superadds damp clothes and wet feet. A few suffer from heat only, as the lacquerers and glass-blowers. The majority of our workpeople, however, are more influenced by constrained positions whilst at work, by defective ventilation in crowded manufactories and by atmospheric vicissitudes, than by any special risk or danger. For some of these evils remedies have been provided by the employers of labour; but self-will and intractability on the part of the mechanics at times render these precautions useless.

The trades of the town are numerous, and the subdivisions of labour are unusually great; hence the fluctuations of commerce rarely fall heavily upon the entire class of artisans, and famine is of very rare occurrence.

There is no cellar population. As a broad rule, every family has its own dwelling-house, so that excessive overcrowding, with its consequences, is avoided.

These circumstances probably explain the favourable records of mortality, which have scarcely varied during the last thirty years, and have been a fraction below 25 per 1,000.

A supply of pure water has been called "a natural right," and Professor Gairdner says that "wherever water has become matter of private sale or barter, there has been a dereliction of duty on the part of the community as represented by the local authorities." It appears to me that the means of cleansing and purifying and lighting should be secured to every dwelling-house. To the poor these adjuncts to health and comfort are necessities to moral and physical well-being. An irreparable mistake was committed here when the local authorities, evading or failing to perceive their proper responsibilities, permitted duties that should have been municipal to escape them, and allowed the control and the profits of the water and gas supplies to pass into the hands of private companies. The acquisition of such properties now would cast a heavy additional burden upon the ratepayers; whilst, as a preliminary to the formation of new competitive and municipal schemes, it would be requisite to prove inadequacy or impurity in the supplies of the existing companies before imperial legislative sanction could be sought or obtained.

In 1828, the late Dr. Darwall declared the water-supply of the town to be defective. Drawn from springs and wells, the best water was hard, and contained two or three grains of muriate of lime in the pint. Wells in the vicinity of manufactories were impregnated with copper and tin, so as to be nauseous and sometimes emetic; and the majority of waters near the centre of the town contained nitrates from sewage pollution. For domestic purposes the inhabitants at that time were chiefly supplied from pumps in Digbeth, which were found by the late Thomas Southall to contain seven grains and a-half of the nitrates of lime and potash to the pint. Hence you will probably agree with me, that the time was ripe for any scheme that promised potable water to a thirsting population.

The first service of our Waterworks Company was laid on in 1831, the supply being drawn from the river Tame. Much prejudice existed at first against the water, and this may have been preservative; for in 1832, when cholera ravaged Wolverhampton, Willenhall, Walsall, Bilston, and other places through which the Tame flows, and from which it receives drainage, the Water Company supplied only a small district of the town, and that chiefly for manufacturing purposes. It is, however, a curious fact that, although the sewage of many populous places pollutes the stream through its tributaries, such is the purifying power of running water in oxidating and rendering innocuous their refuse, that at Hamstead, some five miles below the last sewage entry into the Tame, fine and healthy trout are frequently taken by the angler.

As the advantage of a free and constant water supply became felt, the Company obtained additional powers, and wisely excluded rivers that, from running near towns, may be contaminated by sewage-matters. Discarding the Tame, their supplies are now drawn from streams passing through purely agricultural districts (notably from the Sutton Basin) and from Artesian wells bored into the new red sand-stone, which promise an abundant supply of pure well-filtered water. It has been roughly estimated that nearly two-thirds of the town are thus supplied, and that the daily consumption amounts to upwards of eight millions of gallons, or between thirty and thirty-five gallons per head.

Whatever criticism may be passed upon its purity, the water may be drank without fear. It is vastly superior to that of the old wells, the aëration of which was so pleasant to the palate as to conceal its impurities. Our borough analyst, Dr. Hill, has declared it to be superior to the standards accepted by the Brussels Congress and by Dr. Parkes.

Few things better illustrate the existence of an ebb-tide in the progress of civilisation than the supply of water to large cities. Our popular perception of the necessity of pure water is comparatively recent, but in their day of power the Romans were alive to its importance as affecting health and comfort. The extent and magnificence of their aqueducts for supplying the household wants, the fountains and baths of Rome with water, do not rest on mere historical record. Two of these engineering triumphs are yet in existence and in use, the Aqua Virgo and the Aqua Paolo or Alsietium. Grand in conception, admirable in execution, they pursued their course subterraneously or on arches, according to the levels, and were worthy of the Emperors under whose rule they were constructed.

The streams which run near to the town need not be de-

scribed, as they are unimportant; they all run into the Trent, which joins the Ouse and the Humber, so that our river-water reaches the sea on the coast of Yorkshire.

The atmosphere of Birmingham will compare, and not unfavourably, with that of other manufacturing cities. We know that it is vitiated in parts by those emanations which must occur in every dense population, and more especially if sanitary supervision be perfunctory and inadequate.

One of our greatest evils is the smoke issuing from the tall chimney-stacks of our manufactories, and perceptible for some miles beyond the town. It is curious that, whilst solemn predictions are issued as to the exhaustion of our coal-fields, and the approaching substitution of some other fuel, whilst the press dispenses Jeremiads on the increasing cost of coal, this wasted carbon is permitted to obscure the sky, to fill the air with fuliginous impurities and to return to us as smuts for the encouragement of the laundress. No scientific mechanician impressed with the motto "*ex fumo dare lucem*," has yet invented a perfect machine, acceptable to employers of labour and of moderate cost, by which this waste fuel may be utilised without the aid and imperfections of a human stoker.

Whilst of late years the town has grown rapidly, and has offered new sources of attraction to the labourer and the merchant-prince of commerce, it has always worn features of interest to the man of science, the politician, and the philanthropist. In archæology we have few attractive remains. The ancient landmarks and monuments described by the learned Hamper and others have disappeared under the requirements of a rapidly increasing population and a necessarily extended building area. The fine old Elizabethan Hall at Aston is well worth a visit, on account of its architectural features and its historical traditions. The residence of Sir Thomas Holte, it afforded shelter to Charles I in October, 1642, whilst on the march from Shrewsbury to relieve Banbury Castle, and before the battle of Edge Hill. Subsequently it was cannonaded by the Parliamentarians, and reduced after a two days' siege. Such slight injuries, however, were inflicted on the building as to raise a smile in these days at the artillery then in use. In the church of St. Martin may still be seen monuments that carry us back to the period of the Normans, whilst our portion of the great Ikenield Road that stretched from Southampton to Tynemouth, recalls to memory the time of the Cæsars and the occupation of the country by the victorious legions of Rome.

We cannot compete with those natural attractions that at Plymouth seduced stern devotees of science from their allegiance, but we can show how advancing knowledge influences man's invention, skill, and industry, and subjects natural and chemical forces to his control; how labour is dignified and intellectual supremacy is asserted by the employment of those potential agents, steam, heat, electricity, and chemical action, which are here made to carry out the most gigantic and most delicate operations.

So near are we to the furnaces and smelting works of South Staffordshire, that their vicinity is revealed at night by a glow in the sky from numerous fires. This has been called the "Aurora Borealis of the Black Country," and has been poetically described by Elihu Burritt as "the halo around the brow of swart and patient labour that knows no rest." Having retired with this luminous reflection to repose, instead of awakening to the rippling music of a Devonian tide, you may be rudely disturbed by the steam gong that summons the mechanic to his early labour, or by the mighty throb of the steam-hammer stamping automatically the resisting metal, and impressing it with forms of beauty or utility.

It has been well said that this town "is the most remarkable centre of manufacturers of metal in the world." "Whatever metal *can* do, Birmingham will make it do: from a pin's head to a steam engine, from a pewter pot to a copper boiler, from a gilt button to a brass bedstead." Certainly the metals, precious and base, are here, by mechanical agencies or manipulative skill, made to assume every shape, from the delicate ornament vying in capillary tracery with gossamer, from the frail threads of wire that bind our island to distant continents and establish intercommunications incredibly rapid, to those monstrous masses of metal which span the chasm or rushing stream and form the iron roads of intercourse and traffic between the busy communities of which this country consists, and by whom its unparalleled commercial prosperity has been achieved.

Whilst these triumphs of this midland city proclaim themselves in sonorous utterances, abundant illustrations of more silent forces in use amongst us may be furnished. Here you may witness the chemico-galvanic process of metallic deposit, conceived and perfected by one of our professional brethren, the late Mr. Wright, and worked by Messrs. Elkington and Mason, who have administered largely to the wants of civilised life. The effects of this invention have been to beautify the commonest material, to decorate our houses and persons, and indirectly to refine our habits and elevate our taste. A reference to this subject suggests the intimate connection that subsists between the various branches of human knowledge and industry. Had not our power of dealing with metal, in moulding, casting, and chasing, progressed, this filmy electro-deposit—which bears the same relation to the material enclosed by it, as does the amber to the fly that it embalms—would scarcely have been devoted to such general uses. So again, had not the study of natural forms been advocated by the appeals of cultivated men, who appreciated the glorious relics of a civilization that has long passed away, our manufacturers would scarcely have produced those graceful and classical designs, which characterise much of the ornament of the present age, and which may, by further cultivation, enable us hereafter to challenge the productions of the palmiest days of Greece.

One noiseless craft to which I would call your attention is the papier maché trade, which is almost peculiar to Birmingham. Derived first from India and China, it was introduced here more than a century ago by Mr. Taylor, a large and ingenious employer of labour, for the production of snuff-boxes and trays. So wide is its applicability, that it is now used, not only for knick-knacks, but for the construction of such massive domestic articles as sofas, bedsteads, sideboards, and chairs. The prepared surface of this paper-pulp receives a high polish, and is capable of such complex decoration by mother of pearl, artificial gems, gold and painting, as to conceal its texture, and render the material unrecognisable.

It has been too much the custom to consider Birmingham as a hive of busy artisans not over-refined: a nest of metal-workers so expert in imitative art, and so little troubled by qualms of conscience, as to be constantly engaged in the production of "lacquered shams and bad halfpence." It is lamentable to see such accusations made in London newspapers whenever our population disagrees in view with a literary Jupiter, or offends the delicate susceptibilities of some writer of political and other "leaders." To such men it is useless to suggest that a community cannot fairly be saddled with the sin of an individual. It is long since Charles Knight, in *The Land we Live In*, showed that the wondrous skill with which metals are handled has led to the ingenuity of our artisans being occasionally enlisted by unscrupulous non-residents, who have carefully concealed their designs, and have saddled our too-confiding class of operatives with their sins. How many works of art, useful and ornamental, that have been accepted as national standards of taste, have sprung from the talent and labour of our workmen, and have been credited to other cities, it is not my duty to inquire. The thought, however, is suggestive in its truth.

The commercial position and material prosperity of this town have been due to such men as the late Matthew Robinson Boulton, John Taylor and others, who possessed the highest views of moral rectitude and honour, and, with a keen sense of the wants of mankind, established new methods of administering to them. It may be said of Mr. Boulton—a Birmingham man, and a veritable Mecænas of manufacturers—that he was highly educated, that he cultivated science, associated with men of learning, and introduced into trade new applications of mechanical power. Prudent and perceptive, he won his laurels in the stony paths of trial and difficulty. The

Soho Works, built by him more than a hundred years ago, then formed the largest manufactory in England. Hence these works—which employed a thousand people—became an object of interest to the whole kingdom. Here, after Boulton had been joined by James Watt, the first perfect steam-engine was made which supplanted water-power, revolutionised commerce and travel, and supplied the world with a new motive force. Here, also our coinage was beautified and improved; and here Mr. Murdock, the engineer of the firm, first introduced the illuminating power of gas to this country, which has contributed so much to man's comfort and convenience. The works were built on a barren heath some two miles from the town; by planting and draining, the surrounding land became a park with fine timber and water, worthy of its princely inhabitant. The works stood for many years after their glory had departed. They were visited by strangers from distant lands, and had an interest to our transatlantic cousins that rivalled the shrine of Shakespeare. This "Mecca to mechanism," as it has been aptly called, is now no more. The building has been pulled down, and its site—like all available land in increasing communities—is advertised as suitable for "villa residences!"

Boulton's time was the Augustan era of Birmingham. Taking only the eminent men who constituted the Lunar Society (so-called from their meeting when the moon was at its full and would facilitate their travels), it may be said that few towns could boast such an array of remarkable talent and capacity. The names of Boulton, Watt, Withering, Priestley, Galton, Keir, and Berrington, are sufficient to prove the assertion; and Mrs. Schimmelpenninck describes each member as being "the centre of intellectual friends" who frequented the meetings, and added to the depth and brilliancy of their discussions. The mention of Sir W. Herschel, Sir Joseph Banks, Dr. Solander, and Dr. Afzelius, as frequent visitors, is a sufficient stamp of their intellectual calibre.

In this town, also, Dr. Roebuck introduced the use of the lead-chamber in the production of sulphuric acid as a substitute for the two old methods of burning sulphur under bell-glasses, or distilling sulphate of iron at red heat. By this improvement he rendered the process continuous, increased the power of production, and reduced cost. The value of his discovery may be estimated, when it is remembered that sulphuric acid is essential to all the metal trades, and that without it the present gigantic works for the production of alkali and artificial manure could not exist.

Whilst ready to welcome and adopt strangers, Birmingham has not always appreciated the genius of her children, but has presented herself at times as a stern step-mother. The populace, whilst thoroughly loyal, orderly, law-abiding, and usually tolerant in spirit, has been betrayed at times by misconception or misguidance into transitory tumult and violence.

The two subjects, Politics and Theology—inseparable in this country—have rarely borne a free discussion without leading to more human passion and unrighteousness than all other sources of difference to which we are exposed. Against this we appear to have no protection. The *odium theologicum*, once fulminated, recognises no genius opposed to its own narrow doctrines, and is antagonistic to that spirit of inquiry by which human progress has been promoted and a higher standpoint reached. To this may be ascribed the terrorism which prevailed in 1791, when Priestley, the philosopher, chemist, and scientific inquirer—when Baskerville, the greatest printer that England has produced, the founder of the most perfect type known, whose edition of the Bible is sighed after by bibliographs, whose exquisite productions of the ancient and modern classics, and of William Hunter's work on the Uterus, are considered to be treasures of the typographic art—were, with other citizens who did not conform to the views of the mass, persecuted relentlessly by the destruction of their houses and property, and they themselves narrowly escaped the *auto-da-fe* of a popular, though unreasoning Inquisition. It is lamentable to think that a reflective and accomplished inquirer, whether right or wrong, was driven by bigotry and intolerance to seek a home for his later years of life beyond the far Atlantic, and that a type so fine as that of Baskerville, employed by him in the diffusion of the highest knowledge—the divinest revelation vouchsafed to man—should have found its last resting-place in a faubourg of Paris, its first duties in spreading the sophistries of Voltaire.

The medical annals of this town furnish a full list of distinguished men. The philanthropic Dr. Ash, who founded the General Hospital, earned the highest local fame. Failing health caused his removal to London, where he was made a Fellow and Censor of the Royal College of Physicians. Dr. Withering, his immediate successor, was widely known by his botanical publications. He lies in the parish churchyard of Edgbaston, close to the Hall in which he passed many years of life. Dr. Male, highly esteemed as a sound physician and most honourable man, rested his literary fame upon his *Juridical Medicine*. To say that Dr. Edward Johnstone was a highly cultivated physician; that his brother John—your President in 1834—was an accomplished scholar, an intimate friend of Dr. Parr, with whom he sympathised in classical lore; and that Dr. James—the President of your last meeting here—won esteem by his acquirements, his courtesy, and his kindness, would be a work of supererogation to the older members of this Society.

Whilst paying merited honour to our physicians, it is due to the surgeons of the town to state that the literature and practice of our art have been ably represented by those who have preceded us. George Freer, a surgeon to the General Hospital, was the first who successfully applied a ligature to the external iliac artery for the cure of femoral aneurism, as suggested by Abernethy.

From the study of this and other cognate cases, his pupil, the late Mr. Joseph Hodgson, probably derived the bias that led to that admirable memoir, *On the Diseases of Arteries and Veins*, which secured the Jacksonian prize of the Royal College of Surgeons, became a surgical authority, and secured for him that character for sagacity and judgment that he subsequently enjoyed. More recent Jacksonian prizemen may be named. My colleague Mr. Crompton earned this distinction by an essay on Diseases of the Tongue; the late Frederick Ryland by a valuable monograph on the Throat and Larynx; and Mr. John Clay by a treatise on Ovarian Disease. It is to be regretted that the essays of Mr. Crompton and Mr. Clay have remained unpublished.

To extend the list would—if I have not already earned the rebuke—be tedious. I will content myself, therefore, with saying that our profession yet numbers members who will not suffer the reputation of Birmingham surgeons to decline from its achieved position.

Having referred thus briefly to the older officers, who were necessarily connected with the General Hospital, as the only large medical charity in existence, I must now be permitted to say that examples nobly set have been zealously followed, and that a variety of institutions, secondary perhaps in scope, but paramount in popular interest and sympathy, have been established amongst us. The Queen's Hospital, founded by Wm. Sands Cox, in connection with the Queen's College (which it was his dearest object to convert into a great Midland University), graced by the favour of Royalty, and approaching in magnitude to its elder sister, competes with it for support. The General Dispensary; the Midland Eye Hospital, founded by Dr. De Lys and Mr. Hodgson; the Hospital for Sick Children, so eloquently advocated by Dr. Heslop; and a Special Hospital (recently established) for Women—appeal, and not in vain, to the sympathy of contributors. A Sanatorium is in course of erection, designed to furnish ample space, the most perfect hygienic arrangements, and life-giving air from the breezes that play over the hills of Bromsgrove Lickey. This will form an adjunct to all the medical charities, and will be suited to invigorate frames that have been exhausted by disease, and are unfitted to encounter the evil influences of a close residence in a polluted atmosphere.

Under the auspices of my friends Dr. Fletcher and Mr. Kimbell, an institution has been founded at Knowle for the treatment of imbecile children upon the principle of the Earlswood

Asylum. From the adaptation of a cottage to the wants of a few inmates, they have so completely established the benefits that may be conferred upon these piteous claimants for human care and benevolence, that the sympathy and co-operation of the wealthy has been secured, and a noble building has been commenced, which promises to administer adequately to our local necessities.

With regard to the establishment in which we are assembled, it is, architecturally and educationally, one of the brightest ornaments of the town. Originating in the wise consent of a youthful king to a petition from the inhabitants of Birmingham, a small annual grant, devoted by pious men to the Convent of the Holy Cross, after the dissolution of these monastic institutions by Henry VIII, was granted for educational purposes, and formed an endowment for this school. The value of the lands thus bestowed has increased a thousandfold, and the income has in course of time become regal. Regarded as a school for imparting classical and general knowledge, it has amply fulfilled the intentions of the founder by securing to the young a liberal, scholarly, and often an University education. Its past history is full of bright associations; and whatever modifications in its course of instruction may be needed to meet the wants of the present age, it has deserved well of past generations.

You will share with me in an expression of deep regret that personal illness has prevented our associate Dr. Fleming from delivering the Address in Medicine, and from taking that prominent part in this meeting which he was invited to assume by your Council, and for which his literary and practical acquirements and his known accuracy so peculiarly fitted him.

We must all lament that the voice which advocated this town as your place of annual meeting will be heard no more. The energy and fervour of Mr. Clayton's manner, his singular conversance with the affairs of the Association, and his judicious advice in its management, will be missed by the active members; whilst we, his intimate fellow-workers, regret the loss of one possessed of great perceptive and executive ability, and endeared to us by many estimable personal characteristics.

Other hands, however, will be extended in friendship and brotherhood; other voices will proclaim our hearty appreciation of your visit.

As the representative of the Birmingham and Midland Counties Branch of the Association, and in the name of the whole profession of the district, I say to all our visitors—Welcome! welcome! thrice welcome!

Curiosities of Chinese Medicine.—The following extracts are from Dr. Dudgeon's report on the Peking Hospital for 1871.—The Chinese doctrine of the pulse frequently gives occasion to the perpetration of jokes upon the Faculty. Most ridiculous mistakes are often made between the sexes, and married and unmarried females. An ordinary joke is for a literary person, with delicate hands and long nails, to simulate a woman. The doctor is called in, the would-be-patient thrusts his hand from behind a curtain or screen, as the manner is when women are attended professionally, and his pulse is most attentively examined at both wrists, as the Chinese manner is. All the circumstances of the family are duly considered, and the doctor, knowing how highly sons are esteemed, declares his patient pregnant with a boy!—Beans and green millet are said to destroy the effect of medicines; hence the care with which the Chinese abstain from these articles when under treatment. No people are more anxious to know what is contraindicated. The idea of the antidotal power of beans originated with the Pên Tsao stating that they destroy the effects of arsenic and other poisons. The effects of medicines may be equally thwarted, according to some, by laying them on any of the three platforms found in Chinese houses—viz., the window-sill, fire-place, and cupboard. The only safe way, it would seem, is to swallow them.—The excrement of bats, called *yé-ming-sha*, or night bright sand, is prescribed, alone or in conjunction with sheep's liver, in indistinctness of vision at night, called *chia ming yen*. Cuttle-fish bones are used for the same purpose. According to the Chinese theories of cosmogony, the white of the eye is related to the lungs, the iris to the kidneys, and the pupil to the liver; diseases of these various parts are, therefore, treated with medicines suitable to the organs to which they are related.

ADDRESS IN MEDICINE,

BY

SAMUEL WILKS, M.D., F.R.C.P., F.R.S.,

Physician and Lecturer on Medicine at Guy's Hospital; Examiner in Medicine at the Royal College of Surgeons; etc.

When I was requested by the Council of your Association to deliver the annual Address on Medicine, I naturally shrank from the task, knowing that I had no novelty to offer you, nor any great discovery in science worthy of your acceptance. I knew, moreover, that the examinations at my hospital and at the College of Surgeons would leave me no leisure to prepare for you a scientific discourse. When, however, I considered the possible intentions of the address, my feelings underwent a change; for, remembering the numberless channels by which any new fact or doctrine can reach you, I perceived that the object of the lecture must be far different from that which I at first surmised. It pleased me, indeed, to think that all you required was to hear from the various members of the profession their views on some of the more general subjects relating to the present state of medicine. You may, indeed, be better occupied in listening successively to the outpourings of differently constituted minds than to a purely scientific address; for, although the subjects discussed are of necessity open to controversy, and of a nature to invite the expression of different opinions, yet, by this very friction of thought, good may result.

In the first place, I shall declare to you that I have no conservative feelings in respect to doctrines and practices in our profession which have long gone by, but have a strong faith in progress. As everything having a scientific basis must naturally grow better and better, so, I take it, must medicine. The question is probably hardly worth discussing; for I have ever found that, in whatever department of life the subject lies, the clinging to the past on the one hand, or the readiness to embrace a novelty on the other, resolves itself into a question of feeling; and against sentiment, as you all know, there is no appeal. For myself, I have the liveliest sympathy with every fresh impulse given to the onward movement of our art; but there are those who are well content with the present, and even look lovingly on the past. I am old enough to have seen with my own eyes the gentleman who smiled at Laennec, and made his stethoscope a bouquet-holder. I have heard living men in scientific societies denounce the microscope as an useless instrument; more recently I have heard the sphygmograph spoken of as a pretty plaything; and, more astonishing yet, my own favourite pursuit, the dissection of the dead, declared to lead to no living results. It is impossible to leave untouched this stand-still condition of the human mind, for reason of some of the astounding propositions which have arisen out of it. To me it seems that no advance, no progress, is possible to be asserted, unless we are capable of comparing the past with the present; but immediately we set about the task, and speak, for example, about the treatment adopted in former days in connection with that of the present, and point out to the seniors of the profession that their change of practice and adoption of new modes of cure is a sign of the advance of the times, we are met, not by a denial of the fact, but by the assertion of a most wonderful doctrine—viz., that the change is not in them, but in Nature, and that they have accommodated their treatment accordingly. It does not seem to have occurred to them that science and art are continually on the march, and that there is more knowledge of clinical medicine and pathology than when they were young; that reports of cases are more accurately taken; and least of all do they suspect that their own minds regard the events of their youth with a fonder gaze than the facts of the present day, but lead themselves to believe that the art of medicine which they now practise is in no way preferable to that of times gone by; and that they have simply changed their procedure in accordance with the alteration of the type of mankind. It seems far more probable to them that man, having existed on the earth for six thousand years (according to orthodox notions), should alter his type in the course of one generation, than that they could have in any way erred in the early practice of their profession. To my mind, this is one of the most preposterous doctrines ever started in order to save the consistency of a few individuals. Why, if our material be thus changing, it is not safe to practise, for we can never be sure of our results; and thus it may happen, as I was but lately told when I showed how people could lose blood with equal impunity as their forefathers, that perhaps the type was again relapsing into its

former dignity. It thus becomes often very difficult to distinguish between absolute truth and the offspring of the human brain. The future professor may be unable to decide, when studying our literature, whether certain diseases were prevailing at certain times, or whether they were merely fashionable complaints of the hour. He may at one time read of fibroid phthisis, at another of ataxia; and he may wonder whether ulceration of the womb, which was once so common, and has now given way to displacements of the organ, shows how disease flows in waves or merely represents the undulations of the medical mind.

With regard to our general notions of disease, I consider that, during the last few years, our opinions have made a rapid advance. I naturally take the period during which I have been in the profession, and reflect upon what was implanted in my own mind by lectures and by books twenty-five years ago. Of course it is necessary to remember that, as our ideas are matured, there is a great liability to transfer one's own earlier and cruder notions to the teachers whom we misunderstood; but, allowing largely for this explanation, I cannot but think that the last twenty or thirty years of pathological progress must have made material alteration in our general opinions regarding disease. For example: a common method of teaching was by the description of acute inflammation occurring in healthy subjects; but the disappointment I felt, in common with other students, in not seeing these cases in the wards of the hospital, soon convinced me that something was wrong. We saw abundance of chronic disease, occasionally an acute affection; but this was generally patched on to some other chronic disorder; so it soon became evident that, with the exception of acute affections of the chest due to vicissitudes of weather, an acute inflammation occurring in a healthy person was of the rarest possible occurrence. Morbid anatomy has been mainly instrumental in making the discovery; and, in fact, this could not have been reached without its aid, since apparently sudden and fatal illnesses were constantly occurring in persons of previously good health. It is true, for example, that persons died of acute peritonitis, and, without *post mortem* examination, the cause was attributed to that universal evil, cold; but inspections have now invariably disclosed some old and long latent mischief in an organ which lighted up the fatal attack. To suppose that a healthy person can suddenly have an acute arachnitis or acute peritonitis, may, perhaps, involve an actual pathological absurdity. Even the acute inflammation of the chest occurring in healthy persons under the aggravated causes of wet and cold, is far less common than is generally supposed. When, many years ago, a paper was read at a medical society advocating the early treatment of acute disease lest it should become chronic, I took the opportunity of remarking that an opposite suggestion might have been with more propriety advanced—viz., the advantage of arresting chronic processes lest they should become acute. There are far more acute diseases carrying off chronically diseased people, than there are chronic diseases which have had their origin in acute affections. What we might more advantageously direct our minds to, are the insidious and slow-working changes in the organs and tissues, to see if we can grasp these in their beginnings and check them at their source; what we are too often asked to do, however, is to arrest an acute inflammation, which is an evidence only of the beginning of the end. But this is what we see through all Nature. If events appear sudden, they are but the exponents of some long anterior hidden causes. The fires of Vesuvius have long been smouldering below before they issue from the summit; and the earthquake is only the result of the pent-up gases arising from chemical changes which have been slowly going on in the bowels of the earth. In society, an honest person cannot possibly become on a sudden a thief, nor a contented people suddenly break out in rebellion. A sane man cannot in an instant become mad; and, as was observed in a late celebrated case, the event which brings the person to justice is but the sudden explosion of distorted feelings long dormant in the brain, but immediately excited by some trivial event. Although I say these are views which have been greatly promoted by the advance in pathology, yet the more profound observers had a glimpse of their truth, as had the father of medicine himself; for Hippocrates says, "Diseases do not fall upon men instantaneously, but, being collected by slow degrees, they explode with accumulated force." I believe, in teaching, there is no more important fact to impress upon the minds of students than that diseases come insidiously and slowly; and the circumstances which induce them are those most worthy of attention. When the older text-books spoke of attacking acute disease in a healthy subject, it appears to us almost as Quixotic as making a thief suddenly honest, or making the French a tranquil people by a new form of government.

In studying how various morbid processes are produced, several circumstances have to be considered, more especially the mode of life which favours them, and the original temperament of the individual, which renders him more susceptible to certain agencies than to others. I consider it to be no credit to our profession that the doctrine of temperaments has not been (with one or two exceptions) more systematically taught in our schools. The value of it, however, is tacitly acknowledged in the importance which the man of acumen and experience attaches to the general appearance of his patient; he sees at a glance when the patient enters his study that he is about to hear a story of a nervous affection, or of symptoms evincing a proclivity to phthisis, or of troubles showing that the patient belongs to the gouty class. He may have nothing more than a rule of thumb to help him; but his experience informs him that the world is composed of different varieties of persons, that each is inclined to morbid changes in a given direction, and that the tendency to particular changes may be dormant, but that the exciting causes are ever waiting ready to awaken it into action. A question here arises, whether these predisposing and exciting causes of disease are not the same. For example, let us take the so-called gouty condition of body, which is said to prevail more in England than in any other country; and let us assume the correctness of the ordinary theory, that its cause is to be found in the use of malt liquors, strong wines, and nitrogenous food. What we understand by this is, that these conditions, operating through several generations, induce this peculiar diathesis. Now, if this be so, it seems reasonable to infer that the same causes acting in excess in a peculiar individual so predisposed, will develope in him all the outward manifestations of the disease; and, on the other hand, the avoidance of such causes would be the means of retarding their development, so that the predisposing and exciting causes would be one. Let us take another example of a diathesis which our climate is prone to produce—the tubercular. It is generally believed, from the peculiarities of its distribution on the globe, that cold and moist air, together with certain circumstances of civilised life, are mainly instrumental in the production of the diathesis. These causes operating through several generations will produce the consumptive tendency; at the same time, these identical causes are they which induce the disease in a predisposed individual; and, on the other hand, the avoidance of them is the mode by which we hope to arrest the disease. The same reasoning is applicable to other forms of temperaments; and it thus becomes a subject of interesting speculation to inquire under what circumstances they were all developed. In our own country, we have to take into consideration the mixture in our race of Norman, Saxon, Dane, and Celt; but, at the same time, it is evident that soil, food, and climate are instrumental in producing striking peculiarities. It is a remarkable fact, and one which I have not been able to unravel, that one country should produce two such different temperaments as those which I have chosen as examples; the one tending in disease to the production of gouty phenomena, and the other tending to consumption. Belonging to the first class is the model Englishman, a good example of whom may be found in the late Lord Palmerston. I allude to a man of sanguineous temperament, with great activity and energy, both of mind and body; a man ready for all emergencies, full of pluck, plenty of "go", of social habits, good humoured, and inclined to gout. It seems remarkable that, with the production of such men, of whom the country is for the most part proud, we should develope, also, the individual inclined to consumption. He or she has often a beautiful conformation of body and a fine intellect, although different from that which I have just described, being more susceptible and refined. It may be that such persons are overbred. They certainly are inclined to die early, but often not before they marry, and propagate their kind. If this were not so, it is probable that the sickly race would be kept under, and, in a more natural state of society, would actually die out; that is, where there were no doctors; for the artificial aid so strenuously given to keep alive the ailing individual, tends to preserve its existence. Therefrom arises another large question which must constantly obtrude itself upon the mind of the medical man—Whether he is not interfering with the natural laws of the world? I confess I do as others do, shut my eyes to these speculations, and do that duty to my fellow-creatures which is closest before me—attempt to relieve their suffering; yet it cannot be gainsayed that, if the Darwinian doctrines be in any way true, they are applicable to the *genus homo* as well as to any other race of beings; and that we, by preserving the puny, the wretched, and deformed, are assisting in the degeneration of the race. Thus Herbert Spencer has remarked, in reference to the care taken of the miserable, "instead of diminishing suffering, it eventually increases it. It favours the multiplication of those worst fitted for existence, and, by consequence, hinders the multiplication of those best fitted for existence, leaving, as it does, less room for them. It tends to fill the world with those to whom life will bring most pain, and tends to keep out of it those to whom life will bring most pleasure. It inflicts positive misery, and prevents positive happiness." Philosophers have thus, without reference to general zoological laws, seen the importance of cultivating the race by allowing the weakly to drop out; and thus long ago it was observed that the Scotch had probably preserved their hardihood on

account of the privations which cut off their sickly young; in the same way as among the lower animals it is known that, where the conditions of life are hardest, there the strongest individuals prevail. We can, therefore, scarcely shut our eyes to the fact that, if we were able to preserve all those miserable creatures the lives of whom their parents would give a fortune to save, we should be instrumental in causing a deterioration of the race. It is thought that, where instinct guides and more natural laws come into operation amongst the lower animals, intelligence would serve the same purpose in man. Thus Joseph Adams, who wrote on hereditary disease at the beginning of the century, says: "In a state of nature, the race of all gregarious animals is progressively improving as far as is consistent with the capacity for improvement. The strongest male becomes the *vir gregis*, and consequently the father of most of the offspring. In the ruder state of the human society, or, rather, in its earlier formation, something of the same kind may prevail; but, in a more advanced stage, sufficient provision is made by the preference which health and intellect will for the most part produce in either sex." Such prudence, however, is so little to be depended on, that it probably has little avail in the union of the sexes; and this gives rise to such views as are expressed by Mr. Phœbus in *Lothair*, when he says, "It is the first duty of a State to attend to the health and frame of the subject. The Spartans understood this; they permitted no marriage the probable consequence of which might be a feeble progeny; they even took measures to secure a vigorous one. The Romans doomed the deformed to immediate destruction. The union of the races concerns the welfare of the commonwealth much too nearly to be entrusted to individual arrangement. The fate of a nation will ultimately depend upon the health and strength of the population. Both France and England should look to this; they have cause. As for our mighty engines of war, in the hands of a puny race it will be the old story of the lower Empire and the Greek fire. Laws should be passed to secure all this; and some day they will be."

Some philosophers, when contemplating the scarcity of individual life compared with the myriads of germs which are destroyed, have seen in epidemics a mode by which population is kept under, and have a kind of belief that Nature is not to be cheated of her victims; for, if man should devise the means of escaping from one plague, he will be overcome by another, although it appears under a new guise. We cannot, however, concur in this speculation, disagreeing, as we do, with philosophers, that the sickly are especially selected for removal. I shall presently show that this is not the case. We might, perhaps, endeavour to reconcile these high speculations with the antagonistic interference of the medical man, by making it our duty to study more the different temperaments of the race, and endeavouring to discover those causes which tend to develope them and their necessary morbid sequences. We might thus perchance arrest the tendency to disease; and the highest office of the medical man would be that of custodian of the public health. This is one, I might say, which he has already voluntarily assumed; and with that exalted view of his functions which, I am glad to say, animates our profession, he is always found battling with disease at its threshold, and endeavouring to arrest epidemic disease at its source. In a lesser manner, he should endeavour, in his own professional circle, to watch the dispositions and manners of his patient, and thus he may be able to advise and guide the children belonging to some of the temperaments before mentioned into those positions of life which would be most advantageous for them. The doctor is shown the precocious child by the fond parent, who discerns nothing but robustness in its mind and body; but he, with the eye of knowledge, sees already the latent tendency to disease; he may be able to destroy the seeds which might afterwards develope, or, should he not be able to prevent them striking root, he may arrest their further growth, even though it be true that we are born to die; for, as the poet says,

> "As man, perhaps the moment of his breath,
> Receives the lurking principle of death,
> The young disease which must subdue at length,
> Grows with his growth, and strengthens with his strength."

Although an older than Pope had already said,

> "Nascentes morimur, finisque ab origine pendet."

I have already said that the body has hereditary tendencies to morbid changes of special kinds, rather than to mere accidental diseases, and, therefore, that the various tissues are liable to their own peculiar degenerations. When we speak, for example, of a gouty man, we imply much more than his liability to an attack of arthritic trouble; he may have, or not, a *materies morbi* in his blood, but he is liable to temporary and organic derangements of a given kind—such as granular kidney, diseased heart and blood-vessels, articular inflammation, and gravel. In tuberculosis, in like manner, there is a tendency to changes in the epithelium of the cutaneous or mucous surfaces, whether bronchial or intestinal. In the nervous temperament, the nervous system is liable to be thrown into unstable equilibrium. But not only in hereditary, but in acquired diseases, we find that the morbid changes are of a particular kind, and that special organs and tissues are also affected. Thus in chronic alcoholism, we find a tendency to fibrous thickening of the tissues, whether these be in brain, liver, or kidney. We find, again, degenerations of a particular kind in syphilis, and in lardaceous disease, which is sometimes its sequel. From other causes, we may find the whole of the bony skeleton diseased, or the lymphatic glands, or the skin. Thus, as before said, it is but a shortsighted view to see special organs only affected by disease, rather than a general morbid condition affecting particular tissues, and occurring under given determinate circumstances. Such views as these have arisen, I believe, from a closer study of the dead; and this has been so little perceived by some, that I have often had to vindicate this department of science to those who have seen no more in it than a curious prying into the body, in order to discover the destruction of some great organ or satisfy a curious diagnosis. At one time, it is true, a diseased organ was simply cut to pieces, and the rest of the body not examined; but now-a-days, when the process is more searching, I maintain that a much larger view of pathological processes is obtained by a dissection of the dead, than could be arrived at by mere observation at the bedside. The narrower views of the ward are expanded in the dead-house. Much larger conceptions are gained, both as to the nature of disease and its diagnosis. A simple name for a diseased organ is sufficient for the ward; but the name for a distinct pathological process is required for the dead-house. In a paper published some years ago, in order to vindicate this view, I took several examples in illustration; and I said, if a person acquainted with healthy anatomy were placed in a room to dissect the dead taken from a hospital, he would very soon be able to arrange the cases in classes; he would soon place together, for example, those who had chronic disease of the lungs, those who had died of typhoid fever, and, amongst others, those who had that series of changes recognisable under the name of morbus Brightii, even though there might be some slight accidental difference in all of them. There might be, in a series of beds in a ward, one patient dying of pneumonia, another of laryngitis, another of peritonitis, and a fourth of apoplexy; and it is possible under these names the cases might be found in the list of the Registrar-General; but should they come into the hands of the necroscopist, as an unbiassed dissector he might find a recent inflammation of the lungs in one, or a clot in the brain of another; but since in all he would discover like chronic changes in the kidneys, heart, arteries, and other organs, he would rightly place them together; he would see that they all had the same pathology. This is sufficient to show how all but valueless are the Registrar-General's returns for pathological purposes; for example, if effusion of blood in the brain is to be classed amongst nervous diseases, nothing but error can result in drawing any conclusion of a scientific character from such reports. What I at that time said should be the aim of the pathologist, I repeat now; we should attempt to do for morbid anatomy what Bichat long ago performed for healthy anatomy.

Whilst I am on this subject, I must say a word in reference to another piece of pathology, on which a dissection of the dead can alone throw a light; and one which ere this (I own a personal shame) ought to have been perfected; it is akin to the matter of which we have been just now speaking. If it be true that the morbid changes are found progressing through tissues rather than affecting particular organs, as it were by accident, it follows that these different tissues have their own special morbid changes and none others. What we ask ourselves therefore is this question—what are the morbid changes to which each tissue is liable? Now, it is constantly assumed that degenerations may occur, and new growths of all kinds spring up, spontaneously in every part of the body, but this is certainly not the fact. If we take, for example, the list of diseases framed by the College of Physicians, which is in all your hands, it would seem as if there were certain morbid states, such as inflammation and its consequences, as well as various morbid growths, which may attack in turn every part and tissue of the body. But is this really so? The morbid anatomist ought long ago to have answered the question; and I believe, had my own attention been directed to this subject earlier, the amount of material passing under my hand would have been amply sufficient to have afforded a satisfactory solution to it. I will explain my meaning: suppuration of the lung is rightly not regarded as a stage of idiopathic pneumonia; consequently, if an abscess be found in the lung, we know that the seeds of it are brought thither from a distance, and we find the source of the pyæmia in some other part. Cancer again, when found in the lung, has, in my experience, been secondary to cancer elsewhere, and thus we suppose the seeds of it have been thereto carried; (intra-thoracic cancer may be primary, but generally commences in other tissues than those of the lung); then again, as regards other classes of tumours, as fibroid, myeloid, osteoid, etc., they

are invariably found existing there as secondary deposits. Now, if what I say be true, the primary morbid changes in the lungs are strictly limited; the epithelium may produce well-formed cells, as found in pneumonia, and ill-formed ones, as met with in the chronic degenerations, but beyond this the lung may be incapable of alteration. The same with other organs; the kidney undergoes certain limited changes, as seen in nephritis, but these do not terminate in suppuration, suppurative inflammation being always secondary; the liver also has certain definite changes, beginning either in the cells or the areolar tissue. The stomach has its own special changes, and is incapable of producing many new formations; as, for example, tubercle. It is thus probably very far from being true that abscess, tubercle, cancer and other growths occur in all parts and tissues of the body; but, on the other hand, that all these have their favourite or perhaps special seats, and when met with elsewhere must be regarded as secondary formations. It is remarkable how surgeons have always tacitly acknowledged this fact; for, when meeting with a malignant tumour on the surface of the body, they have seldom hesitated to operate from the fear of any internal complication, since their experience has taught them that the growth on the surface has been primary. On the other hand, the teaching of the surgeon with regard to inflammation and its consequence, as occurring on the skin, having been made applicable to the internal organs, has been the cause of a long series of pathological errors. A knowledge, therefore, of the special changes to which each tissue is liable is vastly important; the materials for furnishing us with the knowledge are always at hand, and the possession of it must be near.

I must say yet one word more in favour of the study of morbid anatomy—its necessary aid to diagnosis. No amount of clinical observation or acumen could enable the medical man to form an opinion of the nature of many cases without an acquaintance with the diseases which *post mortem* examinations alone can reveal. This implies that symptoms do not carry with them the interpretation of their cause; that symptoms are not, in fact, pathognomonic. The time has not yet arrived to enable us to associate symptoms with certain definite lesions, and we must be content at present to act on the doctrine of probabilities. When a cancer in the chest will produce the same symptoms as an aneurism, or an arachnitis the same cerebral symptoms as a diseased kidney, our diagnosis must rest on other considerations than symptomatology, and we are led to guess in one direction rather than another from extraneous facts. A slight sore throat in a boy at school where the epidemic of scarlatina exists, suggests this disease, not from the symptoms but from a knowledge of its presence in the house. Diagnosis being thus made by considering the probabilities in favour of the existence of one disease rather than another, in order to form a judgment, a thorough acquaintance with all diseases is necessary, and the man who has the largest knowledge of morbid states is he who will most likely arrive at the surest conclusion. It is clear then that mere acumen at the bed-side is not sufficient; the quick eye and ear may discern all that can possibly be learned, and yet the interpretation may be wanting, simply because the observer has not had a sufficiently extensive knowledge of all the phases of disease by which he can explain the symptoms. This fact I have constantly observed. Therefore, if it be true, as I think it undoubtedly is, that that man forms the best opinion of a case who has the widest experience of disease, it follows that not only is a study of the living necessary to diagnosis, but also that of the dead. Diagnosis is made up of two parts—the symptoms and their interpretation. The first is gained by clinical observation, the second by a knowledge of all the diseases to which the human body is liable. We have to try and discover all the ills, functional and organic, to which flesh is heir; and we then, in the living subject, watch the symptoms which are associated with them. In any given case we first take the symptoms and ask what they imply; the answer should be so much and no more. Secondly, we ask what are the probabilities in favour of their connection with one particular disease rather than another. The answer is the diagnosis. A study, then, of morbid anatomy, by making us acquainted more exclusively with diseased action, is necessary for accurate diagnosis.

I have said that, with the exception of sudden attacks of inflammation in the chest arising from vicissitudes of climate, nearly all the morbid changes found in the body have been insidious and slow. These are the diseases going on within, due to causes ever operating upon us quietly, or inherited from our fathers. There is, however, an altogether different class of affections, arising from causes which attack us from without. To these we are all liable; they are the specific contagious and epidemic disorders. The difference between them appears to be marked, and their peculiarity arises rather from the nature of the external agent than from the patient or recipient. To many minds the phenomena attached to the development of each of these diseases are so uniform, that they see in every individual example the offspring of a common stock; and they are strengthened in their view by the fact that the virus taken from a particular victim will grow and spread like a seed from its parent plant. They believe, therefore, in the possibility of stamping out contagious diseases, just as they might exterminate a particular animal or tree. There are other persons, however, who, whilst believing in the specific nature of these diseases, yet hold that they can be spontaneously generated, as, for example, typhus, from the crowding together of many people; typhoid, from decomposing vegetable matters; scarlatina, from decomposing blood; and, according to Miss Nightingale, small-pox, under various conditions of foul air. There are, however, yet others who, believing that specific causes are in operation, yet do not hold that they are necessarily propagated or generated in the animal body, but have an independent existence outside the human frame in the form of vegetable germs; for example, the element of cholera is, according to them, a rice fungus, that of measles a fungus of another species, and the virus of typhoid a third. If the analogy at all hold good between the phenomena of these diseases and those of animal or vegetable life, the conclusions would rather be in favour of each particular example of the disease having its origin in a parent source; and thus, as in the case of every weed in our garden, we assume that a seed has been planted in the soil, and leave it to others to prove its spontaneous growth, so, from analogy of reasoning, in the case of specific contagious diseases, we would leave the *onus probandi* to those who deny the more obvious explanation, and seek for another in the doctrine of spontaneous generation. Whatever may be the view we take, if we regard these diseases as in any way likely to have been produced by specific organic particles rapidly growing in a favourable soil, we cannot regard with any satisfaction the doctrine of elimination. According to the generally received views the virus, as that of small-pox, being inserted into the system, begins to grow and propagate in the soil until the process of development is complete, it may be to the actual destruction of the soil in which it has flourished. I cannot see anything like elimination in this, but rather a rapid and active growth, destructive in its progress. If the soil be not fitted for it, the germ may wither, but the abortion seems by no means due to any eliminative powers in correspondence to the youth or strength of the patient, but to an entirely different class of circumstances. I confess, if I knew the method of killing the virus at its source, or staying its growth, I should be inclined to do so rather than foster its development; and, if it be true that these specific diseases are due to the introduction of an organism into the blood, then all must agree that this treatment is rational. A ringworm grows and grows wherever the soil is propitious; the itch insect spreads over the body; and the hydatid often swells until its host is destroyed. Cancer-cells divide and propagate until they have killed their victim which has supplied them with nourishment; and the germs of small-pox will do the same. In none of these cases do I see any special power possessed by the body which can be called eliminative. If the cause, then, of specific diseases be due to germs, and these should be shown, as in the supposed case of cholera, to be nothing but a vegetable fungus, the analogy between such diseases and the parasitic, as shown by the result, is complete. The specific diseases then afford another example of what is witnessed throughout all nature—that the life of one is dependent on the destruction of another. There is a constant struggle for existence amongst all living things in creation; they are all living on others whilst endeavouring to protect themselves, and man is not an exception.

"While man exclaims 'see all things for my use',
'See man for mine,' replies a pampered goose."

The whole history of a living thing is not told unless it be shown what kind of prey it is to others. The naturalist, in describing the sheep, shows its digestive apparatus and appropriate food, and finally how it becomes meat for man; or a fish in all its anatomical and physiological details, and then how it becomes the prey of some larger creature. The naturalist, too, in describing the hydatid, from a hydatid point of view, would show its means of sustenance, and how some species rejoiced to feed on the liver of man; or how the trichophyton tonsurans found a favourable soil in the human head. I do not see any special power in the human body to get rid of these parasites; all I see is, an open war being waged between the guest and the host as to the mastery; each is trying to thrive, and consequently destroys the other. Would not the ivy, in writing its life, speak of its claspers by which it embraces the elm; and would not the elm speak of its destruction by the ivy? Would not the pretty dodder speak lovingly of the gorse, which it, nevertheless, often chokes. I think the philosophy of the whole matter is found in *Hamlet* when the Prince says to the King,

"We fat all creatures else to fat us, and we fat ourselves for maggots. Your fat king and your lean beggar is but variable service, two dishes to one table.—Alas! alas!—A man may fish with the worm that hath eat of a king, and eat of the fish that

have fed of that worm!—What dost thou mean by this?—Nothing, but to show you how a king may go a progress through the guts of a beggar."

In the case of parasites, it is clear that we have no inherent power to get rid of them, and all we can attempt to do is to destroy them by violence. If there be any truth, therefore, in the germ-theory of contagious diseases, the treatment of them is clear—war to the knife. The analogy would not be so close, if it were true that the weakly and the sick first became a prey to epidemic disease. This has often been stated by writers on social science, when conformable to their views; but facts are antagonistic to them. I have always taught the opposite, and can now speak with confidence since Dr. Walshe, in a lecture lately published, has expressed the same opinion. Many years ago, when reporting cases of fever, I said that I had never found any organic disease in those who had died of it, for it was not until typhus had broken out in the hospital, and after many years' experience, that I had an opportunity of seeing such a thing as a diseased heart in a person dead of fever. I think all members will bear me out in saying that it is amongst the youthful and vigorous that small-pox, scarlatina, etc., grow and prevail. From their own germ point of view, these diseases delight in the young and healthy; and, in the case of artificial poisons or those introduced into the system by accident, I see no effort of nature to get rid of them. The kidney, like every other organ, has its own peculiar function, and takes cognizance of certain materials in the blood and eliminates them; but it often seems to have no power to eradicate them from the system, for, in the case of lead-poisoning, the blood may throw them down in every tissue of the body, and there leave them.

Whilst on the subject of elimination, and the supposed efforts of nature to get rid of deleterious matters from the system, it might naturally be conjectured that, with the rejection of this doctrine, I should discard all such ideas as are conveyed in the terms, "conservative processes" and the "vis medicatrix naturæ". The supposition is right; and I would more fully have dwelt on the subject, had not Dr. Bristowe so admirably treated it in the Croonian lectures lately delivered at the Royal College of Physicians. He has put it very clearly before us, how certain physiological laws exist which we can watch like other laws in nature, and see how they always act in certain definite methods; further than this we have no right to go. We have no right to select a particular instance of a natural process, and declare that a conservative action is in operation, any more than choose another case and call the action destructive. The forces of nature go blindly on, heedless of results, and cannot be spoken of as if they were half intelligent powers with benevolent or baneful objects in view. Such notions would show that we had not reached the true scientific method, but, according to Comte, were still in the metaphysical stage of thought, when external agencies were supposed to be ruling the world. If we once admit them into our nomenclature, we are led into countless contradictions. If, in-instead of regarding the hypertrophy of the ventricle, in the case of obstruction of the blood-vessels, as a result of a simple physiological law, we speak of it as a conservative process, we are immediately reminded of the wrongfulness of the expression, when we see this same conservative process causing the rupture of a vessel in the brain, and killing the proprietor; or if we choose to call the blocking-up of the blood-vessels as they pass through a cavity in the lung, conservative, how are we to name the same process when it tends to the mortification of an organ, and perhaps the death of the patient. These laws are natural laws, and often not even strictly physiological; for where is the difference between the case of enlargement of the superficial veins when the vena cava is obstructed, and that of dirty water finding its way by the gutters when the main sewer is choked. If a conservative power preside in the one case, does it not in the other? I may be allowed to say that I do not take up this subject as the question of the hour, but am giving you the result of my matured thoughts, and such as I have always taught. I have always regarded such terms as, conservative, elimination of disease, "vis medicatrix", as purely metaphysical, and having no place in the vocabulary of medicine. This last term I discarded from my earliest student days, for I well remember when a surgical teacher used the expression with reference to a case of fractured skull, and when, notwithstanding that curative nature was to step in and mend it, the patient was seen on the *post mortem* table a few days afterwards with inflammation of the brain; I remarked, in terms which were considered almost sacrilegious, that the man would have lived with a crack in his skull if nature's vis medicatrix had not stepped in and killed him. I am convinced that, when we occupy our minds with metaphysical entities, and talk of conservative powers of nature, vital principles, and such like vague terms, we are hindering scientific discovery, by implying that there are agencies at work behind the phenomena which we witness. I confess I do not know the intentions of nature, and whether, when a man is purged in cholera, nature is endeavouring to cure him or to kill him. The doctor says the former, the social statician says the latter. I remember, too, we used to be told that not only disease itself, but even an accident, might contain within itself the element of repair; for example, a thorn which sticks in the skin would set up an inflammation and abscess, and thus be discharged. The very source of mischief contained the cure. A very striking and ridiculous rebuff to this doctrine occurred some years ago at my hospital, in the case of a young man who, having had too much to drink, fell off a plank whilst crossing to his ship, and was nigh being drowned. On his recovery, he was lectured on the serious consequences of spirit-drinking; whereat he replied that, on the contrary, he had been informed that it was nothing but the brandy in his stomach which had restored him to life.

Next to the evil of allowing some metaphysical idea to influence our mind is the fault of taking a scientific fact or principle, and making it explain a number of obscure phenomena without our possessing any data to guide us as to the correctness of the application. With one, a chemical theory is made to solve all abstruse questions in physiology and pathology; with another, cell-growth can do the same; and with a third, a nervous influence can accomplish all things. See, for example, what a remarkable experiment of Bernard has done for us. He divided the sympathetic in the neck of a rabbit, causing the temperature to rise, and the part to become more vascular. It seemed clear from this experiment, that the vascular supply is dependent on nerve-influence, and thus we are introduced into a new domain of vaso-motor and trophic nerves. What has been the consequence? Every ingenious man has sat down in his study, and assisted to flood medical literature with explanations of physiological action, morbid processes, or the therapeutic operation of medicines founded on the theory. Nearly every disorder of the nervous system, be it of an apoplectic or convulsive nature, as well as a large number of other morbid phenomena, can be now accounted for on the theory of an altered vascular supply through the vaso-motor nerves. The operation of many drugs is now made apparent by the influence they exert on nutrition through these nerves, the only difficulty being in the fact that the medicines have different actions, whereas the vessels are only susceptible of dilatation or contraction. It is for this reason that theoretical men have found strychnia and belladonna the two great agents for rousing and depressing the nerve-centres, thus enabling them to hold in their grasp the maladies supposed to be dependent on their rule. This great idea has been much simplified by substituting heat and cold, and thus these nerve-governing powers of the human body being stimulated to increased action by the one, or their over activity controlled by the other, every single complaint to which the human body is liable can now be cured, and all by means of spine-bags. I take this as one example of our eagerness for more knowledge; there are very few on this earth who are presenting us with new facts, or, rather, revealing to us some hitherto hidden secret of nature; and when they do bestow upon us the result of their labours, we grasp it, we hug it, we cannot make enough of it, until in the end we all become ridiculous. What we want are more facts and more truth; the praise cannot be too great which is bestowed on those who are silently working in their laboratories for our advantage. It is more light and knowledge that we want. I might here remark, that I believe it is the suppression of theory, and the keeping to facts, which has placed the Pathological Society of London in so eminent a position; and, to my mind, the more it has kept to dry, morbid anatomy, the more successful has it been. Those who talk of grouping together facts, and speak of our dead pathology, can scarcely be aware of the material which is required before this can be done. How much do we know, I might ask, of the changes in the brain, spinal cord, and ganglionic system, so as to associate them with living symptoms? The whole lies before us as an undiscovered country. So difficult does it seem to keep the great dictum of Bacon before us, and regard ourselves as the interpreters of Nature, and not invent false theories to ourselves, which are only "the children of an idle brain". I believe Ruskin is not far wrong when he says, "The more I think of it, the more I find this conclusion impressed upon me; that the greatest thing a human soul ever does in this world is to see something, and tell what it saw in a plain way. Hundreds of people can talk for one who can think, but thousands can think for one who can see."

If, then, we are struggling on, our facts scanty, our pathological ideas narrow or false, how is it possible that the art of cure can have a scientific basis? I have ever maintained, and must do so still, that our treatment at present is necessarily empirical. Even those who maintain the contrary, and found their opinion upon the newly discovered property of a drug to-day, are tacitly admitting that they must have worked in ignorance yesterday. A scientific treatment appears to me to require a thorough knowledge of disease to understand the meaning of the symptoms, and then to have a better acquaintance with the action of drugs. Why, look at the pulse; every one can feel a pulse and understand its indications, except some of those clear-sighted men with

whom we sometimes meet, and who declare that it takes a lifetime to understand its significance. Think for a moment of the pulse and some of the more evident circumstances which must influence it, or rather regard it as the resultant of a number of forces variously combined; why, the machinery is far more complex than any you manufacture in this town. There is the ventricle itself, affecting the pulse by the force, number, and regularity of its beats; then there is the condition of the orifice; then of the blood-vessel, its size and elasticity; thirdly, the state of the channels into which the fluid flows; again, the receptacles beyond them, and their facility or not of receiving the current of blood: then there is the quality of the blood itself; and, lastly, the intensity of the controlling influence over all. That all these conditions, and even more, are at work, is seen by the varied tracings of the sphygmograph, the importance of which a distinguished physician of this town (Dr. Foster) was one of the first to recognise. Now, I apprehend a true knowledge of the pulse would be the facility of appreciating how any one of these conditions mentioned was at fault; and a scientific treatment would be the appropriate remedy for it. I consider the pulse as a case showing the difficulty in acting on scientific principles; for, supposing the sphygmograph should now enable us to administer appropriate treatment, it shows that my proposition was true before its discovery. My great objection to the idea of scientific therapeutics is, that it necessarily implies acquaintance with diseased action as well as the meaning and importance of symptoms. What, for example, is the scientific treatment of cholera? "To try and check the fatal discharge", says one; "To let it flow", says another. In the meantime, and whilst the scientific question is being solved, I consider it a disgrace to the profession that we are not yet agreed as to the best hygienic methods under which the greatest number get well. What, again, is the scientific treatment of fever? This a few years ago would have been considered decided, if unanimity implied truth; for, amongst other rules, it would have been strictly laid down that, whilst the patient should have fresh air, he must by no means be chilled. This idea, however, seems to be a mere phantasm of the human brain, for we now hear that placing the patient in a cold bath is the most successful scientific treatment. So opposed to our notions does the advisability of placing a patient in a cold bath seem, that he who had attempted it years ago would have almost regarded himself as a murderer had the patient died; yet now the treatment is considered rational. As matters of minor consideration in this same disease, we daily ask ourselves whether it is better or not to encourage the sweating; whether it is better or not to remove the articular inflammation; and we make the same inquiries with regard to many other diseases. Whilst we are asking these questions, and obtain no reply in our present state of ignorance of the signification of symptoms, we point to the man who can show the greatest number of cures as the best practitioner, who is content at present with knowing that he has a large number of valuable drugs in his Pharmacopœia, which he finds eminently useful in particular cases; first having made the diagnosis, and then administering the drug. I believe that all reasoning on the matter naturally leads to my conclusion; but, if I look around and see what is practically being done, I feel no doubt of the justice of my remark. I see that the best advisers are those who most skilfully lead their patients through a difficult illness, guided only by experience; whereas I, on the contrary, see the very worst practitioners and the most ignorant among those who act on fancied scientific principles. Again, extra-professional persons, who have no knowledge whatever of medicine, are they who are almost exclusively influenced by that kind of reasoning which is styled scientific. A sick man, you know, does not like to take his physic blindly; he will know the why and the wherefore of its administration; and the more clear it is to him that the medicine is to act on this organ, or relieve this or the other symptom, with the greater pleasure does he swallow the dose. The whole train of reasoning must be wrong in such a case; but that is of little consequence to him. All quackery has for its basis science, falsely so called; and it is because of this that uneducated persons are mostly influenced by those who purify the blood, or put fresh vitality into the nerves. I may say, moreover, that all quack systems, as well as the worst methods within the pale of orthodoxy, proceed upon the plan of treating symptoms. The more closely a medical man adopts this method, wittingly or not, the nearer does he approach the charlatan. If what I have been saying be true, that changes in the body come about slowly and insidiously, our duty is rather to study how to check their progress, and not to devote ourselves to the treatment of the mere phenomena of the disorder. In so-called gouty persons, with malassimilation and tendency to articular inflammation and deposits of uric acid, much harm is often done by the continual use of alkalies, which often merely cover the presence of the gravel without in any way removing it; or, if the great toe be especially treated, the cause may still remain. When the body has relieved itself by these portals, it may show that the outward and visible signs, in the form of symptoms, are not to be meddled with. This, which has long been recognised in the case of gout, may be applicable to other diseases, and the relief expressed by a symptom be much greater than could be accomplished by medicine.

"Tho' when small humours gather to a gout,
The doctor fancies he has driven them out."

I think few would hesitate in saying that the medical man is doing much more for his gouty patient by prescribing a suitable regimen and medicine of that kind which operates on the assimilative organs, than by attempting to relieve particular symptoms. In like manner in a case of early phthisis, he would render better service by advising a particular conduct of life than by giving his attention to petty ailments. In acute affections the same may be said: he who treats a typhoid fever, having regard to its natural course and phenomena, would be more likely to meet with success than he who, as was done in past times, meddled with the various organs of the body, and should order vinegar rags for the head, expectorants for the chest, and astringents for the bowels. Some of our methods, without appearing so, may be equally absurd, as, for example, what was once proposed to me in a case of strangulated hernia, to defer the operation until the sickness had ceased. Our object should be to get behind the symptoms, and thus obtain a fair view of the case. Some of the most lamentable spectacles I witness occur in cases of nervous people, who, being treated according to their special wants, have procured for themselves a permanent place on the doctor's sick list. It is quite true that patients do not want to know anything about pathology: they have their aches, pains, and troubles, and for these they seek advice. It is of course the province of the medical man to heed these troubles, and endeavour to relieve them; but, nevertheless, I contend it is his duty to take, if he can, a just and comprehensive view of the whole case, and, whilst administering to the wants of the patient, yet not forget his high calling as a scientific man, and act for the general welfare of his patient and of society. He who simply pleases his patient by attending to local troubles, and does nothing but satisfy the prejudices and ignorances of the public, either has not learned the greater truths which his art and science contain, or is simply converting a noble profession into a trade. If the history of particular minds be identical with the history of the race, we shall find the mass of the public is in accord with the least scientific in our profession. A layman recommends a remedy for a symptom, and offers his friends a medicine for the spasms or a pill for the liver complaint, and so on. All quacks knowingly and systematically pursue the same course; and the least educated in the profession unwittingly follow a similar method. This is the explanation of such men doing large practices: their ignorance is a means towards success. In the history of the world we see savage nations attempting to exorcise particular pains, having of course no knowledge of their cause. At a later period, symptoms are treated; but in proportion to the advances of medicine as a science, is the attempt at a wider generalisation being constantly made. If scientific treatment had been at the present day in any way perfected, how were it possible that, within a few years, bromide of potassium, carbolic acid, and chloral, should become in turn universal medicines? If any fact were required to prove the absence of scientific system in the treatment of disease, it would be the universal administration of chloral: every patient has some bodily uneasiness, or is sleepless, and thus presents symptoms suggesting its use. It is a powerful benumber; but benumbing the sensibilities and paralysing your patient is not curing his complaint. If a man be raving mad, and you knock him down and stun him, he will be quiet, and you may praise highly the dose which you have given him. The practice might thus be developed into a valuable therapeutic agent, and a trained boxer might give blows on the head of different degrees of force according to the strength of the dose ordered by the prescriber. The method would hold rank with the universal administration of chloral, and, in the hands of an expert, might perhaps be more safe.

I cannot leave the subject of treatment without adverting to a method of practice which, I believe, is far from uncommon, and which some delude themselves is philosophic. We are called to a patient, and we feel extreme doubt as to the best plan of action: two opposite methods of treatment pass through our minds; the case may be one of pneumonia; and we are considering, on the one hand, the value of depletory measures, and, on the other, of stimulating; we halt between two opinions, and silently saying *in medio tutissimus ibis*, adopt a compromise. Now, if being in doubt, we did nothing, there would be reason in the plan; but to propose to oneself two methods and split the difference, is to adopt a treatment which I take to be most unscientific.

A very natural result of the instinctive feeling which all persons have to gain relief for their individual troubles without giving a

thought to the deeper question of the cause of them, is seen in their endeavours to compel medical men to give their undivided attention to particular parts of the body: I cannot say particular complaints, for of these the public knows nothing; but to particular organs and symptoms. They thus insist on one medical man devoting his powers to the heart, another to the kidney, another to paralysis; and, if he do not choose to obey their behest, the public, if they seek advice from him, are pleased to ticket him with the name of kidney or liver doctor, according to the organ they believe to be at fault. Is the public right in its demand, and the profession in submitting to it? If what I have already said be true, there can only be one answer. If the greater insight into the mechanism of man and the morbid changes to which his body is liable oblige us to take an increasingly comprehensive view of disease and its treatment, the idea of chopping up the body into separate parts must be strongly deprecated. Who would be most likely to possess the more correct view of the nature of cancer—he who saw it in some of its external forms only in a cancer hospital, or he who in a general hospital would meet with it in all parts of the body, and had an opportunity of comparing it with other morbid growths? It may be asked, Has not scientific advance encouraged specialism? I should say decidedly not. If history showed me that the more comprehensive method was adopted in ignorant times, and that a higher civilisation had brought with it the division of the art into sections, I would submit to the fallacy of my argument; but my reading of history proves the contrary. The votive offerings in our British Museum are monuments to the special cures practised by the Greek medical men; and in Egypt, we are told by Herodotus, every place was full of physicians, there being some doctors for the eyes, others for the teeth, some for the head, and others for the belly. If we read what was taking place in our own country a hundred years ago, we shall find this so-called division of labour carried to a much greater extent than now. Thus Goldsmith writes: "In other countries, the physician pretends to cure diseases in the lump. The same doctor who combats the gout in the toe, shall pretend to prescribe for a pain in the head; and he who at one time cures a consumption, shall at another give drugs for a dropsy. How absurd and ridiculous! This is being a mere Jack of all trades. Is the animal machine less complicated than a brass pin? Not less than ten different hands are required to make a brass pin? and shall the body be set right by one single operator? The English are sensible of this force of reasoning; they have one doctor for the eyes, another for the toes; they have their sciatic doctors and inoculating doctors; they have one doctor who is modestly content with securing them from bug-bites, and five hundred who prescribe for the bite of mad dogs." Other contemporary writing will show that there was good reason for drawing this picture; and, if it in any way approaches the truth, it is evident that the fondness for specialities has been waning, and a larger view of the practice of medicine, founded on a more scientific basis, is taking its place. With the progress in our science and art, this meddling with particular organs and symptoms has decreased; and this is what might have been expected, if the method were shown to be due to a lesser knowledge than exists at the present day. The division of our art into specialities, according to the manner of the Egyptians, is antiquated and unphilosophic. If so, the public suffer from their exactions, if they oblige a man to devote all his time to the skin; they reap the reward when they find a necrosed bone cannot be cured by arsenic. If they compel a man to give all his time to gout, they should not quarrel with him if he cannot reduce a dislocated thumb by potash-water; or, if they oblige a third to do nothing but look down their throats, it is their own fault when they discover that their best days are passed for taking good advice for their phthisis. I would not say for a moment that a physician or surgeon should not devote more attention to one subject than another. In fact, whether he choose it or not, his own turn of mind will incline him to do so; and, if this be the case, his advice will naturally be sought in the department in which he has most studied; but, having a knowledge of the whole range of disease, he is not likely to be misled or foolish enough to treat one symptom without considering its bearing upon others. The evil of so doing is less likely to occur now than formerly; for an ophthalmic surgeon may divine that blindness can arise from causes remote from the eye; and the obstetric physician knows that, with a highly nervous or hypochondriacal woman, his whole thoughts need not be given to the uterus; and thus, at the present time, every author of note detaches hysteria from any necessary disturbance of the womb. Should, however, an exclusive attention be given to this organ, absolute harm to the patient may result; and one feels often sorry to witness many cases of morbid irritability of body perpetuated by it. One of the few specialities where a long and extended experience enables the professor to gain a larger knowledge than the mass of medical men can possess, is mental disease; but this is one of the few least patronised by the public. At least, from my own observation it has seemed that, when a man's mind is going wrong, the last person whose aid he seeks is the "mad-doctor". The division into medicine and surgery, even, has its evils; and thus I am convinced that the best advisers for the people at large are the general practitioners.

Not only does the profession suffer in its true scientific dignity by its being divided—not only do those who seek advice often meet with disaster; but the poorer portions of the community suffer from the diversion of benevolence into wrong channels. It is a standing disgrace to England, and especially to London, that so little is contributed towards the maintenance of general hospitals. If we except those which are largely endowed, there is not one of the other great hospitals which has not often overrun its funds, or is forced to close some of its wards from sheer poverty. The public would not subscribe their guineas for so mean an object as the cure of an inflammation of the lungs, an erysipelas, or a broken leg, but choose rather to give their hundreds and thousands to maintain some special institution which was pleasing to their fancy. Sentiment often entirely rules; and thus the abject poor, with their vulgar wants, are neglected; whilst any amount of money can be raised to expend on a beautiful house and grounds for the care of hopeless jabbering idiots. I might also allude to the evil of drawing away cases from the hospitals where pupils resort for instruction, although it is therein, and from the physicians and surgeons attached thereto, and who rarely practise specialities, that they gain a knowledge of those very subjects which are supposed to be known only to the few. In whatever way, therefore, the subject is handled, the evils of the so-called division of labour are evident. There can be only one thing said on the other side: that it gives those engaged in the practice of one department greater facility in manipulation and the use of remedies. If may be true, if your watch be out of order, that the boy who can make a pin would be better able to set it right than the watchmaker if a pin only were required; but I think, for all this, the boy's advice would not in the first instance be sought.

In what, then, does our science consist? According to my idea, we study the peculiar tendencies and disposition of the human frame. We see in it the proneness to various changes and degenerations. We see acute rapid affections running their course in a few days, whose origin is legion. We see the body attacked by causes altogether from without. In all these cases, we stand by and watch. We have found various substances in Nature, the most valuable having their histories lost in tradition, which are useful in arresting morbid processes, or in assisting in the completion of necessary changes. Such medicines, when given as experience dictates, have saved the lives of numbers. This must be positively spoken of digitalis, opium, iodide of potassium, and some other remedies. I say we are still watching, for we do not yet know the value of symptoms; and, until we do, we have no right to interfere. Our sole duty is to act empirically. Nothing can be said against any system under which the greatest number have recovered. Suppose a number of hungry people crying for bread, and blessing their benefactor who continually supplied their wants: he would gain more credit than the man with a large political creed who devised a political scheme to prevent starvation; but undeservedly so, for the latter would be the truer philanthropist. So it is with the art of medicine. Apollo was the God of Medicine; and why? Because, says Bacon, "the variable composition of man's body hath made it a body easy to distemper, and therefore the poets did well to conjoin music and medicine in Apollo; because the office of medicine is but to tune this curious harp of man's body and to reduce it to harmony." It will be remembered that both the Society of Apothecaries and the College of Surgeons have chosen for their mottos adjacent lines from Ovid's *Daphne*, in which Apollo says, "Opiferque per orbem dicor," and "Quæ prosunt omnibus artes." I think a text for another theme might be got out of the intermediate line,

"Hei mehi! quod nullis amor est medicabilis herbis,"

which might imply that affections having a moral cause must be treated by moral means. Hysteria, for example, is too often perpetuated by the too officious interference of the medical man. Moral means often avail when all the herbs have proved futile. Daphne was right in running away from Apollo when he said he was a doctor.

In coming to a conclusion, you will see that I have pursued the course which I proposed to myself; viz., to offer you in the short period you allow me, some of the thoughts which have occupied my mind in reference to the objects and aims of the medical man. Upon the whole, the address may be considered disagreeable by some among you. Nearly every point is, I know, open to controversy, and will allow of something being said on the other side. This, of necessity, must be so; but I nevertheless think, if members of the Association state their opinions freely, their worth can soon be measured. It would no doubt have been easy to come here and indulge in platitudes and

conventional phrases about our glorious profession, but I have preferred rather to offer it to you for dissection. We might have met and congratulated ourselves and one another, and, in fact, have done as I lately read of a learned professor doing among his admirers, stroked each other's backs to make each other purr until we had all purred together. I have given you a kind of idea of the objects which, in my opinion, a medical man should set before him; he should, in fact, aim at a very high standard—nothing less, indeed, than the improvement and welfare of the material nature of man. If we become the advisers of families and the promoters of sanitary laws in our several towns, our calling is a high one; if we take ordinary cases of disease and endeavour to unravel their nature, our profession can be ranked among the sciences. We are obliged, of course, to attend to the immediate necessities of our patients, for it is by this means we earn our bread; and every man in this world, however high his calling, must submit to much drudgery; but take away our higher aims, and lower us to the pursuit of doing nothing more than tinker our patients by patching and soldering, our trade is a hateful one. There is no use in disguising a plain fact, that when a man takes no interest in his profession, but is simply working for bread, the practice of medicine is a wearisome business. It is immensely to our credit that we doctors make the best of our pursuit. The practice of it to many is wearisome in the extreme; we can never reckon upon a single hour as our own, and the recompense is in no way commensurate. Nothing but a long training could enable many of us to sit down for hours every day to hear the same complaints from a garrulous old female or hypochondriacal male. I am sure many must have approved Dr. Johnson's definition of the practice of medicine—"a melancholy attendance on misery, a mean submission to peevishness, and a continual interruption to rest and pleasure." There are very few but agree to the truth of this, and we must endeavour to diminish the annoyance as much as possible, and especially by placing high aims and objects before us. For my own part, I believe a much larger share of the conduct of mankind should come under the cognisance of the medical man. If it be his duty to have regard to man's bodily frame, and not merely to be (as Carlyle says) a body cobbler, his function is very large, and he immediately enters into the domain taken possession of by the social philosopher, parson, and philanthropist. It is simply our excessive modesty which has allowed our place to be preoccupied; for when we speak of "mens sana in corpore sano," we know that the two are essentially associated. Vice and moral evil are so closely connected with defective organisation, that I believe they can never be eradicated, whilst the latter is untouched. It were sometimes amusing, if not at the same time painful, to see a poor human wretch sharing his life between the lunatic asylum and the gaol. The surgeon and the clergyman alternately try their hand upon him; but the material is too bad, and the man remains incorrigible. If in any way it ever becomes our more direct duty to study and endeavour to improve the physical condition of our race, we have, indeed, a grand and noble function to fulfil; for it will be attempting nothing less than to raise our fellow-creatures in the scale of humanity, with all that is noble and good contained within it. The mention of the clergyman reminds me of another function which all of us have to fulfil. It is one not spoken of in our medical schools, or in our text-books on physic; it is one scarcely whispered of amongst ourselves, and yet it is a function which we unconsciously and instinctively accept. The people have imposed it on us, and we have become their father confessors. In a Protestant country, we take the place of the priest, and consequently an intelligent man or highly gifted lady can always find an educated and sympathetic gentleman in a member of our community before whom they can "purge their stuffed bosoms of the perilous stuff," whether bodily, moral, or mental, which weighs upon the heart. The trust reposed upon our honour is as flattering as remarkable; for, in the medical man's breast are secrets which, if revealed, would blast the reputation and prospects of many a family. When I speak of the possible future, and the social regeneration of man being dependent in a large measure on his material condition, I say it advisedly; for should any question arise as to my opinion of the existence of mental powers and qualities apart from cerebral organisation, I may as well say that I believe the two are intimately associated. Not only do I admit it with all other physiologists, but I believe that it is our duty, as medical men, to insist upon it and preach it. It is said that we are growing too materialistic, the word being used erroneously for too worldly, too conventional, too covetous, or too mean; but in its strict sense, I think we cannot be too materialistic. We are constantly hearing and reading much of powers and influences apart from human organisation; but I think that, directly we allow of the existence of any such influence, except those which proceed from man to man, we get into cloud land, and are all afloat as men of science. What Lawrence was denounced for declaring, we all now openly proclaim; not only so, but insist upon it as necessary to the interpretation of phenomena. Most of us would endorse Lawrence's statement that we know nothing of mind except in connection with matter, and that "the theological doctrine of the soul and its separate existence has nothing to do with the physiological question, but rests on a species of proof altogether different." That proof is not in my province, but most of us have the same conviction as the rest of mankind, that some more subtle essence lies behind all that we see around us, to explain "this material and unintelligible world." We feel that our minds, progressively developing, cannot suddenly cease to be, and we say with the poet—

> "For though my lips may breathe adieu,
> I cannot think the thing farewell."

When our work is done, when we sink into life's last sleep, our eyes will close,

> "As sets the morning star,
> Which goes not down behind the darkened west,
> Nor hides obscured amid the tempests of the sky,
> But melts away into the light of heaven."

ADDRESS IN SURGERY,

BY

OLIVER PEMBERTON, Esq.,

Surgeon to the General Hospital, and Professor of Surgery in Queen's College, Birmingham; Foreign Corresponding Member of the Society of Surgery of Paris; etc.

It has been customary to leave to individual selection the subject of this Annual Address. In the exercise of this unfettered discretion, some of my predecessors have devoted themselves to the consideration of a particular subject on which they were entitled—either from the circumstance of original research, or the advantage of practical knowledge—to speak with authority; whilst others have directed their attention to reviewing the progress of Surgery with all its bearings on the science and art of their time.

It may be that those who followed the latter course placed themselves more in harmony with the original plan of this undertaking; but it must not be forgotten that, during the number of years that have elapsed since this Association was founded, the entire scope and character of medical literature has been changed.

In these days the scientific discoveries of Europe, Asia, and America are, as it were, on our very tables, and within speedy reach of us all; surely it would seem then but a repetition of an old story to arrange them in order before you.

One of the happiest events, however, connected with these meetings provides an escape from any difficulty in the selection, from any sameness in the character of the discourse. They are held, in turn, in England, Scotland, and Ireland. The great cities of these kingdoms are so many centres of surgical study, having features marked and distinctive, created no less by local than by personal circumstances. For I take it, that it will be conceded that, whilst the great principles are well nigh everywhere the same, no art differs by its exercise so widely, whether in force, completeness, or success, as ours does, in varying hands, or when practised in places removed by distance from each other. Hence, whoever happens to be designated to fulfil this most honourable task, may be expected to possess some special experiences which his opportunities have afforded him in the place of assemblage—some illustrations of vexed questions in surgical treatment that may arouse interest in an audience even as critical and accomplished as that I have before me at this moment.

In this hope, and with a full knowledge of how illustrious are the names that have preceded me in accomplishing this task, I ask your indulgent consideration, whilst I endeavour to justify the confidence reposed in me by the Council of this Association, and by my professional brethren, as I submit to your judgment the fruits of personal observation connected with one or more of the chief maladies that demand the skill of the surgeon.

To solicit your attention to some moot points connected with the treatment of aneurism, is sufficiently appropriate in itself, if we only consider the increasing interest that at present surrounds it, and the impetus that must be given to its study by the exhaustive nature of the lectures now in course of delivery before the College, by Professor Holmes; but I cannot forget that we are assembled in Birmingham, where Freer and Hodgson lived and wrote—illustrious pair!—well fitted to be teacher and pupil. I cannot forget that George Freer was

the first to tie successfully the external iliac artery (4th October, 1806), and that Joseph Hodgson (*Treatise on the Diseases of Arteries and Veins.* London: 1815) paved the way to a clearer perception of the pathology of arteries and veins than had existed since the days of Hunter. So it is an appropriate tribute to their labours, that here, in this place, I should have the subject of aneurism foremost in my mind.

Professor Lister's improvement in the Hunterian operation, by which the permanent closure of the artery at the spot tied can be insured, without dividing the coats of the vessel, at once effects a complete change in some of the most important conclusions that for long years have guided us in our treatment of aneurism. One of the greatest dangers attending the Hunterian operation has hitherto been considered to be the application of the ligature immediately beyond any considerable branch of an artery. This impression has deterred surgeons from applying a ligature to that portion of the artery which otherwise would have seemed to them best adapted for the purpose. That an abiding coagulum will form under certain circumstances in the vicinity of almost any number of branches on the proximal side of a ligature, I am perfectly satisfied; but the attainment of this success in many cases depends on a fact which it is almost impossible for the surgeon to estimate beforehand; that is, the facility with which the blood will coagulate or deposit its fibrin in any particular instance. In the case I am about to relate, the existence of this tendency, in a much greater degree than usual, was the main cause of the success of the operation.

In June, 1870, I saw F., aged 60, strumous from childhood, and highly intellectual. There was an aneurism, three months old, of the left superficial femoral artery, about five inches below Poupart's ligament. There were marked indications of general arterial disease, and, during the past twelve months, of semi-paralytic seizures, evidently due to temporary hindrance to the cerebral circulation. Pressure failed, and was abandoned at the end of three months. I then advised ligature—the aneurism rapidly increasing. On October 12th, the aneurism having "leaked" the previous day, in the presence and with the sanction of Sir James Paget, I tied the common femoral with a hempen ligature. Fearing, from the diseased state of his arteries, the worst results, as the ligature might be thrown off, the wound was left completely open, being simply covered for protection. In forty days the ligature came away, and the patient died a week afterwards, from causes wholly removed from the aneurism. There was no hæmorrhage, but gangrene may be said to have commenced in one toe. When I came to dissect the arteries I found the circumflex ilii, epigastric, and the profunda femoris given off together, that is at opposite points of a line drawn round the main trunk, a little above Poupart's ligament, the point of ligature being five-eighths of an inch below these vessels, the part of artery intervening being firmly plugged. The profunda was pervious for some distance and then plugged. There were plugs of former date in the right and left carotids and in the left axillary arteries. The aneurismal sac was filled by broken down clot and fluid blood, and would have suppurated.

Now I cannot consider this case as any contribution to the surgery of the common femoral, though I hoped and expected it would be so; for I think hardly any doubt can be entertained that the patient would have died from secondary hæmorrhage on the separation of the ligature, had it not been for the unusual tendency of the blood to coagulate, for nothing could well be closer than those three vessels were to its site. At the same time I think, with Porter and Macnamara (On Ligature of Common Femoral. British Medical Journal, 2, 1867, p. 285), that the exclusion of the common femoral, on account of the assumed liability to secondary hæmorrhage and gangrene that follows its ligation, is not founded on any solid basis. It was selected in this instance in preference to the external iliac, and I should so select it again; of course, on the presumption that I was going to place my ligature in the vicinity only of such branches as the epigastric and circumflex ilii; in the presence of which I feel satisfied that an adequate coagulum may under ordinarily favourable circumstances be reasonably expected to form.

It is rather here then I draw your particular attention to this feature of coagulation. For I ask myself this question: If I had tied the artery—complicated as its irregularity was in this instance—with a hempen ligature, and there had not existed this tendency, would it have held? Assuredly not. This same tendency to coagulation, as manifested in the collateral vessels, whilst it preserved the patient's life, would, I may observe, have subsequently caused his death by gangrene. Further, it appears to me that in proportion as the coats of the arteries deviate from their natural state, and as the general vital conditions are lowered, so is this tendency increased.

Surgically speaking, then, this very circumstance of diseased arteries and tendency to blood-coagulation, in some cases, establishes a reason why the surgeon should not refrain from operating where the diseased condition of the coats of the arteries alone would lead him to abstain from interference. And it is clearly of the utmost importance to increase this tendency to the coagulation of the blood as much as possible, after all operations for aneurism, by good diet, and by the absence of all depressing remedial agents.

Apart from this question of coagulation, I feel warranted in expressing my conviction that too much stress has been laid on the disturbing influence of a large branch or branches taking origin close to the part of the vessel tied. If, however, we are to believe the teaching of Professor Lister (*Observations on Ligature of Arteries.* Edinburgh: 1869), it will be of little moment in the future whether a plug form on either the proximal or distal side of the ligature at all, so long as the "prepared catgut" insures permanent closure of the vessel at the spot tied, without severance of the coats, and, consequently, without liability to secondary hæmorrhage.

From what I have seen since this case came under my notice, I am glad, before such a meeting, to be able to express my unbounded admiration of and confidence in the use of the animal ligature, as placed before us by Professor Lister. If the so-called "antiseptic system" has effected no more for surgery than to give us the means of effectually closing an artery without cutting it through, and without suppuration, it has in doing this placed the crowning glory on the treatment of aneurism, for which it has waited since the time of Hunter.

For forty days I watched patiently for the detachment of this ligature with an open wound to escape deep-seated suppuration. I watched twenty-one days in a case last May, in which I tied the external iliac for aneurism at Poupart's ligament; and though the case did perfectly well, the suppuration about the track of the hempen cord gave me the greatest anxiety.

Last August, Mr. Lund, at Manchester, tied the same artery with a catgut ligature. No pus was secreted: the wound healed on the eighth day.

Professor Lister remarks that ligature of the innominate must yet prove, with these means at command, "a very safe procedure." Yes; but always, I presume, provided that the coats of the artery are healthy where the ligature is applied; and on this we await further evidence: given this, and I feel inclined to echo the assurance.

I shall now endeavour to show that the principles of treatment in the methods of flexion, compression of the sac, and manipulation, are one and the same.

The method of flexion can only be applicable to certain arteries. All that it is needful to do is to keep the limb flexed, not continuously, but to such an extent as to alter the relations between the orifices of ingress and egress, and the fibrinous laminæ of the sac. Some of these laminæ become, as it were, dislocated, and protrude more or less into the stream when a fresh deposit of fibrin occurs, and so the cure is gradually effected.

The exercise of pressure on the artery above the angle of flexion appears to me useless. What we want is a stream of blood flowing into the aneurism; that it should be more or less retarded there, and that there should be present something in the nature of a foreign body; for example, the fibrinous laminæ, on which blood would coagulate and deposite its fibrine. This retardation of the blood in the sac can be effected by a gentle compression of the artery on the distal side of the aneurism; as I strongly hold that what we want in these cases is a deposition of fibrin rather than a coagulation of blood. For, surely, the slow deposition, layer after layer, of solid fibrin in the sac, until the filling-in is complete, is a surer guarantee against subsequent mishaps than if it were closed by a mass of suddenly coagulated blood.

I place before you the case of K., a Lascar, 22, who came under my care May 10, 1869, having an aneurism of the left popliteal artery of four months duration. Flexion was maintained for seventy-two hours, with the result of the aneurism ceasing to pulsate, and becoming solid in eleven hours. Compression, during the first forty-eight hours, of moderate character was also made by Weiss's instrument on the artery in Scarpa's space.

I believe that this was the first instance on record in which the combination of compression and flexion was made use of; and the case was published very fully at the time in the *Lancet.* But I feel satisfied now, in reviewing it, that pressure below the sac would have proved more advantageous than above.

If one wanted convincing of the very slight means whereby important curative changes may be brought about in aneurismal sacs, I have but to ask a consideration of the facts connected with the following cure, in thirty-nine hours, of a popliteal aneurism.

M., 28, a porter, came under my care on the 17th January, 1871,

with an aneurism of the right popliteal artery five months old. On the 22nd, I showed the patient how I proposed to treat him—by flexion—at the same time bending his leg, and arresting the circulation through the sac. It is very likely that the patient, in the afternoon, subsequently to my visit, imitated my proceeding, as he seemed very much struck by what I had done. Be this, however, as it may, I only bent the limb once, and fingered the sac lightly, and told him to keep quiet. At two a.m. on the 23rd he was seized with sudden aching, shooting, gnawing pain in the neighbourhood of the aneurism, extending down the calf of the leg as far as the ankle, and upwards as far as the crest of the ilium. The pain continued very intense for some hours, during which he had no sleep. He had severe nausea, but no vomiting, and was chilly. The pulsation in the aneurism seemed unchanged, but he remained poorly all the day.

On the 24th, he slept until three a.m., when he awoke and found that pulsation had ceased in the aneurism. The limb was cold below the knee, and œdematous; and though the pain of the previous day was better, it was not gone. On examining the aneurism it felt hard, and was free from pulsation. He was subsequently discharged cured.

I am inclined to think that coagulation commenced here after the first flexion; that the deposit of coagulum, after a few hours, increased rapidly, as indicated by pain which culminated in intensity as the sac was solidified. There may have been a clot detached which plugged up either the proximal or the distal orifice; if so, it took place at the final exacerbation of pain, when pulsation ceased; for I certainly judged the contents, when I bent the limb, to be fluid.

The verification of the intense pain that occurs, when the blood-current is forced suddenly into narrow collaterals, or at the supreme moment when the contents of the sac are solidified, was here very conspicuous.

To ask, for a few minutes, the judgment of a skilled assembly, such as this, on the probability of applying pressure with success to the actual sac of an aneurism, would appear to be returning to the pre-Hunterian period; and yet had the theory by which aneurisms are cured now, been fully comprehended then, I can have little doubt that the necessary deposition of fibrin would have been brought about in many instances that otherwise signally failed.

I entertain the opinion that compression of the sac ought to be used more frequently than it is now. The principle of this proceeding is exactly the same as flexion; we want simply to alter the relations of the laminated fibrin to the cavity of the aneurism, so as to bring about a further deposition of fibrin on the projecting surfaces of any of the displaced laminæ. The pressure need not be continuous. It should be very gentle. It need not, even, be distributed uniformly. But it must ever be borne in mind, that if it be carried to such an extent as to empty the sac, and to press one wall against the other, then a cure cannot occur. The very conditions under which a cure is possible are here ignored. Blood must pass through the sac. It must not pass through too rapidly; and I now think that this would be facilitated by gentle pressure being made on the artery below the aneurism.

In March, 1857, I visited D., 67, an active sportsman and farmer. He had an aneurism, a month old, of the right external iliac artery, just above Poupart's ligament. It was somewhat fusiform in shape, measuring three inches in length, by one and a half in breadth. There was no bruit. I failed to arrest the circulation through the aneurism by making pressure on the artery above, but I found I could greatly limit the current by making pressures on the sac itself. The question of an operation being raised, I advised that, as a ligature could hardly be applied to a sound artery, other than in the course of the common iliac, and bearing in mind the vicinity of the bifurcation, no operation should now be performed; but that Dr. Carte's compressor, under careful management, should be applied to the sac itself. Accordingly under my directions two senior students (the late Mr. Dennis Moore, of Walsall, and Dr. Neal, of Birmingham) remained with the patient. The treatment extended over a period of six weeks. During the first fortnight, little good was effected. Then, for eight consecutive days pressure was applied, on an average of seven-and-a-half hours per day. The pressure effectually retarded the circulation—nothing more—and was never applied for more than three or four hours at a time. Consequently, the patient was not wearied, and had undisturbed nights. There was now a complete interval of nine days, during which no pressure was applied, the aneurism being firmer and with less pulsation, and he was allowed to move about in his room. Then followed nine days of treatment, averaging six hours and a-half per day. From this time the aneurism ceased to pulsate, and the patient gradually resumed his ordinary avocations. He is yet living, in his eighty-third year, active and well. In December last (letter from Mr. Earlam, of Abbots Bromley) the remains of the aneurism were represented by an indurated enlargement about the size of a chestnut.

I venture to think that even Dr. Macnamara will give me credit for having studied O'Bryen Bellingham (*Observations on Aneurism*, London, 1847) to some purpose, who, happily for my patient, published his observations in the January of this very year.

Reduce the force and volume of the blood current by any carefully considered measures, and we follow out the reasoning of Brasdor and Wardrop in the distal ligature; a reasoning which is rendering amenable to treatment internal aneurisms hitherto beyond surgery; a reasoning that has the authority of nature's own proceedings to recommend it, from the fact that it is more or less identical with the mode in which the so-called spontaneous cures are brought about.

I own, this case—unique as it is in this situation—has always been in my mind, on the discovery of any fresh instance of aneurism. It serves to confirm the soundness of the remark, that in proportion as the true method of curing aneurisms has been fully understood—that is, the gradual lessening of the blood-current to final and complete coagulation in the sac—so have the means whereby this has been brought about, become simpler and more safe.

The occurrence of these cases led me to the attentive consideration of the facts, as they are at present before us, connected with the purposed displacement of the contents of the sac of an aneurism, in the hope of plugging up either outlet: and the case of M. happened when a subclavian aneurism* was under my notice in another ward, about the treatment of which I was—to say the least of it—previously undecided.

It seemed to me so impossible to limit the degree of force, short of extreme hazard, in the method originated by our distinguished *confrère*, Sir William Fergusson (*Medico-Chirurgical Transactions*, vol. xl, 1857); and I was not reassured by perusing the cases which he has recorded, or those of Mr. Pollock (*Op. cit.* p. 45).

I cannot but regard the treatment by manipulation to be based on exactly similar principles to those on which the methods I have just alluded to are founded. No forcible pressure to detach fibrinous laminæ, in my judgment, ought to be used; as the result would be the almost certain separation of small portions of the clots, which would be carried into the circulation, and would eventually plug the smaller vessels, causing symptoms according to the functions of the parts which the plugged vessels supply. For I must own I have not been able to see how these clots could be located at either outlet, to be fixed by arrangement, as it were, at a spot where it is simply impossible to be assured that they could effect a lodgment. All that is necessary is, that the aneurism should be gently manipulated, so that the laminæ of fibrin in its interior should occupy a different position to that which they had previously held with reference to the two orifices of the sac; and in order that the blood should not be allowed to pass out of the sac too freely, if I have an opportunity, I shall endeavour to compress the distal artery in accordance with the principles I have been advocating.

B., 32, a former Lifeguardsman, was admitted into hospital October 20th, 1870, with aneurism of three months' duration, in the second and third parts of the right subclavian. It was as large as a hen's egg, and accompanied by bruit, and by dilatation of the axillary artery. He stayed a month, during which time iodide of potassium was freely given; and then, frightened at the idea of an operation, he suddenly left. On January 20th, 1871, he was admitted again. The aneurism seemed firmer, giving me the impression that fibrin had been deposited. From February 10th to 14th, the sac was manipulated, night and morning, for a few minutes. The proceeding was one of the utmost gentleness and regularity, and consisted in making pressure with the thumb and finger, so as to slightly appoximate its fibrinous walls, and, whilst thus limiting the circulation, probably rendering the clot surface somewhat irregular, and promoting the tendency to deposit already commenced. On the 11th, pulsation was much weaker. On the 14th, it ceased altogether. There was no brachial or radial pulse below the aneurism; and he complained of pain, extending downwards from the aneurism to the iliac region. This was constant, severe, and of a numbing character. There was no constitutional disturbance. During the following days the collateral circulation about the clavicle and shoulder developed itself; and especially noticeable was a large transversalis colli crossing over the aneurismal sac. On April 17th, he left for the Sanatorium, the sac being small and hard. Since this time he has pursued his business as a hawker, travelling all over England. I examined him, and so did my colleagues, as recently as the 19th of June, sixteen months after the cure of the aneurism, and I noted the following facts. A little induration marks the site of the aneurism; the axillary artery and upper part of brachial can be felt, cord-like, as far as insertion of coraco-brachialis—here pulsation

* Pollock records three cases of direct compression applied successfully to subclavian aneurisms.—Guy's *Reports*, vol. xvi, p. 63.

begins, and can be felt, feebly, in the radial at the wrist. He is himself excessively thin, but well and hearty.

The absence in this case of any symptoms of paralysis during the four days in which the sac was manipulated, justifies the inference that no clot at least passed into the cerebral circulation, and I entertain myself the conviction that the cure was brought about by a steady process of lamination, rather than by a detachment of a clot, happy enough to fit into either orifice of the aneurism.

I have now to call your attention to what I believe to be a not uncommon result of the cure of aneurism, after it has been effected for some time; I meau the formation of varicose aneurism or aneurismal varix. I shall first relate two cases. In 1844, my late colleague, Mr. Amphlett, tied the superficial femoral for an aneurism of the artery as it enters Hunter's canal. The patient was aged 41, and a soldier. There was nothing unusual at the operation, and the ligature was thrown off on the nineteenth day. Ten days subsequently, there was arterial hæmorrhage from the seat of ligature. This recurred in ten days, and a third time in fourteen. Pressure on the arch was used, and the patient recovered. He remained well for upwards of three years, when a tumour formed at the seat of operatiou, which was evidently an arterio-venous aneurism. With this coming under the care of my colleague, Mr. Baker, (our President), he died with a drunken pleurisy, just five years from the date of the operation. I was fortunate in being able to dissect his vessels. The femoral artery had formed an aneurism at the seat of the operation as large as a hen's egg, and the femoral vein communicated with the artery by a large opening. The former aneurism was cured, and the artery between it and the seat of ligature was impervious.

M., 50, a soldier, syphilitic and intemperate, became the subject of an aneurism of the upper part of the right posterior tibial artery. Pressure was made over the artery on the pubic arch, for three weeks; on it, below, for nine months. The aneurism was cured. Ten months afterwards, an arterio-venous communication formed at the chief seat of pressure, and the patient died in about a year and eight months subsequently. I had the opportuuity of minutely examiniug his body, and I came to the conclusiou that pressure on the pubes induced varix in the femoral vein, at the situation of the saphenous opening; that this subsequently, sustaiuing pressure, enlarged and became adherent to the artery, aud finally, by a succession of changes, readily comprehended, between a diseased artery and a diseased vein adherent to each other, ended in establishing an aneurismal varix.

At the time when I published this case, which was done at considerable length in the *Medico-Chirurgical Transactions* for the year 1861, I attributed the results merely to the injurious effects of long-continued instrumental pressure, producing morbid changes around and between the contiguous veiu and artery; and I was inclined to quarrel with Bellingham's remark (*Medico-Chirurgical Transactions*, p. 12) "That no morbid change of any kind takes place in the artery or veiu at the site of instrumental compression." Subsequent reflection, however, and an attentive study of the preparations, have led me to seek a different explanation. Thus, in consequence of the diseased conditions and diminished elasticity of the arterial walls, which almost constantly exist in all arteries above the seat of an aneurism, the velocity of the blood-movement is considerably retarded. It is evident that this retardatiou must be materially increased by the obstruction at the seat of ligature, or the seat of long-continued instrumental compression. The immediate consequence of this retarded velocity is an increase in lateral pressure. This dilates the diseased coats of the artery into au aneurism, which—by the usual processes of pressure, absorptiou and disintegration—opens into an adjoining vein. Sometimes, as in the second case I have adduced, the opening is effected directly into the vein without the previous formation of an aneurism—and the vein subsequently becomes varicose by the passage of arterial blood into it.

It is now with regret that I must leave this subject and pass on to another.

Up to the early part of the year 1868, I had invariably performed the lateral operation of lithotomy in all cases aud at all ages, and had encountered that good and ill luck that always, sooner or later, disturbs the statistics of the most successful or the most unfortuuate of operators who take all that come before them. I had reached my sixtieth case. Of this number, thirty-five were under twenty years, and but one had died from the operation—a child of four, a complicated case, with stone both in bladder and urethra. Of the remaining twenty-five, four had died at 79, 59, 56, and 53. Surgically, there was nothing to be regretted concerning these, save their deaths; for about them all were conditions favouring a bad rather than a good ending—conditions that happen with stone, at all times, and to all people, and will happen again; so I need not touch on them further now.

In all this I had used the single knife and the laterally grooved staff, and I did not think then I should use any other instruments as long as I continued to operate. But what happened? I cut a boy of eleven, and extracted an ordinary-sized stone, without, apparently, complication of any kind. Hæmorrhage followed, of such severity that it was with difficulty controlled, and death from its immediate effects took place within twenty-four hours of the operation. I could find nothing in the *post mortem* examination to account for the bleeding. It is true he had but one kidney, but that had nothing to do with his death. It was clear the cutting did it somewhere; and I naturally thought I should like, in the future, to extract such a stone as the one I then removed with less of the cutting in the dark, if possible. Accordingly, I turned to median lithotomy. Allarton, who practised near here, had delivered a lecture on the subject of lithotomy simplified, in the Sydenham College, in 1854; and I was much struck by his arguments as to the capability of dilating the neck of the bladder without incision. I felt satisfied that, for bladders within reach of the finger, and for small stones, if not for all, there should be escape from the fear of uncontrollable hæmorrhage, though I had never tested his proceeding in the living subject. Since, I have had an experience of twenty-five cases. Of these, twenty have been of ages from two to twenty years, with not a single death. Of the five, of ages from forty-six to sixty, one died of peritonitis.

I perform the operation in the following way. I open the urethra, just behind the bulb, on a centrally grooved staff. Along this, I pass into the bladder a tapering probe-headed gorget, withdraw the staff, and, taking hold of the handle of the gorget, pass the finger gently along its groove into the bladder, letting it dilate as it goes, and so take the place of the receding guide.

Now, I know that many believe that this dilatation means laceration. It has, indeed, not very long since been described as "complete rupture and laceration" (Mr. Teevan: *Lancet*, vol. ii, 1870, p. 237), and as "unsurgical and dangerous." I answer this statement, which I venture to characterise as eminently reckless, by a positive contradiction as to facts.

I have cut enough cases by the ordinery lateral method, and am still cutting them, to know the difference between laceration and dilatation. I am quite satisfied that my finger passes into the bladder without laceration in the operation I have described. I feel the entrance gradually narrow itself into a mere ring, which encircles and equally grasps my finger on all sides. Through this ring pass the forceps; through this ring passes the stone, and any number of stones, or any fragments of stones; and there is no laceration, unless the stone be too large for the proceeding, or violence have been used.

I hold that it cannot be necessary to make incisions to the same extent to remove a body of the size of a pea, as we should make for one of the size of twenty peas; and, further, my conviction is that, whilst in all ordinary dangers, the median operation as compared with the lateral, is simply equal, in two it is immeasurably less. These are the dangers from hæmorrhage, and from prolonged recovery. The danger from hæmorrhage in the median operation can only arise from a central wound of the bulb. It is not unlikely to take place, and did occur to me once in the twenty cases, and was readily arrested; for it must be borne in mind that the source cannot be far away, and so happily cannot require the use of that most hateful of all appliances—a plug for the wound. As to recovery, the exception is to find any constitutional disturbance at all. The urine is retained and passed naturally. I would like to ask if any one ever knew a patient pass his urine naturally with a "lacerated" neck of bladder? and the wound is healed mostly within a fortnight.

I shall be prepared for it to be said of my advocacy of median lithotomy—"The statistics of your own cases are against you." My answer is, "Statistics are not everything." A case may end just as successfully one way as another, though the troubles on the journey differ widely, and no one will question that lateral lithotomy in children is eminently successful. But every operator who has sufficiently tried any given two methods of procedure, has a right to say which of the two he prefers; and therefore it is that I say, when I reflect on the anxiety that I endured in watching the threatenings of mischief in children cut by the lateral operation, I rejoice that I have cause for it no longer, notwithstanding the general good fortune that attended my practice with that method.

And now as to the cases where the median operation should not be selected. In any instance where the finger is not likely to reach the bladder, so that instrumental dilatation would be required, the lateral operation should be preferred. The reason I use my finger is because I have more control over it than over an instrument. I can regulate the one, not the other. I would sooner cut than lacerate at any time, and I consider that the use of instrumental dilatation in this operation meaus laceration. You may use it, on aud off, with impunity, but it is

a most destructive instrument—reviving all the dangers of the discarded Marian. I attribute the peritonitis, which carried off my single fatal case, solely to the laceration of the neck of the bladder that of necessity followed its use. I repeat, the only dilator must be the finger, and so long as the neck of the bladder can be widened by this sufficiently to allow of the removal of a stone without laceration, I shall deem it a part of my duty to advocate the adoption of this form of mediau lithotomy.

I hope, however, my observations will not be misunderstood. I am second to none in admiring what Cheselden practised, and what Liston and Fergusson have brought to perfection—the lateral operation for stone. I have been surrounded during the whole of my professional life by teachers and colleagues who have had unusual opportunities for practice, and who have realised brilliant successes in this very operation; but, in my opinion, it is not the most desirable operation to perform for all stones, at any age and under any circumstances, as some would have us believe.

I now desire to say something about stricture of the urethra. It is to me remarkable, but it is true, that the views entertained by the highest surgical authorities of the day, differ on no subject so widely as on the particular system they adopt and recommend in the treatment of stricture. Simple dilatation and rest, I am thankful to say, have had a great following, and, if I mistake not, will yet rise into higher position. The main quarrel is between the advocates of internal as opposed to external division. The late Professor Syme (*Stricture of the Urethra*, p. 21, 1855) thought he had effectually put an end to the use of those "dreadful engines," as he termed M. Reybard's instruments; but he was mistaken, for strictures of this day are both cut, split, and torn; and new engines for the purpose multiply, as if the great surgeon had never lived to speak of plunges iu the dark with caustic, or of ripping open the urethra by internal sectiou.

Stricture may fairly be defined to be a diminution of the normal diameter of any portion of the urethral canal; and as it must be admitted that the existence of auy stricture, however slight, from whatever cause proceeding, and of whatever nature, may sooner or later give rise to serious consequences in the condition of either the bladder or kidneys, it is needful for the surgeon to discover it and cure it as soon as possible. But the real question is in reference to this word cure. Have we to deal with a simple stricture that has resulted from inflammation of the lining membrane of the urethral canal, or with a stricture, originally of this kind, which has been aggravated and increased in extent by ill-considered surgical proceedings?

For the first, there is a cure by simple dilatation. For the second, there properly is no cure. Once organic stricture, always organic stricture, is my belief. Whenever the lining membrane of the urethra has been injured, whether by accident, disease, or by bad surgery, the spot will contract and establish permanent stricture, aud I do not believe that the materials constituting such cicatricial narrowings are ever absorbed.

If you endeavour to restore the normal calibre of the urethra under these conditions by ever so well considered a system of dilatation, my opinion is that the contraction will return sooner or later with increased vigour, the natural elasticity of the canal being gone; in other words, dilatation will not effect a cure, aud never does effect a cure.

But dilatation, if it be well and properly carried out, will protect the patient against the occurrence of those diseases which, dependent on individual health and mode of life, arise either rapidly or slowly in all cases of stricture. The degree to which it is necessary to carry this may fairly allow of discussion; for I have ever before my mind the conviction that the very means made use of to effect the so-called cure, may become the certain cause of the continuance, and, in many cases, of the increase, of the malady.

I think it will be admitted that the tendency to narrowing in cases of stricture, differs very markedly in individuals. Some may show few signs of change during many years, others, especially those arising from the effects of laceration by direct violence, certainly, surely, and often rapidly increase. In all cases, treatment by dilatation is necessary; but I doubt myself whether it is needful always to endeavour to restore the standard of the canal to the utmost of its original extent. I believe that there are many cases which admit of being maintained at a standard short of this, depending, however, on the facility with which the contraction yields, and its rate of increase subsequently. And it must never be forgotten that when once this treatment by dilatation has been commenced—no matter how carefully or how thoroughly it may have beeu done—it will have to be continued, whether at the hands of the surgeon or of the patient, more or less during life.

For my own part, time being given, I do not believe that there is any stricture through which an instrument cannot be passed by a skilful surgeon. This being so, treatment by gradual dilatation follows; aud in my judgment this should be by the silver catheter, as the safest, simplest, and most certain instrument in the greatest number of hands yet given to us, *bougie à boule* and *bougie olivaire* notwithstanding. If the induratiou be cartilaginous non-dilatable, or if there be fistula, the treatment by external division on a grooved staff should be adopted as speedily as possible.

Entertaining this view of the permanence of the changes established in the urethra by injury or disease, I am not very likely to favour any internal severance of the lining of the canal, whether by Mr. Holt's method of so-called "splitting," or by any form of internal cutting. I believe a wound is produced just as much in the one case as in the other. I regard those methods as artificially inducing the very conditions which I lament should result from almost unavoidable causes; and I further believe that a shut-up wound on the internal face of the lining of the urethra, is attended by dangers, from which an open wound on the outside face is comparatively free.* I have had occasion to divide the urethra after Professor Syme's method in upwards of thirty cases. In one case only was there a fatal ending, and this from pyæmia. In no case was there a relapse, provided that an instrument was passed from time to time, the frequency of this being determined by individual tendency to re-contraction, once a month to once iu three months being about the average; and by this means the calibre of the urethra was without difficulty maintained at its original standard. All the cases that I have seen, save one, have required this continued resort to dilatation, aud will require it, in my judgment, more or less, during life. For there is no more a cure by this, than by dilatation or splitting. In the case that did not require it a fistula remained permanently in the perinæum, letting through a little urine, the general stream flowing by the urethra, which at the end of twelve years shows no disposition to contract.

If the induration of the urethra, and narrowing, be of such an extent as to preclude the idea of dealing with it by external division, I prefer to tap the bladder by the rectum. I do not feel inclined, at present, to divide from the bulb to the meatus; and this literally must be the length of an incision in many of these long-standing cases, if the entire disease is to be dealt with.

There are numbers of these inveterate cases wholly unsuited to external division; but they are eminently calculated to be dealt with by a method which deviates the course of the urine to another channel, in order that rest may heal the fistulæ, and absorb much of that adventitious material blocking up the natural urethra, which can then readily be found, and have a standard established almost without resort to dilatation.

I frankly say that I do not believe that either internal or external division of any urethra will cause the healing of fistulæ in the groin, buttock, and perinæum, where a man passes his urine, as it has been graphically described, like a watering pot. (See Discussion: Medical Society of London: British Medical Journal, November, 1870, p. 590.)

Surely relief by the rectum will stand comparison with all the manœuvres that have been suggested from the days of Hunter to Grainger, and from Grainger, who, by the bye, belonged to us here, to Gouley and Wheelhouse. I cannot conceive why a patient is to sustain —sometimes for hours together—the distress belonging to hopeless attempts made to trace, in that stage of the disease, an impracticable canal, when the chief cause of the malady—the flow of urine—can be reached and diverted iu a moment. Since Mr. Cock published his views (*Medico-Chirurgical Transactions*, vol. xxxv, p. 153), now just twenty years ago, I have had many opportunities of seeing the results of this proceeding.

I am able confidently to state that it is wholly free from danger. Indeed, I can scarcely conceive death following as a direct result of the operation. So little fear of the proceeding had one of my patients that he has been tapped at least six times for the relief of fleeting attacks of reteution, dependent on a rapidly distended bladder, unable to empty itself in the presence of long standing organic stricture. I have seen him almost within a day or two afterwards as if nothing had occurred. Further no fistula remains, for the opening in the rectum invariably closes after a few weeks.

I have left in the silver cannula for three weeks, and have not found inconvenience from its presence; indeed, it appears to me that one of the greatest arguments in favour of its adoption exists in the fact of the position of the cannula, which, whilst certainly securing the emptying of the bladder, is wholly removed from the urethra. I am strongly myself of opinion that many urinary cases terminate

* I will, with Sir H. Thompson, admit its use in narrowings at the external meatus.—*Pathology and Treatment of Stricture*. Third edition

fatally from urethral irritation, set going and kept up by an instrument retained in the canal in its length.

Some persons are very tolerant of tied-in catheters, whilst others, dependent on a certain idiosyncrasy, cannot sustain with impunity the simple introduction of an instrument. I saw a case in a young man which all but ended fatally from epileptic convulsions, induced by a first catheter; whilst the single introduction of a lithotrite in a man of 77 to measure a large smooth stone that had been carried with impunity for years, set up such an attack of cystitis that death ensued. I was very much impressed by a case in which a man, suffering from complete paralysis from the bladder downwards, owing to concussion of the spine, had a silver catheter tied in his bladder. He appeared sinking fast, and the most profound irritation of the bladder was established. I directed the urine to be drawn off every eight hours, and he began from that moment to amend, and ultimately recovered. Here, doubtless, the true explanation lay not in idiosyncrasy, but in the fact of the existence of disease from the injury. You may leave an instrument in the bladder for years from the perinæum, but you cannot do this with impunity and traverse the length of the urethra. Morbid sympathies become excited in connection with the urethra, which are not produced by the introduction of instruments into other mucous channels.

In what I have said, I have urged the adoption of tapping by the rectum, as affording assured relief to the most inveterate forms of stricture. And in considering the treatment of this disease, I have hitherto limited my observations to cases of stricture of the urethra *per se*, not to those complicated by retention of urine. I must equally urge it, however, as the remedy most reasonable for almost every form of retention. It is the absolute cure of spasmodic stricture: and if, in any given case arising from this cause, after one good effort has been made to obtain relief by ordinary means, there is no success, it should be carried into effect. If retention be present with an impermeable urethra from organic stricture, a double necessity supports its selection, whilst I have yet to learn that it is inadmissible in the retention of old people from enlarged prostate. I know that it can be accomplished in these cases, but of course not so readily as if the rectum had only its ordinary contents; and I am quite satisfied that far less irritation would be produced in the majority of these diseases, where death so often directly results from the effects of instrumental measures, by the presence, at the most depending part of the bladder, of a harmless tube, calculated to secure the removal of all urine secreted, and thus master that inevitable decomposition which is not overcome by any other method in use, for the simple reason that one and all fail to empty the bladder. If the membranous urethra bulge behind a stricture, or if an abscess opened in the perinæum suggest a ready path to the bladder, by all means let a female catheter effect, through the perinæum, what otherwise, I maintain, can be accomplished by the rectum.

Some years ago I asked the question, "Can the urethral canal be permanently restored whenever any complete and considerable portion of its length has been entirely destroyed?" I believe the answer must yet be "No." I had then a boy of sixteen, with at least two inches completely destroyed by burning; and, believing this, I established him with a silver perinæal tube, through which he now (aged 27) passes his urine without trouble; but there is nothing in the growth of the parts that tempts me to interfere, for I know the whole circle of the canal must be gone.

I think, however, that if only a streak of mucous membrane lingers about the part, an efficient connection can be re-established even after the lapse of many years.

I saw in the early part of this year a patient, aged 30, who had sustained, eighteen years previously, such a laceration, that two inches below the meatus was a fistulous opening into the urethra, three-quarters of an inch long. The canal was pervious from the meatus to about one inch above the bulb, where was a second small fistula; then, the canal was obliterated for an inch, and a third fistula, placed just at the commencement of the membranous division, gave exit to all his urine. For eighteen years, then, the urethra from this spot had been unused. I first closed the penile fistula, paring the edges, which looked beautifully in apposition for some days, and then came apart as usual. But by clipping the penis with a self-acting spring, on the principle of the *serre fine*, the edges were admirably united. Then I laid the lower fistulæ into one, dividing all the hard textures between them, and passed an eight catheter, and for forty-eight hours tied it in the bladder. After this I passed nine daily. The patient learned to pass it in a week himself; and at this time the canal is in excellent order, with the introduction once a week. Now, I do not think the roof of the urethra was destroyed here, and hence the reason of a success which I did not expect.

In reference to the repair of penile and scrotal fistulæ, I would remark that they can alone be treated satisfactory by the urine being drained through the rectum, or, as here, through the perinæum. Even then, union by first intention is a myth; but union can be obtained by keeping the granulating edges together by some artificial means, at the same time that vivacity is maintained in them by the use of the acetum lyttæ.

And now, permit me to indulge the hope that the illustrations I have been enabled to place before you of modes of practice have not been devoid of interest.

The chances are, that I shall never again address an audience characterised by qualities that belong to a representative meeting like this. I ask, therefore, your kindly reading of the motives which have induced me in what I have said to refer mainly to my own experiences. If I have any regret in having adopted this plan of proceeding, it arises—let me assure you—from the fact that I have been deprived by so doing of the pleasure of referring to the opinions, to the investigations, and to the successes of my colleagues and associates.

The British Medical Association has diffused an experience by these meetings that does away with the idea that the light of Surgery is permitted only to one man, in one place, or to any set of men in any place. Handed down to us by imperishable traditions—by names that will live as long as the world lasts: greater in its power to save life or limb than at any period of its history: so simple in its teaching—so open in its counsel—that a tyro may learn and act: Surgery stands proudly with its fellow-sciences in laying claim to having blessed mankind.

And if this be true, can it not claim also to have been the means of diffusing a blessing of a different kind? I mean the engrafting in the hearts of the men who follow its teachings such a spirit of honour and love of truth, that meanness and jealousy cannot live by its side.

I entertain the sentiment—as dear to me as life—that Surgery will cease to be what it is, when the dread anxieties that beset its practice are not softened down by the certainty of the knowledge that good fellowship prevails amongst those who may happen for the moment to be judges of what is being done.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF SURGERY,

At the Annual Meeting of the British Medical Association, in Birmingham, August 1872.

By SIR WILLIAM FERGUSSON, Bart., F.R.S.,

Serjeant-Surgeon to the Queen; Surgeon to King's College Hospital; President of the Section.

Gentlemen,—In commencing the business of the Surgical Section of the meeting of the British Medical Association for the year 1872, and on assuming the position of your Chairman, it may be naturally expected that I shall begin our special business by an address appropriate to the work which we now inaugurate. It would indeed, in my opinion, be a great defect were such a ceremonious beginning neglected; but it would be equally inappropriate were one in my position to offer to you any semblance to those addresses in surgery to which we have been so long accustomed, from those who have been specially appointed to deliver them at each annual meeting. At our present concourse, the Address in Surgery is to be given by one of the foremost of our surgical brethren of the day, Mr. Oliver Pemberton, whose name, as a pathologist and practical surgeon, is known wherever the history of modern surgery extends. It would therefore be as unbecoming as uncalled for were any one in my position to encroach upon the duties which belong to a gentleman so thoroughly able to do all that has been asked of him by our Association; more particularly as most, if not all, of us are honoured visitors in that town where his laurels have been won, his fame is sacredly cherished, and his fortunes are centred. There seems little before me, then, gentlemen, than to express my sincere appreciation of the honour conferred upon me by the authorities of our Association in offering me the chair which I now assume. It is assuredly the foremost place which the British Medical Association could offer to one in my special department; it is, in addition, an expression of kind and brotherly love, which I accept with the same heartiness with which it has been offered.

I am sure that I shall not be trespassing on our friend Pemberton's

department, when I offer such of you as mean to devote your energies to our Surgical Section, a presidential congratulation on the work you are about to undertake. It would be invidious in us to draw distinctions as to the merits of our different sections; but all of us here, devoted as we are to surgery, must feel that we are assembled on a noble occasion, where we can interchange thought and speech in our great department of the healing art, and when each and all can, with becoming grace, show what the last twelve months have added to the progress of the profession in which we are so deeply interested.

As your president, I cannot but anticipate that a choice repast of information is before us, and I cannot doubt that, like true searchers after knowledge, you are eager that the flood-gates should be opened at once, to permit the ready flow of the streams which have been in a manner pent up during the last year.

If I had not had a predilection for surgery, gentlemen, I should not now have been in this chair; and I am sure that my fellow sectional presidents cannot take offence, when I congratulate you on your choice of department or section in our profession.

The grandest feature in surgery is precision. In our present knowledge, and I fear it ever must be, there are doubts, hesitations, and great imperfections; yet there are accumulated stores of facts which may justly make us proud of our profession. A history of surgery would be as inappropriate from this chair as an interference with the yearly address; yet a brief glance at the results of the course of surgery during somewhat more than a generation by one like myself, who for more than forty years has been devoted heart and soul to the subject, may possibly fill the measure of expectation on the present occasion.

In my younger days, the surgeon had few sources of alarm greater than that of inflammation of veins, phlebitis as the term went. Abernethy had added greatly to his reputation by his celebrated essay on the occasional evil consequences of the operation of venesection. Every good surgeon did his best, by suggestion and action, to prevent injury to veins during operations; above all, we were restricted from putting ligatures on veins, such a step being deemed wellnigh fatal, although there was ample proof that some thirty or forty years further back our predecessors were by no means nice in excluding veins from nooses which were intended for arteries chiefly. It is doubtful if their operations were less successful than ours. At all events, we have so far changed in regard to the probabilities of phlebitis, that we, in the present day, think as little of applying ligatures to veins as to arteries, when there seems need, and we take all sorts of rough liberties with them when in a varicose state. True, we have a modern bugbear in the shape of pyæmia, for which the veins are greatly blamed, a disease about which there prevails more questionable physiology than common sense should admit. This subject is closely allied with what was called secondary deposit in former times, and this last-named condition was itself closely allied with Hunter's views and theories regarding inflammation. Any one who is watching the spirit of the times, must see that there are strange views afloat regarding Hunterian doctrines, which seem totally to ignore our great surgical philosopher—most notably in this respect, that what Hunter thought was developed by Nature from within, is now alleged to have origin in external influences and agencies which have no dependence on what has heretofore been considered life and life-like action within the frame.

Gentlemen, there must ever be theories in surgery as in medicine, and when these are propounded by men of undoubted character and consideration, it behoves us all to wait cautiously to see the influence of time in the development of facts for or against what may be called the fashionable doctrines of the day.

But, gentlemen, as I have said, one of the grandest features in surgery is its precision. This applies more to the art than to the science of our department, and one fact is worth a volume of theory. That a new operation has been added to our list of operations—that at the ankle, as developed by Syme and Pirogoff, is a fact that surgery may justly be proud of. As much may be said regarding amputation at the knee, the most recent and greatest stimulus having been given in that direction by one of the foremost of British surgeons, our respected member, Mr. Carden of Worcester. I maintain it as a fact, that even amputation itself, the direst of all surgical operations, has been largely superseded by more judicious methods of treatment. It seems a fact, that statistics of amputations are no longer so fashionable as they once were, because it has been proved by fact that a more limited use of the long knife might have greatly diminished the numbers of those operations which have been justly called the *opprobria* of surgery.

When ovariotomy was first propounded, it was little else than a theory—a rash visionary scheme for notoriety; but, thanks to the well-directed efforts of Clay, Brown, Wells, Keith, and a host of others, the proceeding is a well established fact, which ranks among the best and safest efforts in surgery to save human life.

Anæsthesia is another fact in modern surgery; perhaps, in reality, the most surprising of all. We are often told that the facts in real life are more surprising than those which the novelist delights to depict in fiction; and, in my opinion, the fact of anæsthesia, by whatever means it is brought about, by far surpasses all that has yet been done in regard to practical surgery.

Gentlemen, my mind has perhaps been naturally inclined to refer to "facts" on the present occasion, from the circumstance that, in my own professional career, I have been always more influenced by facts than by suppositions or questionable agencies; by the positive than by the speculative. I fear that it must be admitted that, despite all the skill of medicine from the earliest times to the present, the disease, stone in the bladder, must still be admitted as one of the "ills which flesh is heir to"—as a fact. We know it, however, as a fact, that our skill is such that we can combat that fact, and even assume the supremacy by surgically doing away with it. It is a matter of theory whether or not we can combat successfully with a diathesis to stone; but it is a matter of fact that we can combat manfully, aye, even successfully, with that painful enemy, when he once plainly shows his colours. Taking the surgical aspect of treatment, we can more readily, and with greater certainty, cope with this disease than with many others that come under the consideration of the surgeons.

It has been my fate, gentlemen, to have been largely engaged in this field of combat. Others in this country, of my own age, may have been more so; but, with the exception of Sir Henry Thompson's experience in lithotrity, their labours have not been made public, or have escaped my observation. Whether my contemporaries in Britain have treated more cases of stone in the bladder than I have, I am not prepared to say; or, whether they have more proofs of experience than I can display, is also beyond my knowledge; but, anyhow, to add my humble effort to what may excite interest in this meeting of the British Medical Association, I have ventured to put on show the results of my personal work in dealing surgically with this fell malady of mankind. By a kind of prescience, as I may now call it, I, at an early period of professional life, kept, on behalf of my own surgical museum, or surgical taste, all that could serve to revive the memories of the past or illustrate the events of the passing day. Throughout my professional life I preserved any stone or bit of stone that I could secure as a trophy of surgery, and now I have the honour of laying before the present meeting of this Association between 300 and 400 specimens of this disease which have been dealt with by my own hands. Every now and then patients or their friends have insisted on keeping what might be deemed as hereditary personal property, and occasionally specimens have fallen aside; but on the whole, I must admit, that my patients or their friends have humoured my fancies and given me free possession of the results of my surgical prowess. I exhibit the produce of between 330 and 350 cases of stone, personally treated by myself—about 200 by lithotomy, the rest by lithotrity. The aggregate of stones removed amounts to nearly 500 in number. There may be others of my own time who can speak of larger numbers; there may be those who can show larger numbers of actual proofs of what they have done in this field of surgery, and I see with pleasure the valuable contributions made in this direction, especially by Messrs. Gutteridge, Pemberton, Baker, Bracey, Bartleet, Elkington, Freer, and Jackson, which add largely in my estimation to the value of your museum display.

Most of these specimens were exhibited years ago at the Royal College of Surgeons in London, when I lectured on the subjects of lithotomy and lithotrity, but the time for their display was so evanescent that they attracted little attention, although at that date there was not a specimen of crushed stone by lithotrity in the Museum. A feeling seems to prevail that there is no interest in a stone broken into fragments by the lithotrite, but if it has been cut into two by a saw, after its removal from the bladder, the cut surface is eagerly looked at. No doubt the interest here has reference to the chemical composition of stone, and possibly the nucleus, although the section does not invariably make that clear. In my estimation, the fragments in lithotrity possess an interest equal, if not greater, in every respect to the cut or entire specimens. The chemical composition of a stone can be as readily made out from fragments as from sections; so also, as regards the nucleus; and, indeed, from these fragments we can often acquire a knowledge of a patient's constitution, as regards the tendency to the formation of stone, which we cannot in any other way. We can see how in some the fragments will lie in the bladder without change of surface much longer than in others. In one case we can recognise for days, even weeks, the fragments of an uric acid stone with edges defined and surface the same as when first broken; in another, we perceive how readily and rapidly new stone deposit occurs—generally phosphatic. Then, too, we can speedily appreciate the danger of neglect or carelessness after lithotrity is once begun, for, in place of

probably only one stone being present, there may, indeed there will, soon be many stones, for each fragment becomes a nucleus for fresh deposit, and this hastens on with greatly increased rapidity. Even the nucleus, always a centre of interest, may be as appreciable in the fragments from lithotrity as when displayed by the saw. It has happened to me in a case of crushing, in a female, to be struck with the appearance of redness in many of the fragments; and on investigation the mystery has been revealed on confession, that the patient had been in the habit of tickling herself with a stick of red sealing-wax, a portion of which had broken off in the urethra and remained in the bladder. The fragments will be seen in the collection.

Again, I once was aware, in using a lithotrite in a male, that I had clutched something peculiar. On withdrawing the instrument, there was a black substance about an inch long between the blades. A surgeon present, who had been in charge of the case for years, immediately exclaimed, "Egad! this is the end of my gutta percha catheter." A terrible revelation, for in the *interim* the patient had undergone prolonged treatment for chronic inflammation of the bladder, and had actually gone a voyage to Madeira in search of health.

I put as much faith as any man does in the chemical treatment, if I may so call it, of the diathesis of stone; but when once a stone has formed (and in most instances it is so without marked premonitory warning), the "fact" of stone is established, and there may be room for doubt whether chemical treatment does not then make matters worse; for, whatever the quality of urine, the chances are that a nucleus being present, deposition of stone will go on with increased rapidity, equivalent to the increase of size of the stone. That there may be exceptions to this rule, I admit; and there are two stones in my collection from one bladder, which are so smoothly polished by attrition that the formation of more stone had probably ceased for many months, if not years, before they were removed.

I have referred, gentlemen, to the chemical treatment of stone in the bladder, chiefly for the purpose of ventilating a sort of heresy of my own—viz., that in our treatment of stone, and in our estimate of specimens of stone in our museums, the chemical composition has been improperly the feature most referred to as the one of the greatest importance. Stone in the bladder is essentially a surgical disease; it can be treated effectually only by the surgeon; and to him the size, or, I may call it, the circumference of the substance to be removed, possesses the most engrossing interest, whether he looks to his own mechanical work or the safety of his patient; for I hold it as a maxim, particulurly in lithotomy, that the bigger the passage required for egress, the more difficult and the more dangerous is the operation. The *accoucheur* considers the size of the head, but does not trouble about its chemical qualities or composition. So should the surgeon the stone, both in regard to lithotomy and lithotrity.

But time will not permit me to say more on such subjects; and I shall conclude by a partial quotation from one of my lectures, delivered seven years ago at the College of Surgeons;—some of my language holding as strong an impression on my mind as ever. In the collection which I have the honour to exhibit, "there are examples of comminution from lithotrity, enough to satisfy those not much acquainted with the operation, and entire stones, the result of lithotomy; exhibiting specimens from a few grains in weight to nine ounces—from one solitary stone in the bladder to forty-two. There is the first, taken out in 1832; and the last, removed in 1872. There is a single, solitary, grim, savage-looking mulberry calculus which held possession of its vesical home for forty years; there are numbers, smooth and less formidable in aspect, yet equally painful and dangerous to the sufferers. A momentary glance can sweep over the range; but only those who, like myself, have been engaged in such work, can estimate the days, the nights, the months, the years, of anxious thought and labour, associated with the results which I now put before you."

THE HOSPITAL FOR SICK CHILDREN.—The Princess of Wales, since the laying of the foundation-stone of the new buildings of the Hospital for Sick Children, has sent the patients a quantity of fruit and toys.

POST PARTUM EXPLOITS.—At a recent meeting of the Obstetrical Society of Edinburgh, Dr. Keiller observed that he had recently witnessed several instances of extraordinary exploits on the part of women immediately after their confinement without subsequent suffering. As showing what some women can do, without any bad consequences, he stated that the other day a woman was delivered in the Old Assembly Close, no one being with her at the time. After the placenta came away, she put her room in order, and then, placing the child and the placenta in a basket, she walked coolly to the Maternity Hospital, within an hour of her confinement, to see if everything was right with her. Dr. Keiller exhibited the fœtus, which was apparently about the seventh month.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF MIDWIFERY.

At the Annual Meeting of the British Medical Association, in Birmingham, August 1872.

BY EVORY KENNEDY, M.D.,

Late Master of the Dublin Lying-in Hospital; President of the Section.

As I understand, it is the duty of your Presidents to open each Section of the British Medical Association with something of an address. It occurs to me that, in place of occupying the valuable time of so many of my *confrères* with an historical analysis of the progress of our branch of medicine—the usual stock subject of all introductory lectures, and one on which you are all very likely more competent to descant than myself—I might possibly occupy your time more profitably and pleasantly by giving you a few cases of not very ordinary occurrence which I have selected from my notebooks. Be not alarmed. I shall not weary you with detail in these brief *excerpta*, but merely touch the salient points of interest in each case.

CASE I. *Fœtal Femur embedded in Uterus.*—A lady was brought to me from the country, anæmic, wasted, and with a countenance expressive of pain and suffering. She had a constant fœtid vaginal discharge, purulent, and occasionally sanious. She was said to have miscarried a year before. She complained of pelvic distress, with lumbar pains and frequent micturition. On vaginal examination, the uterus was found about double its natural size. The os was slightly patulous, and a solid hard resistance was experienced on introducing the finger. The os was gradually dilated with a two-bladed uterine dilator constructed for the purpose, and a bony substance was distinctly felt, traversing the neck of the uterus at the junction with the body of the organ. This was so deeply embedded in the walls of the uterus, that neither extremity could be dislodged. I introduced a pair of small beaked bone-forceps, constructed for the purpose, broke the bone across, and extracted piecemeal the femur of a fœtus of about four months' development, which had been all the time embedded in the walls of the uterus, which was converted into an abscess by the presence of what should have been its natural occupant, thus forming an unnatural nidus in its walls in place of its cavity. The discharge subsided; and the lady recovered her usual health; but the look of health was never quite restored. She, however, bore children after an interval of some years, and the uterus appeared to have quite regained its normal condition.

CASE II. *Excision of Part of Neck of Uterus.*—Dr. Kitson of —— brought a patient from the country, suffering from ulceration of the os uteri. The neck was enlarged considerably, and elongated; the ulcer, which impressed us both as presenting all the characters of malignancy, occupied about one-third of the neck. It had taken a rapid course, bled at intervals freely, and upon the slightest touch, and was attended with pain, sleeplessness, and marked constitutional disturbance. It was, however, circumscribed and limited to the part ulcerated; the remainder of the neck and os being healthy to the appearance and touch, although larger than natural. The lady had borne children. The part of the neck engaged extended from the posterior along the left side of the os, and the diseased structure appeared to occupy the entire substance of the wall. Under these circumstances, the case promised little or nothing from the application of the ordinary caustics, and the choice appeared to lie between the free application of potassa fusa and excision. The latter was determined on; first, because of the limited extent of the part engaged; secondly, because of the apparent malignancy; thirdly, from the difficulty of destroying by the potass the whole diseased structure, without extending its action to the adjoining vital parts. On the other hand, the diseased structure came well within our view; the neck was long, affording facilities for the use of the knife. The patient was placed on her back. The vaginal wall and labia were distended by my four brass tractors, firmly held by Dr. Hans Irvine and Dr. Kitson. An ebony spatula, nine inches long and half an inch broad, was introduced and placed within the os. This I held firmly in my left hand, whilst I introduced the scalpel which I now exhibit, which, you perceive, has a handle seven inches long, while the blade is scimetar-shaped. Cutting from without inwards towards the resisting spatula, commencing near the point of junction with the neck and body of the uterus, above the central part of the diseased structure, by two divaricating incisions Λ, a triangular section was removed. I was prepared to draw the uterus down with the double tenaculum; but this was unnecessary, from the perfect manner in which my assistants used their tractors. This allowed me the

assistance and security of the spatula to cut upon. It has occurred to me that, in a case where excision is preferred, and where the facilities I describe do not exist, the spatulum might be armed on the reverse side with two hooks, when it would perform the double office of uterine tractor and spatula, as necessary. The vagina was simply plugged with Ruspini's styptic. There was scarcely any hæmorrhage. The patient recovered speedily and perfectly, and in about two years afterwards conceived and carried a living child to the full period. Her labour was easy and natural; and I had an opportunity of examining her at an interval of several years afterwards, when she was quite well, and the uterus, with the exception of the loss of a portion of the neck, was perfectly sound.

CASE III. *Portion of Placenta thrown off in Pregnancy.*—A lady, in the seventh month of her fifth pregnancy, was seized with hæmorrhage, ascribed to over-exertion. There were no labour-pains. On examination, a portion of the placenta was found protruding through the os uteri. The hæmorrhage continued for several days, but to no serious extent; and still there was no labour. At length, fœtid grumous discharges, mixed with a little blood, occurred, attended with sense of downward pressure. The portion of placenta descended lower in the vagina; its connection with the interior of the os separated; and I removed it with very little assistance. As no increase of hæmorrhage occurred from this, I thought it unnecessary to plug the vagina. The hæmorrhage and discharge ceased, and the patient went on without any inconvenience, except the precaution of keeping the horizontal position for six weeks longer, when she was delivered of a living boy apparently at or near the full time. The edge of the placenta that remained could not be felt near the os, and the portion that came away consisted of the vascular structure without the reflected membranes. There was no discharge of liquor amnii until the labour set in.

I have already had the honour of calling your attention to some of the more rapidly destructive of puerperal diseases in a paper read for me, in my absence, by your Secretary, at your Dublin meeting, under the head of purpuric puerperal fever. It is now my intention to allude briefly to other forms of blood-poisoning, but more especially to puerperal arthritis and puerperal gangrene; premising that, when this disease shows itself, it is usually most rapid and unsparing in its onslaught, and no tissue in the body escapes its ravages.

CASE IV. *Destructive Inflammation of the Eye, combined with Arthritis.*—Bennet was delivered of her first child after a labour of nine hours, on June 14th, 1838. On the 16th and 17th, there was abdominal tenderness, with a quick small pulse. She was leeched. On the 18th, her countenance was anxious and shrunken; pulse 140, small. On the 19th, sudden inflammation of the right eye set in; the conjunctiva and iris being engaged. Leeches were applied and blisters to the temples. Mercury was given. On the 21st, she was salivated. The whole globe of the eye appeared prominent with serous infiltration beneath the conjunctiva. All the tissues of the eye were engaged; the sclerotic was very vascular, the cornea prominent, the aqueous humour turbid, the iris hardly discernible; there was total loss of vision. The conjunctival vessels were freely scarified. This evening, inflammation of the wrist set in, with erythema of the back of the hand. Excitement and delirium were present. On the 22nd, the other wrist became engaged; her countenance was shrunken and excited. Pulse 125, small and thready. The wrists were treated with solid nitrate of silver. She sank, and died on the 24th. At the *post mortem* examination, effusion of blood was found on the right side and posterior lobe of the cerebrum, and a small quantity between the arachnoid membrane and the pia mater on the left side. The brain in other respects was healthy; there was no fluid in the ventricles. The right eye was much suffused; the conjunctiva very vascular, the cornea perfectly opaque. On extracting the eye, some pus was found round the lacrymal sac. On cutting down on the carpal bones, a quantity of pus was found in the sheaths of the tendons, unconnected with the joints. Pus was found in the vessels of the broad ligaments of the uterus; but there was no fluid in the cavity of the abdomen.

I would now call your especial attention to the drawing which I exhibit to you as a type of disease known as sloughing of the vagina, but which would be more correctly designated as lying-in hospital gangrene; and also to a group of cases occurring in puerperal women as the result of their state and condition, but which are now clearly established as prevailing so commonly in great lying-in hospitals, and so rarely out of them, as to stand in relation of effect and causation with the locality of their delivery. As in surgical hospitals, so in lying-in hospitals, these cases are ascribed to hospital or poisoned atmosphere.

These cases generally occurred in groups. For instance, in April 1837, four occurred in the Dublin Lying-in Hospital at the same time, not one of which recovered. One occurred in June of the same year, complicated with arthritis of the elbow-joint; one in October, and one in November—all being fatal. Another at the same time was complicated with erysipelatous inflammation of the buttock, followed by abscess and inflammation of the elbow, sterno-clavicular and shoulder-joints; and yet this woman (Keating), the drawing of whose disease I exhibit to you, struggled through all this and recovered, after two months of as acute suffering, from the number of joints consecutively engaged, as ever I witnessed. Free incisions were made into the buttock, with escape of pus. The sterno-clavicular joint suppurated, and an incision was made; but the inflammation of the elbow- and shoulder-joints yielded to the free application of nitrate of silver and potassa fusa. On the 8th of December, another fatal case occurred. This case was complicated with slight peritonitis; and the *post mortem* examination disclosed a peculiar lesion of the peritoneal surface of the uterus at the junction of the neck and body anteriorly, which I have rarely observed, but which of itself I esteem a very fatal occurrence.

CASE V. *Puerperal Arthritis: Erosion of Cartilages of Elbow, Hip, and Ankle Joints.*—Kenny, three weeks delivered after a difficult and protracted labour, was wakened from sleep in the night by an acute pain in the left groin. In the morning, she observed a swelling in the middle of the thigh, which at the end of two days had completely engaged the entire limb. The pain became less acute as the swelling increased, but never entirely subsided. Some days subsequently to the swelling of the thigh, she was seized with violent pain in the elbow, but did not perceive any swelling. All these symptoms progressively increased, notwithstanding frequent leeching, stuping, poulticing, opiates, and mercury. She was admitted into hospital on January 28th, 1829; and, on the 30th, there was an obscure sense of fluctuation over the outer third of the thigh. An incision was made into it, but no pus followed. On February 3rd, she had a severe rigor; and on the 4th she died comatose. A *post mortem* examination was made twelve hours afterwards. The cellular tissue throughout the entire thigh was filled with gelatinous lymph. An extensive abscess extended from nearly one extremity of the thigh to the other, between the periosteum and muscles. The muscles were pale and flabby, and appeared much softer than natural. About one inch of the upper part of the femoral vein contained pus; its inner tissue was vascular, but did not appear to have lymph upon its surface. The synovial membranes of the hip, knee, and ankle joints were filled with puriform matter. The cartilage covering the bones of the hip appeared healthy; whilst that covering those of the knee and ankle was in part removed by absorption, particularly in the ankle, where scarcely a trace of cartilage could be detected. The uterus was vascular, and inclined towards the left side. The lymphatic glands along the iliac vein were enlarged and vascular. The cartilage was removed altogether from the extremities of the bones forming the right elbow-joint. The viscera appeared healthy.

CASE VI.—*Puerperal Arthritis: Sterno-clavicular Articulation and Buttock engaged: Recovery.*—Keating was delivered in November 1837 of a still-born child, after a labour of thirty-five hours. There was some sloughing of the vagina, but not considerable, with a good deal of tympanitis of the abdomen and irritation, which were relieved by turpentine followed by opium. On the eleventh day, there was an erysipelatous state of the right elbow, which had been, she stated, painful three or four days previously. She was treated with nitrate of silver locally, and sulphate of quinine with hyoscyamus constitutionally. On the twelfth day, she was attacked with erysipelatous inflammation of the left buttock (the elbow having become improved), which was also treated with the caustic and with quinine. On the sixteenth day, there was an appearance of pointing in the buttock, and an eschar was made with potassa fusa. There was this day noticed some tenderness in the right iliac region. On the seventeenth day, she complained of the left sterno-clavicular articulation, which was swollen, red, and painful; it was scored with caustic, the other treatment was continued, and wine was given. On the twentieth day, a fresh eschar was made on the buttock, through the slough consequent on which a lancet was passed on the twenty-ninth day, giving exit to matter of a healthy character. The swelling of the sterno-clavicular articulation continuing, with decided fluctuation and uterine pain, there being present also great constitutional disturbance, an opening was made on January 11th, 1838, and exit given to healthy pus. She gradually improved after this, and left the hospital. There still remained some swelling, but the opening had healed.

I can conceive what I term lying-in hospital gangrene to occur out of hospital; yet, after a protracted and sufficiently extensive opportunity in my own practice and in consultation, I cannot tax my memory with ever having met with a case of it out of hospital. Would that I could make the same statement of my experience in hospital! It occurs in isolated cases, but more frequently prevails in groups of cases, when a tendency to its congeners—puerperal fever, erysipelas, arthritis, and

peritonitis—also prevails. It is usually the effect of long continued pressure or lesion, or of the force used by the application of instruments in forced deliveries. Indeed, so constantly is the disease observed to occur as the result of these agencies, that they may be fairly looked upon as the exciting or determining cause, and the disease classed as a traumatic affection, and treated accordingly. This is so well understood by the observant hospital physician, that he looks with dread to the occurrence of any lesion when the hospital is in an unhealthy state; and, for the same reason, hesitates to perform the simplest operations, lest they be followed by this affection—operations that, in a healthy state of the hospital, would not cost him a thought.

I hold that the congregation of a number of patients in common chambers generates what we term a hospital atmosphere; that this hospital atmosphere is, or more properly becomes, a poison; that, by a persistence in the causes of its production (with which we shall presently deal), it undergoes a process of what may be termed cumulation, pervading every part of an enclosed building, until it eventually arrives at a stage which we may term saturation, when the whole hospital is charged with a poison capable of seizing upon those who are susceptible to its influence, or who are in what we term a state of receptivity.

Now, from this it will be seen that, by crowding patients in a hospital, we are actually exposing them to a new disease generated by the very means we adopt to cure them of the disease under which they chance to labour. But, unfortunately, the new disease is generally one most fatal in its character, as few there be who survive it.

The characters or phases of the hospital disease vary under the different circumstances of the victims susceptible to it. Thus one may be attacked with blood-poisoning or empyema; another with erysipelas; a third with hospital gangrene; and a fourth with metria or puerperal fever. The laws which regulate the habits of this family of zymotic disease are perhaps best arrived at by a study of the last named poison, as, in its occurrence in our great lying-in hospitals, where it principally commits its ravages, it is less exposed to disturbing influences, and consequently pursues its own natural course free from interruptions and complications.

Out of a hundred and eleven years, for which the great Dublin Lying-in Hospital has been established, it has been haunted by puerperal fever ninety-three years. For twelve years it has been comparatively, and only for eight years has it been totally, free from this fell disease. The deaths of those admitted for the last years amount to 1 in 33. Let us remember that in three small cottage hospitals in Ireland, in which accurate tables have been kept (Kilkenny, Newry, and Waterford), we find that the mortality has been 1 in 282. On the comparison of these two proportions, the conclusion is inevitable that eight out of nine patients have died in the Dublin Lying-in Hospital who would not, in all likelihood, if they had taken refuge in the cottage hospitals, which were comparatively free from the hospital miasm or poison that prevailed or lurked in the great unhealthy hospital.

A fatal error, into which we are prone to fall, is the confounding epidemic and endemic disease; and the amount of loss of life that has occurred from this error I believe to be incalculable. This will be easily appreciated when we state that what, in strictness, we should call true epidemic diseases, are unavoidable; whilst the latter, or endemic diseases, are, with rare exceptions, preventable and perfectly within our control. True, they may be convertible; but this makes the distinction the more important, in order to prevent their extension or fixture.

The contagious nature of hospital miasm is now beyond question; as also that of most of those modifications of hospital zymotocene with which we are familiar, especially metria and erysipelas.

Having satisfied ourselves that a poison is generated by the mere crowding of numbers of patients into a common atmosphere, and also that this poison spreads by contagion, the next principle or law we require to establish is that this poison is cumulative, or developing in its quantity, commencing with a single poisonous emanation, and increasing in its quantity until the atmosphere, walls, floors, and furniture become imbued or charged with it. Unfortunately, as yet we are unable to detect this miasm or poison and display it by its sentient properties; but of its existence we cannot have the slightest doubt, from its effects, from its laws, from analogy, and especially the spread of diseases by inoculation and contact.

But why should the hospital wards ever be free from hospital miasm and these fatal results, if all this be true? This is a question to be answered by the law upon which we now dwell—cumulation. The ordinary epidemic disappears; having, as we say, worn itself out. This it does in hospital as out of it. Precautions are taken; patients zymotically affected are separated; ablution and ventilation are carried out; admissions are refused; the wards are emptied; and the hospital becomes healthy. Weeks, months, and longer, pass over before the poison again shews itself. The cumulative process, however, is in steady operation; and at an uncertain period the poison again shews itself, and snatches up its victims. The same measures of precaution are taken to banish it, and with the same results. But it does not rest here, as has been abundantly proved by the history of our great hospitals. When the cumulation has gone on repeating itself again and again, a further stage, or that which I shall denominate the state of complete saturation is arrived at, and then the hospital becomes the fixed *habitat* of the poison.

The death of the consumptive costermonger is not to be placed in the category of the victims to hospitalism. It has its analogue in the dog slain in the Grotto del Cane for the instruction of his slayers, by holding him so close to the surface of the deadly cavern that he can only inhale mephitic gas. Nor, indeed, is it only in St. Pancras that we have this going on. Have we not our No. 11 wards and grottoes in nightly operation for the benefit of the upper ten thousand in the West-end *réunions?* Witness the pallid and poisoned state to which our belles are reduced, at the end of the season, from breathing mephitic and animal-poisoned air for several hours nightly, with their lungs at nearly as great a disadvantage as the costermonger's, by tight lacing and waltzing. The Black Hole of Calcutta and the middle passage rendered our fathers familiar with the more immediate effects produced from a number of people breathing and rebreathing the same atmosphere; and its more gradual effect in the production of jail-fever, grappled with by Howard in his mission of mercy, has reached us as a matter of history. We were in hopes that the labours of Boswell Reid and Arnott had exposed the defects of ventilation and directed a remedy. But the enormities occasionally cropping up from neglect in this respect shews that much remains to be done. Dr. Farr, in a paper lately read at the Leeds Conference, pointed out the want that exists of an authoritative organisation charged with the ministry of public health. As it is, what is every man's business is left undone. When will our legislators waken up from their piecemeal attempts at sanitary improvement, and grapple with this great subject as it demands, and as the well-being of the community requires?

The fact is that, when the poison is generated, crowding or the cohabitation of patients in a state of receptivity secures its spread. A process of cumulation of the contagium or poisonous element occurs; and when this arrives at the stage of saturation, outbursts of erysipelas, phagedæna, gangrene, pyæmia, and metria occur; the patients are attacked wholesale; and the diseases become, as we before stated, endemic or fixed, and continue to haunt the hospitals, be they surgical or obstetrical.

Now that the blot has been hit, it requires no great philosophy to meet the difficulty. Simply cease to crowd such patients into common buildings under the same roof. All the advantages of an asylum can be afforded whilst segregation is secured, and facilities for medical instruction preserved to the schools. The substitution of cottage-hospitals for these great hotbeds of contagion should be insisted upon in all future arrangements for housing cases liable to endemic poisons. The term epidemic should be applied in its true meaning. These large surgical and maternity hospitals, in which metria, erysipelas, and pyæmia have committed such havoc, should be either applied to purposes compatible with the safety to human life, or so altered in their construction as to isolate each ward from the common atmosphere now pervading the whole hospital. This may be very simply and inexpensively accomplished by opening separate entrances into each ward direct from the open air. In the existing hospitals, the communications with the common hall should be built up, and the same system carried out in the upper storeys by opening the ward-doors on flying galleries. The lifts and stairs should be placed outside of the building; the existing halls and passages being still retained for the staff, and affording an approach to the respective storeys, but no covered approach or communication of any kind allowed to remain between these and the wards. By these simple expedients, and the limiting the number of beds to three in each ward, it is probable a large saving of human life would result, and hospitalism become, like jail-fever and small-pox, a thing of the past. Pity the founders of the great hospitals so recently erected had not applied our dear-bought experience in their magnificent constructions. The sooner these altered arrangements are made in such great palatial institutions as St. Thomas's and the Leeds Hospitals, as well as the Maternities and our other great charities subject to erysipelas, pyæmia, and phagedæna, the sooner will the insidious approaches and the fell ravages of our common enemy, hospitalism, be subdued.

Stow, in his *Survey*, mentions, in speaking of the King's Bench Prison, that the great mortality that occurred there in the six years preceding 1579 was produced through a certain contagion called "The Sickness of the House." Those learned physicians who uphold the

crowding in large hospitals, and imagine they can meet the difficulty by disinfectants, I would refer to the simple experience of that benefactor of our species, John Howard, as conveyed in his preface a century since. He says: "I guarded myself by smelling to vinegar while I was in those places. This I did constantly and carefully when I began; but, by degrees, I became less attentive to these precautions, and have long since entirely omitted them." John Howard discovered and carried out the best means, on true scientific principles, of disposing, once and for ever, of "the sickness of the house." If the obstinate hospital crowders would take example by him, and meet, as he did, crowding, the cause of "the diseases of the house," and, as he did, remove them, they would speedily produce an equally satisfactory result, and, like Howard, give up their futile attempt to meet the case of dealing with emergency by "smelling to vinegar."

CASE VII. *Lying-in Hospital: Gangrene.*—Catherine Barnes was delivered by crotchet, after a tedious labour, of her first child. She had one fit of convulsions on entering the ward, and was treated with tartar emetic. There was no return of convulsions. Extensive sloughing of the vagina showed itself the day after delivery, with great debility and exhaustion. Tympanitis and delirium occurred, and she gradually sank, and expired on the fourth day after her delivery. The appearances exhibited in the plate presented themselves. A small quantity of limpid serum was observed in the peritoneal cavity. The whole vagina and the lining of the uterus were in a state of slough. The os uteri was jagged and disorganised; and there was serous infiltration underneath the pelvic cellular membrane.

These cases are sometimes attended with hæmorrhage. For instance, in Murphy (October 1837) there was lingering labour with slow dilatation. She was treated with tartar emetic and ipecacuanha injections. She was delivered naturally on the 17th, but with laceration of the perinæum, of a still-born male child. Sloughing was perceptible, with rigors and prostration. Hæmorrhage from the vagina set in as the sloughs were separating, on the 24th; and she sank on the 25th.

In Black's case, the drawing of which I here exhibit, she had tedious labour, followed by sloughing inflammation of the vagina and external parts, of erysipelatous character, spreading from the vulva to the buttocks and back. She sank from exhaustion after a long struggle. In addition to the appearances here represented, the omentum was found adherent to the pelvis and uterus: and an abscess in the walls of the latter organ opened into its cavity.

[*To be continued.*]

COLD FOOD FOR INFANTS.—Under this heading, Surgeon King, U.S.A., writes to the *Philadelphia Medical Times* as follows:—"Our best authorities direct that the [cow's] milk should be given to the child at the same temperature as that of the mother's milk—from 90 deg. to 95 deg. Fahrenheit—and, when great accuracy is required, a thermometer employed. On reflection, it is obvious that these instructions can never be carried out so that the little one will take all its food at the same temperature; for during a meal the bottle becomes cold, and there may frequently be considerable difference of temperature between the first and the last milk imbibed by the infant. It is unnecessary to state that very little will upset the feeble powers of the digestive organs in the early days of infantile life; and this difference in the temperature of the food, I am disposed to believe, is one of the causes of gastric and intestinal disorder which we so often have to deal with among infants brought up by hand. Instead of giving warm milk, I have adopted the plan of giving cold milk entirely—ordering the babe's bottle to be kept standing in iced water in the summer and in a cold place in winter. This method I have found, from practical experience, to answer remarkably well. If there is any tendency to diarrhœa, I recommend the milk to be heated to 212 deg. Fahr., and afterwards allowed to get quite cold before being used. In private practice, I am of opinion that bottle-fed infants generally have their food given them too warm. . . . . They soon like it even better than warm food, and during the teething period cold milk seems especially agreeable to the inflamed gums of the little sufferers." The above plan for the preparation of food for infants is, the *Boston Medical Journal* thinks, worthy of trial. We all know the difficulty of having artificial food properly prepared, notwithstanding minute directions are given concerning it and the importance of keeping the nurse-bottle scrupulously clean. Many devices are resorted to by those who have the care of infants to avoid the trouble of freshly preparing the food every time it is wanted, and the temptation is great, particularly at night, to have in readiness a quantity sufficient for several meals. As a consequence come the various disturbances to the system resulting from the ingestion of food which is often sour before it is taken. If it can be given cold without detriment to the child, there seems to be no good reason why the diet should not always be fresh.

AN ADDRESS
ON
MEDICAL PSYCHOLOGY,

DELIVERED AT

The Opening of the Psychological Section at the Annual Meeting of the British Medical Association, in Birmingham, August 1872.

BY HENRY MAUDSLEY, M.D., F.R.C.P.,
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IN beginning the work of this Section, over which I have the honour to preside, I shall confine myself to a few introductory remarks of a general character, leaving to those who will come after me the more exact scientific work of which we have fair promise in the papers that are to be read. The occasion seems fitting to take a short survey of the position of medical psychology in relation to certain important questions of the day, and to consider the bearing which its progress must eventually have upon them. Permit me, then, to ask you, first, to look back a little way at what medical psychology was, in order the better to realise what it is, and, if possible, to forecast something of the character of its future work. A glance at the past will show how great a step forward has been made, and may yield some reason for congratulation; a glance at the present, showing, as it cannot fail to do, how small a proportion the gains bear to what remains to be acacquired, will prove that as yet we have rather discovered the right path than made much way on it—that we are, in truth, only on the threshold of the history of medical psychology as a science.

One of the saddest chapters in human history is that which describes the cruel manner in which the insane were treated in times past. Notwithstanding that it is happily a thing of the past, it will not be without profit to inquire from what causes the barbarous usage sprang: for it was not common to all nations and all times; on the contrary, it had its birth in the ignorance and superstition of the dark ages of Christian Europe. Whatever may have been thought of madness among the peoples who preceded the ancient Greeks—and there is evidence that the Egyptians adopted a singularly enlightened and humane treatment — it is certain that the Greeks had comparatively sound theories of the nature of insanity as a disease to be cured by medical and moral means, and adopted principles of treatment in conformity with those theories. Their dramatic poets, it is true, present terrible pictures of madmen pursued by the anger of the gods; but these were poetical representations, which must not be taken as a measure of the best knowledge of the time. Then, as now, and indeed as ever in the history of mankind, the true thinkers were emancipated from the fables and superstitions of the vulgar: the just measure of Greek intellect must be sought in the psychology of Plato, in the science of Aristotle, and in the medical doctrines of Hippocrates. This eminent physician and philosopher expressly repudiates the notion that one disease is of more divine origin than another. After saying that the Scythians ascribe the cause of certain disorders to God, he goes on to give his opinion that these and all other disorders are neither more nor less of divine origin, and no one of them more divine or more human than another; that each has its own physical nature, and that none is produced without or apart from its nature. In what he says of the psychical symptoms of various diseases of the body, he evinces such enlarged views of the scope of medical observation and practice as are not often evinced at the present day; and the few observation sin his works respecting the symptoms of delirium "evidence that clear and correct view of disease which has made this first observer a model to all succeeding times". He directs attention to such facts of observation as the physical insensibility of the insane, the appearance of mental diseases in the spring, the occurrence of disorder of the intellect after a continuance of fear and grief, the union of melancholy and epilepsy, the critical importance of hæmorrhoidal discharges in mania, the difficulty of curing madness which commences after the age of forty, and the like. And as there was no superstition in these doctrines, so there was no barbarism in his treatment, which was medical, and consisted principally in evacuation by the use of hellebore. But moral treatment was not unknown among the Greeks; for Asclepiades, who seems to have been the real founder of a psychical mode of cure, made use of love, wine, music, employment, and special means to attract the attention and exercise the memory. He recommended that bodily restraint should be avoided as much as possible, and that none but the most dangerous should be confined by bonds. Without going further into particulars, enough has been said to show that the Greeks had acquired

accurate notions of madness as a disease, which was to be cured by appropriate medical and moral treatment.

How came it to pass that these enlightened views ever fell into oblivion? The question is really only a part of the larger question, how it came to pass that the high æsthetic culture and brilliant intellectual development of the Grecian era, which might have seemed possessions of mankind for ever, were lost in the darkness and barbarism of the middle ages. To trace the causes of this so sad decline would be far beyond my present purpose; suffice the fact that philosophy, which had mounted so high, was for a time sunk so low beneath the waves of superstition and ignorance, that it might well have never been in existence. And when at last a revival of learning took place, things were little better: empty scholastic subtleties and metaphysical mysticism engaged the whole attention of men, who rivalled one another in verbal disputations, without agreement in the meaning of the terms they used, and in blind worship of the authority of Aristotle, without real regard to the true method of his philosophy or to the facts with which it dealt. As if knowledge were nothing more than a process of ingenious excogitation, they made no attempt to observe the phenomena of Nature, and to search out the laws governing them, but laboriously "invoked their own spirits to utter oracles to them"—wherefore philosophy was little more than a web of unmeaning terms and of empty metaphysical subtleties.

With this sort of intellectual activity was joined, as the result of the detestable spirit which inspired monastic teaching and monastic practice, a harsh religious asceticism, through which the body was looked down upon with contempt, as vile and despicable, the temple of Satan, the home of the fleshy lusts which war against the soul, and as needing to be vigilantly kept in subjection, to be crucified daily with its affections and lusts. It was the earthly prison-house of the spirit whose pure immortal longings were to get free from it. Such was the monstrous doctrine of the relation of mind and body. What place could a rational theory of insanity have in such an atmosphere of thought and feelings? The conception of it as a disease was impossible: it was ascribed to a supernatural operation, divine or diabolical, as the case might be—was a real possession of the individual by some extrinsic superior power. If the ravings of the person took a religious turn, and his life was a fanatical practice of some extraordinary penance—if, like St. Macarius, he slept for months together in a marsh, exposing his naked body to the stings of venomous flies; or, like St. Simeon Stylites, he spent the greater part of his life on a pillar sixty feet high; or, like St. Anthony, the patriarch of monachism, he had never, in extreme old age, been guilty of washing his feet—he was thought to have reached the ideal of human excellence, and was canonised as a saint; more often his state was deemed to be a possession by the devil or other evil spirit, or the degrading effect of a soul enslaved by sin; from some cause or other he was a just victim of divine displeasure, and had been cast down in consequence from his high human estate.

It was the natural result of such views of insanity that men should treat him whom they believed to have a devil in him as they would have treated the devil could they have had the good fortune to lay hold of him. The tortures which the insane person suffered from the devils that had entered into him were less than those inflicted by the devils who took charge of him. When he was not put to death as a heretic or a criminal, he was confined in a dungeon, where he lay chained on straw; his food was thrown in and the straw raked out through the bars; sightseers went to see him, as they went to see the wild beasts, for amusement; he was cowed by the whip or other instrument of punishment; and was more neglected and worse treated than if he had been a wild beast. Many insane persons, too, were without doubt executed as witches, or as persons who had, through witchcraft, entered into compact with Satan. It is a striking illustration, if we think of it, of the condition of thought at that time, and of the great change which has taken place since, that such expressions as the black art, witchcraft, diabolical possession, and the like, have fallen entirely out of use, and would be thought to convey no meaning if they were used now. They were fictitious causes invented to account for facts, many of which undoubtedly lay within the domain of madness.

Now it is a fact, abundantly exemplified in human history, that a practice frequently lasts for some time after the theory which inspired it has lost its hold on the belief of mankind. No wonder, then, that the cruel treatment of the insane survived the belief in diabolical possession, though it is justly a wonder that it should have lasted into this century. The explanation of the seeming anomaly is to be sought, I believe, in the purely metaphysical views of mind which prevailed long after inductive science had invaded and made conquests of other departments of nature. Theology and metaphysics, having common interests, were naturally drawn into close alliance, in order to keep entire possession of the domain of mind, and to withstand the progress of inductive inquiry. With the notions they cherished of the nature of mind and of its relations to body, it was thought impossible, and would have been denounced as sacrilegious, to enter upon the study of it by the way of physical research. To have supposed that the innermost sactuary of nature could be so entered through the humble portals of bodily functions, would have been regarded as an unwarrantable and unholy exaltation of the body, which was full of all uncleanness, corruptible, of the earth earthy, and a gross degradation of the mind, which was incorruptible, of the heaven heavenly, and joint partaker of divine immortality. Whosoever dared to propound such a doctrine would assuredly have been put to death as a blasphemer and a heretic; and yet he ought to have been hailed as a benefactor. It is impossible to say of any false belief which mankind have had, that it has been the most pernicious in its effects; but we may truly say of the theological notion of the relations of mind and body, that it has been surpassed by few false doctrines in the evil which it has worked.

The spirit of metaphysical speculation was scarcely less hostile to physical researches into mental function. For when inquirers had struggled successfully out of mere verbal disputation, and had applied themselves to the observation of mental phenomena, the method used was entirely one-sided; it was a system of mental introspection exclusively, each one looking into his own mind and propounding as philosophy what he thought he observed there; the external observation of mind in all its various manifestations, and of the bodily condition of all mental action, was ignored. When all knowledge of mental action was gained in this way by observation of self-consciousness, men naturally formed opinions from their own experience which they applied to the mental state of insane persons; feeling that they themselves had a consciousness of right and wrong, and a power of will to do the right and forbear the wrong, they never doubted that madmen had a like clearness of consciousness and a like power of will—that they could, if they would, control their disorderly thoughts and acts. The dungeon, the chains, the whip, and other instruments of punishment were accordingly in constant use as means of coercion; the result being that exhibitions of madness were witnessed which are no longer to be seen, "because they were not the simple product of malady, but of malady aggravated by mismanagement." What with the theological notion of madness as a work of Satan in the individual, and what with the erroneous views of it subsequently begotten of the metaphysical spirit, it came to pass that the barbarous system of treatment was only abolished within the memory of men yet living. In sad truth may we say that so far as a knowledge of the nature of insanity and of the proper mode of treating it is concerned, mankind owe no thanks, but, on the contrary, much error and infinite human suffering, to theology and metaphysics.

It was when men recognised insanity as a disease which, like other diseases, might be alleviated or cured by medical and moral means—when they regained the standpoint which the ancient Grecians had held—that they began the struggle to free themselves in this matter from the bondage of false theology and mischievous metaphysics. So far as the phenomena of deranged mind reach, the battle has been won and the victory is complete; no one whose opinion is of any value pretends now that they are anything more than the deranged functions of the supreme nervous centres of the body. But the victory is not yet complete along the whole line of mental function; there is the strongest desire evinced, and the most strenuous efforts are made in many quarters to exempt from physical researches the highest functions of mind, and particularly the so-called moral sense and the will. The moral sense is, indeed, the stronghold of those who have made strategical movements of retreat from other defensive positions which they had taken up; and it is from this stronghold that what are deemed the most telling arguments against the Darwinian doctrine of physiological evolution have come. Are we then, as physiologists, to allow an exemption from physical research to any function of mind, however exalted, or shall we maintain through good and through evil report, that all its functions, from the lowest to the highest, are equally functions of organisation? A vital question for us as medical psychologists, which we must, sooner or later, face boldly and answer distinctly.

In Abercrombie's well-known and valued work *Inquiries concerning the Intellectual Powers* there is a passage relating to the moral sense which seems to me almost melancholy. After pointing out clearly the existence of a moral insanity in which every correct feeling is obliterated in regard to moral relations, while the judgment is sound in all other relations, and so demonstrating that the influence of the moral principle on the power of conscience may be weakened or lost, while reason remains unimpaired, he says—"That this power should so completely lose its sway, while reason remains unimpaired, is a point

in the moral constitution of man which it does not belong to the physician to investigate. The fact is unquestionable ; the solution is to be sought in the records of eternal truth." Is not this passage truly melancholy ? Must science really accept this attitude of helplessness ? Must the physician who has to deal practically with these instances of moral insanity forbear for ever to investigate its nature and causation ? So far from assenting to such an exclusion, I hold that it distinctly belongs to the physician to seek for the solution of the problem in the discovery of those laws of nature which are to him the incontestible records of eternal truth ?

Let us clearly apprehend the problem which we have to consider. Some popular capital has been made, and made in quarters where we might justly have looked for greater sincerity or sounder apprehension, out of the fact that physiology, however far it may advance, can never bridge over the gap between nerve elements and mind, can never leap from the movements of nerve molecules to consciousness. No one has ever said that it could ; the problem before us as scientific observers is not to demonstrate the real nature of the force which we designate mental, nor to show how and why certain molecular movements in nerve become, if they do become, sensation or idea, but it is to trace here, as in other departments of nature, uniformities of sequence, to point out that certain sequences are within our experience, the invariable consequences of certain antecedent conditions. The *how* or the *why* is a mystery which we do not pretend or attempt to explain ; we do not even aspire to know it. We can only know the uniformities of sequence as we do the uniformity of sequence which we call gravitation. What is the actual power which makes one body attract another directly as the mass and inversely as the square of the distance, we have not the least knowledge ; why and how certain molecular movements become heat, or electricity, or chemical action, we are just as ignorant ; and in admitting that we cannot comprehend how certain states of matter occasion certain states of mind, we may rightly demand that no more should be asked of the physiologist, in explanation of the *why* of events, than is asked of the physicist. The mystery is neither more nor less in one case than in the other. To say that it is inconceivable that matter, in however complex a state of organisation, should generate consciousness, should feel and think, is simply an appeal to the self-sufficiency of human intellect at the present day, and a sort of argument which, if logically carried through, would bar any new conception of what, from ignorance, is yet inconceivable to us ; it would make the present limit of conception the limit of conception for ever ; and it is certainly unwarrantable in the face of the fact that the history of the progress of knowledge is, in great part, a history of the inconceivable becoming conceivable. Moreover, it is an assertion which is positively contradicted by the testimony of persons who have been presumably in their right minds, and who have not spoken in mere haste and ignorance. Let me instance that of one person, whose qualifications few will contest—I mean John Milton. Both in prose and poetry he makes known his opinion that matter is capable of intellectual functions, declaring, in *Paradise Lost*, that the first matter rises through various degrees of substance and of life, until "body up to spirit works," just as from the root springs lighter the green stalk, from thence the leaves, and "last the bright consummate flower spirits odorous breathes." That he intended this passage not merely as poetry, but as sound philosophy, is proved by what he says in his *Treatise on Christian Doctrine*, where he declares,—

"That man is a living being, intrinsically and properly one and individual, not compound or separable, not, according to the common opinion, made up and framed of two distinct and different natures, as of soul and body,—but the whole man is soul, and the soul man ; that is to say, a body, or substance, individual, animated, sensitive, and rational."

The notion of matter being capable of thinking was clearly then not inconceivable to Milton ; and there can be no doubt that there always have been persons who have found it more conceivable than the notion of spirit entirely distinct from body, and yet acting upon it in every thought, feeling, and act of life.

With these general remarks, by way of necessary caution, let me come to the particular problem which we have to face ; namely, whether there is the same essential connection between moral sense and brain which there is between thought and brain, or between any one of our special senses and its special ganglionic centre in the brain ? Is conscience a function of organisation ? I will ask you to look without prejudice at the facts of observation, and to consider if they admit of any other scientific interpretation they admit of. For the medical psychologist, whose duty brings him into constant intercourse with facts, cannot rest satisfied with vague speculations ; he is bound to investigate the phenomena as they present themselves to observation, and to form conclusions from them, without regard to accepted theories of faith or knowledge ; and if he arrives at sound conclusions from such observation of facts not before observed, these will not contradict old faiths unless in that wherein old faiths are wrong, and it is right they should be contradicted.

His generalisations, like the generalisations of astronomy, chemistry, or any other branch of science, must rest on their own merits ; they cannot justly be tested by any preconceived standard of truth, however much hallowed by antiquity or sanctioned by authority. When we come to deal with examples of moral degeneracy, whether among the insane or among criminals, we perceive at once that it is not sufficient to ascribe immorality to the devil ; that we must, if we would not leave the matter a mystery, go on to discover the cause of it in the individual. The effect defective comes by cause, we are constrained to believe ; what is the cause and what are the laws of moral degeneracy ? As society is constituted, certain forms of evil doing are certainly not profitable in the long run : how comes it, then, that an individual, capable of looking before and after, remembering the retribution of past sin, and foreseeing the Nemesis that waits on future wrong-doing, is so forgetful of true self-interest as to yield to evil impulses ? And whence do these impulses come ? One thing is certain : that moral philosophy cannot penetrate the hidden springs of feeling and impulse ; they lie deeper than it can reach, for they lie in the physical constitution of the individual, and, going still further back, perhaps in his organic antecedents. Because the fathers have eaten sour grapes, therefore it often is that the children's teeth are set on edge. Because the fathers had stoned the prophets, therefore it was that the children rejected Him who was sent unto them. Assured y of some criminals, as of some insane persons, it may be truly saidl that they are born, not made ; they go criminal, as the insane go mad, because they cannot help it ; a stronger power than they can counteract has given the bias of their being. Those who doubt this when it is put in this positive form, will hardly continue to do so, when they consider that between the drivelling idiot, equally destitute of intellect and moral feeling, whom no labour of training can raise to a human level, and the highest example of intellect and moral feeling, there are beings marking every step of the long gradation ; that we may mount from entire absence of moral sense through every grade of deficiency up to its highest state of development. I do not dispute that much may sometimes be done by education and training to counteract in this respect the ills of a bad inheritance, but it is still true that the foundations upon which the acquisition of education must rest are inherited, and that in many instances they are too weak to bear a good moral superstructure. Moral philosophy may make its hard and fast lines, and lay down abstract propositions concerning the power of the will in the conduct of life : but, when we have to do with concrete cases, it is plain that no such definite lines can be applied, and that the abstract propositions are on y true of a certain proportion of mankind. Moreover, it appears also , that those of whom they are true have much less merit in the matter, a nd those of whom they are not true much less blame, than moral philos ophers are apt to imagine and inculcate. The fate of inheritance whi ch constitutes the misfortune of the latter constitutes also the virtue o f the former. There is often *nulla imputatio* in one case, *nulla virtus* in the other.

The causes, course, and varieties of moral degeneracy are not then merely subjects for the moral philosopher or the preacher ; but they are proper subjects for positive scientific inquiry. And if they be so investigated, it is not unlikely that the results may throw some light on the vexed question of the nature and origin of the moral sense. Now if there be a class of persons who are without the moral sense, who are true moral imbeciles, it is the class of habitual criminals. All observers who have made them their study, agree that they constitute a morbid or degenerate variety of mankind, marked by peculiar low physical and mental characteristics. They are scrofulous, often deformed, with badly formed angular heads, are stupid, sluggish, deficient in vital energy, and sometimes afflicted with epilepsy. They are of weak and defective intellect, though excessively cunning ; aud not a few of them are weak-minded and imbecile. The women are ugly in features, and without grace of expression or movement. The children, who become juvenile criminals, do not evince the educational aptitude of the higher industrial classes ; they are deficient in the power of attention and application, have bad memories, and make slow progress in learning ; many of them are weak in mind and body, and some of them actually imbecile. At the end of the best part of a life spent among prisoners, a prison-surgeon declares himself to be mainly impressed with their extreme deficiency or perversion of moral feeling, the strength of the evil propensities of their nature, and their utter impracticability ; neither kindness nor severity availing to prevent them from devising and doing wrong day by day, although their conduct brought on them further privations. Their evil propensities are veritable instruments of their

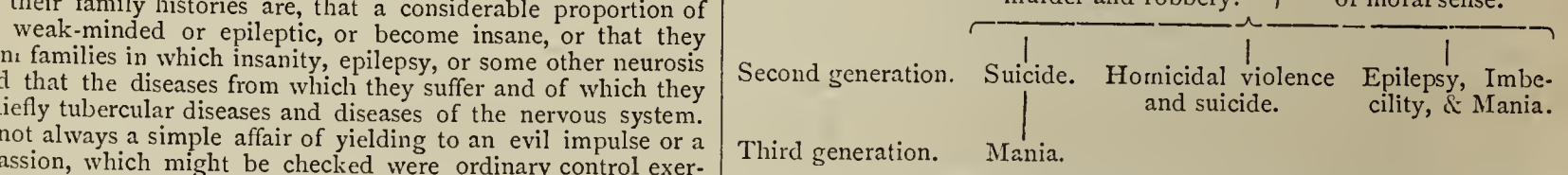
defective nature, acting, like instincts, in spite of reason, and producing, when not gratified, a restlessness which becomes at times uncontrollable. Hence occur the so-called "breakings-out" of prisoners, when, without apparent cause, they fall into paroxysms of excitement, tear their clothing and bedding, assault the officers, and altogether behave for a time like furious madmen.

We may take it then on the authority of those who have had the best opportunities of observation, that there is a class of criminals formed of beings of defective physical and mental organisation; one result of the defect, which really determines their destiny in life, being an extreme deficiency or complete absence of the moral sense; that an absence of moral sense may be a congenital vice or fault of organisation. The experience of medical practice certainly confirms this view. From time to time we are consulted about perplexing cases of what might be called moral insanity, or, more properly, moral imbecility in children of the better classes. Though born in good circumstances of life, and having every advantage of education, they cannot by any care or training be made to learn and behave like other children; they display no affection whatever for parents, brothers, or sisters, and no real appreciation of the difference between right and wrong—no love for the one, no remorse for the other; they are inherently vicious, and steal and lie with a skill that is hard to believe could ever have been acquired—are, in fact, instinctive thieves and liars; everything that their vicious nature prompts them to desire is for them right, and they exhibit a remarkable cunning in gratifying their evil propensities; they are the hopeless pupils of any master who has anything to do with them, and are sure to be expelled from every school to which they may be sent. In the end, all those who have to do with them are constrained to ascribe to defect what at first seemed simple badness. Now what we commonly find in these cases, when we are able to push satisfactory inquiry into their hereditary antecedents, is that they come of families in which insanity or some allied neurosis prevails. This is the interesting fact to which I wish to draw attention.

In addition to the entire absence or perversion of moral sense, without feeling of remorse, which experience of habitual criminals brings prominently out, other important facts which we learn from an investigation of their family histories are, that a considerable proportion of them are weak-minded or epileptic, or become insane, or that they spring from families in which insanity, epilepsy, or some other neurosis exists, and that the diseases from which they suffer and of which they die are chiefly tubercular diseases and diseases of the nervous system. Crime is not always a simple affair of yielding to an evil impulse or a vicious passion, which might be checked were ordinary control exercised; it is clearly sometimes the result of an actual neurosis which has close relations of nature and descent to other neuroses, especially the epileptic and the insane neuroses; and this neurosis is the physical result of physiological laws of production and evolution. No wonder that the criminal *psychosis*, which is the mental side of this *neurosis*, is for the most part an intractable malady, punishment being of no avail to produce a permanent reformation. A true reformation would be a *re*-forming of the individual nature; and how can that which has been forming through generations be *re*-formed within the term of a single life? Can the Ethiopian change his skin, or the leopard his spots?

The hereditary kinship which is sometimes traceable between crime and insanity I cannot now set forth in detail; but, to make clear what I mean, I may give one or two illustrations out of many of a like kind which might be brought forward. Of five children from an insane mother and a drunken father, one was suicidal, two suffered imprisonment for crimes, one daughter was insane, the other was imbecile. Suicide, crime, insanity, and imbecility were thus different manifestations of a morbid type in the second generation. The case of Christiana Edmunds, who was convicted of murder and afterwards reprieved and sent to Broadmoor, will be fresh in your recollection. Her father died raving mad in an asylum; her brother died epileptic and idiotic at Earlswood; her sister suffered from mental excitement, and once attempted to throw herself out of a window; her mother's father died paralysed and childish; a cousin on the same side was imbecile; she herself had been subject to somnambulism in childhood, and had finally had an attack of hemiplegia; and at the time of her trial her face drawn to one side showed the effects of the hemiplegic attack from which she had suffered. I had more than an hour's conversation with her in Newgate, and at the end of it two convictions were firmly planted in my mind: the first, that she had no real moral appreciation of the nature of her crime, and no shadow of a feeling of remorse with regard to it; the second, that she would have poisoned a whole city full of people, if it had lain in her way to do so, without hesitation, compunction, or remorse. Nevertheless, her intellect was acute, certainly above the average, and showed no sign of disorder. I could only regard her case as a strong confirmation of an opinion which I have elsewhere expressed, and which I believe to be a just conclusion from facts; namely, that one occasional result of descent from an insane family is a nature entirely destitute of moral sense—congenitally defective in that respect—whereby the individual is as insensible to the moral relations of life as a person colour-blind is to certain colours. I give no opinion here as to the legal policy of treating such a person as of sound and responsible nature; it is a subject beset with difficulties, and many considerations on which I cannot enter now would have to be taken into account; but I may justly ask you as scientific men, whether you would pronounce a person with such hereditary antecedents and such personal ills accountable in the same sense or same degree as one of us? For my part, when one thinks of the terrible affliction which an unsound mental organisation is, and what a reason for devout thankfulness a man of sound descent and nature has, I would rather pray with the Arabian philosopher, "O God! be kind to the wicked; to the good thou hast already been sufficiently kind in making them good."

One example more shall suffice to exhibit the alliance between degenerate types; it shows the effect of crime in one generation of a family upon the mental organisation of the following generations—shows, indeed, how the sins of the fathers are visited upon the children unto the third and fourth generations. While the Reign of Terror was going on during the first French Revolution, an innkeeper profited by the critical situation in which many nobles of his commune found themselves, to decoy them into his house, where he was believed to have robbed and murdered them. His daughter, having quarrelled with him, denounced him to the authorities, who put him on his trial, but he escaped conviction from lack of proof. She committed suicide subsequently. One of her brothers had nearly murdered her on one occasion with a knife, and another brother hanged himself. Her sister was epileptic, imbecile, and paroxysmally violent. Her daughter, in whom the degenerate line approached extinction, became completely deranged, and was sent to an asylum. Here, then, is the sort of pedigree which we really want, if we are to judge of the worth of a family, the hereditary line of its vices, virtues, and diseases.



It may be said that this was an extreme and exceptional case. Without doubt it was an extreme case; but it is on that account the better fitted to produce an impression; and it must be remembered that the laws by which its results were worked out are laws which are continually at work in accomplishing less striking results, and that so-called exceptional cases in science are, when rightly studied, exceptionally useful in helping us to discover the laws for which we are searching. My argument is, that the moral element is an essential part of a complete and sound character, in the present state of human evolution; it was the last acquisition of development in the progress of *humanisation*, and it is commonly the first to suffer when degeneracy begins, and therefore its decay is the first sign of the commencement of such degeneracy. He who is destitute of moral sense is a defective being to that extent; he marks the beginning of race-degeneracy; and if better influences do not intervene to check or neutralise the morbid tendency, his children will exhibit a further degree of degeneracy, and be actual morbid varieties. What shall be the particular outcome of the morbid strain—whether vice or crime or madness—will of course depend much on the circumstances of life: the inborn fact counts for much, but not for everything, in the result. Certainly, however, it is a conviction in my mind, produced by observation of instances, that one way in which insanity seems to be generated *de novo* in a family, is through the deterioration of nature induced by destruction of moral sense. As insanity in one generation may produce an absence of moral sense in the next, so, conversely, absence or destruction of the moral sense in one generation may be followed by insanity in the next.

No one who has had much to do with the treatment of the insane can have failed to notice the mental peculiarities sometimes exhibited by their near relations. And one way in which these are displayed is an extreme morbid suspicion of everything and everybody; in the most innocent actions of others they detect an unworthy motive, and seize on the evil interpretation. They torment themselves and others with the ingenuity of their suspicions. Secret ways and dealings they affect naturally and pursue systematically; however insane their relative may be, they can hardly be brought to see it, and if they do see it, they seem actually to persuade themselves that the doctor who has treated

him, or those who have the care of him, are responsible for his state. These moral peculiarities are constitutional; they are marks of one variety of the insane temperament, and, as such, are of interest to us in our present inquiry.

For the facts which I have thus far mentioned seem to me to prove the essential connection of the moral sense with organisation, and to admit of interpretation only on that supposition. It, or the potentiality of it, is inherited by most persons, though some appear to be born without it; it is developed by culture; decays from disuse; and is perverted or destroyed by disease. The last acquired faculty in the progress of human evolution, it is the first to suffer when disease invades the mental organisation. One of the first symptoms of insanity, one which declares itself before there is any intellectual derangement, before the person's friends suspect even that he is becoming insane, is a deadening or complete perversion of the moral sense. In extreme cases, it is observed that the modest man becomes presumptuous and exacting, the chaste man lewd and obscene, the honest man a thief, and the truthful man an unblushing liar. Short of this, however, there is an observable impairment of the finer moral feelings, a something different which the nearest friends do not fail to feel, although they cannot always describe it. Now these signs of moral perversion are really the first symptoms of a mental derangement which may, in its further course, go through all degrees of intellectual disorder, and end in destruction of mind, with visible destruction of the nerve-cells which minister to mind. Is the end then dependent on organisation, or rather disorganisation, and is the beginning not? This course of degeneracy is but a summary in the individual of what we have already seen to take place through generations; and in both cases we are constrained to believe that the moral changes are as closely dependent upon physical causes as are the intellectual changes which accompany or follow them. If it be not so, we may bid farewell to all investigation of mental function by a scientific method.

Other arguments in favour of this view of conscience as a function of organisation—the highest and most delicate function of the highest and most complete development thereof—might be drawn from the effect of a severe attack of insanity on the moral feelings. The patient entirely recovers his reason; his intellectual faculties are as acute as ever, but his moral character is changed; he is no longer the moral man that he was; the shock has destroyed the finest part of his mental organisation. Henceforth his life may be as different from his former life as was the life of Saul of Tarsus from the life of Paul the Apostle to the Gentiles. An attack of epilepsy has produced the same effect, effacing the moral sense as it effaces the memory sometimes; and we are all familiar with the marked temporary change of moral character in the epileptic, which often precedes and heralds the approach of his fits. A fever or an injury to the head has in like manner entirely changed the moral character; and so also has habitual opium-eating or habitual drunkenness. The evil effects of these vices might of course be ascribed to the indulgence of passion and the degradation of the moral sense apart from physical causes, but the same cannot be said of the effects of a fever or of an injury to the head. Moreover, we know that alcohol and opium do affect the brain by their actual presence there, and through the brain the mind, just as strychnia affects the spinal cord and its functions; and we know also that it is in the natural order of events that continuance of perverted function should lead to organic disease. In the case of opium or alcohol then, as in the case of a blow on the head, we believe the effect to be physical.

We are further strengthened in this conviction when we take note of the decided effects of such a vice as self-abuse upon the moral character, or of such a sexual mutilation as eunuchs have undergone. Long before self-abuse destroys the mind, it destroys moral energy and feeling, this effect being the precursor of the intellectual impairment which goes on to utter dementia in the worst cases. Of the moral character of eunuchs, all that we can briefly say is, that in most cases they have no moral character; their minds are mutilated like their bodies; with the deprivation of sexual feeling, they are deprived of all the mental growth and energy which it directly or remotely inspires. How much this is, it would be hard to say; but were man deprived of the instinct of propagation, and of all that mentally springs from it, I doubt not that most of the poetry and perhaps all the moral feeling would be cut out of his life.

Before such an audience, it is not necessary for me to insist further on such facts as I have mentioned; as physicians, we cannot fail to recognise them; but it is necessary for us if we would be, like our great master Hippocrates, philosophers as well as physicians, to give them their proper place in a system of medical psychology, and to weigh their bearing on accepted philosophical theories. I had meant to point out how they go to prove the doctrine of evolution to be true of the highest mental faculties of man, including his moral sense; but I must refrain. Already I have trespassed too long on your patience. The medical psychologist must, I think, hold that the best of the argument concerning the origin of the moral sense is with those who uphold its acquired nature. That the sentiments of common interest in the primitive family and tribe, and the habitual reprobation of certain acts by individuals as injurious to the family or tribe, should finally generate a sentiment of right and wrong in regard to such acts, and that such sentiment should in the course of generations be transmitted by hereditary action as a more or less marked instinctive feeling, is in entire accordance with what we know of the results of education and of hereditary action. Time was, we know, when men wandered about the country in families or tribes. In order that they might rise from this nomadic state to a national existence, the acquisition and development of a moral sense must clearly have been essential conditions—not, however, as preformed agents, but as concomitant efforts, of evolution. This development is still going slowly on; but the proof how little moral sense itself instigates progress, is seen in the absence of it between nations. Men have risen to a national existence, but they have not yet risen to an international existence. With moral principles that have not changed within historical times, nations still laud patriotism, which is actually a mark of moral incompleteness, as the highest virtue: and statesmen think it a fine thing to sneer at cosmopolitanism. But it cannot be doubted that the time will come, though it may be yet afar off, when nations will know and feel their interests to be one, when moral feeling shall be developed between them, and when they shall not learn war any more; it will come as a step in evolution and as a condition of universal brotherhood, not otherwise than as, coming between tribes, it bound them into nations, and made patriotism the high virtue which it is believed to be.

In the work of helping to trace the path of human evolution through the ages, a great function lies before a scientific psychology; and in investigating, in our department thereof, the characters of the various neuroses, and the causes, course, and varieties of human degeneracy, which seem to be necessary retrograde accompaniments of progress, we medical psychologists have a vast field before us. To rise to a just conception of the scope and dignity of our work, will be the best inspiration for entering on it, as is becoming, neither in an abject spirit of superstition, nor in an arrogant spirit of conceit. For we must not forget that, however clearly we trace the order of events, the mystery of their *why* remains where it was; however clearly we may follow "one first matter" through

> "its various forms, various degrees
> Of substances, and in things that live, of life,
> The body up to spirit work,"—

the power which determines why one tissue should supervene on another, why life should tend upwards, which inspires and guides the everlasting becoming of things, must ever remain past finding out. Man himself, with all his sorrows and sufferings, with all his hopes and aspirations, and his labours wherewith he has laboured under the sun, is but a little incident in the inconceivably vast operations of that primeval central power which sent the planets on their courses, and holds the lasting orbs of heaven in their just poise and movement.

SLEEPING TO DEATH.—We have before referred to a Portuguese account of the singular and always fatal lethargic disease (*lethargus*) observed by physicians to be occasionally prevalent among the negroes of West Africa. Dr. T. H. Baily, who has observed it there, but who is not able more than others have been to explain its pathology, describes it briefly as follows. It is one of the curiosities of medicine. "As the name implies, the principal, and, in fact, only symptom that presents itself is lethargy, and one case is essentially a stereotype of all. The patient, usually a male adult, is seized without any premonitory symptoms, with a sensation of drowsiness, which continues rapidly to increase, in spite of all efforts to throw it off, until he sinks into a profound and seemingly natural sleep. This continues for about twenty-one days, when death takes place. Throughout the course of the disease, the patient preserves a quiet and peaceful countenance, may be easily aroused for a short time, will take nourishment, and generally answer a few questions in a perfectly rational manner. The pulse, respiration, and temperature remain normal throughout; the pupil is neither dilated nor contracted to any noticeable extent, and the urine and fæces are voided with comparative regularity. With the exception of the abnormal tendency to sleep, nothing exists to denote disease. Many careful *post mortem* examinations have been made by competent men, but nothing of an abnormal character has been found. Dr. Smith, colonial surgeon at Freetown, informed me that every remedy that could possibly be of any avail had been used, without any apparent beneficial effect. They sleep on and glide into eternity, in spite of professional skill.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 10TH, 1872.

THE BIRMINGHAM MEETING.

FOR the third time in the history of our Association, Birmingham has received the members in annual meeting, and has offered a right hearty welcome to the now vigorous adolescent whom she helped Worcester and Sir Charles Hastings to nurse through the anxious though hopeful days of his infancy. One of the earliest meetings of the Association was held in Birmingham; and again, after nearly a quarter of a century, it visited the town, and made the occasion memorable by assuming that comprehensive title and liberal constitution under which it has since gone on in a career of prosperity and usefulness.

In the sixteen years that have elapsed since the last meeting of the Association in Birmingham, its strength has much more than doubled. This increase has naturally added to the labour and responsibility of those who have undertaken the duty of organising the arrangements for the annual meetings; and to say that the Committee of Management at Birmingham have proved themselves fully equal to the occasion, is to say no more than they deserve. In the spacious premises of King Edward's School, with its numerous class-rooms, the business of the Association, whether in general meeting or in special departments, has been carried on with comfort; and every reasonable arrangement has been made to meet the convenience and requirements of the members. The reception of the visitors has been most cordial; and of professional hospitality, both on the part of private individuals and of the local Branch, there has been no stint. And it must be highly gratifying to those who have borne and are bearing the labour of receiving the Association in Birmingham, to see that the attendance of members from a distance is among the greatest—and probably it will prove to be the greatest—that has ever been met with at one of our annual meetings.

The account of the proceedings on Tuesday and Wednesday, which we give at another page, will show the harmonious and satisfactcry character of the proceedings. The addresses, which are published in this week's JOURNAL, were listened to with interest, and will be read with pleasure and profit. The President took Birmingham as the chief text of his discourse, and eloquently described its merits in the eyes of the physician and sanitarian, while he candidly pointed out defects. His graceful recognition, too, of the manner in which the metropolitan members of the Association have used their influence for the good of their provincial brethren, will receive as grateful an appreciation on the part of those of whom it was spoken.

Dr. Wilks enchained his hearers' attention during a long hour on Wednesday, in the delivery of his philosophical address on Medicine, and left them at the end with their interest unabated. It will be remembered that Dr. Wilks, notwithstanding his other onerous and unavoidable duties, undertook the delivery of this address almost at the eleventh hour, and under circumstances which would scarcely leave room to hope for a production bearing such traces of profound thought. Perhaps, however (as indeed we have heard suggested), the secret of the excellence of the address lay in the very fact of the limited time which Dr. Wilks had at his disposal, so that what the Association heard from him were the simple outpourings of the mind of a man who has thought long and much.

The address in Surgery, by Mr. Pemberton, was delivered on Thursday. It is published at page 153, and was practical in tone, worthy of the reputation of its author, and a justification of the trust reposed in him by those who entrusted its delivery to him. It was a considerate and graceful act on the part of Sir William Fergusson, as president of the Surgical Section, not to attempt to deliver an address which might encroach on the general address in Surgery; and it seems as if the President, well known as he is as an able surgeon, with equal consideration in his opening address kept his own department of practice altogether out of sight, so as not to interfere with the deliverer of the Address in Surgery or with the president of the Surgical Section.

In the sections, which were opened on Wednesday, addresses were delivered, three of which are printed this week—those of Sir William Fergusson, Dr. Evory Kennedy, and Dr. Maudsley. We commend them to the attention of our readers. That of Dr. Maudsley, in the section of Psychology, is a specially able contribution to that department of medical science. We are compelled, however, to defer for a week the publication of the address delivered by the Rev. Dr. Haughton in the section of Public Medicine—one characterised by the well known genius, eloquence, and Hibernian wit of its author, and of which the delivery attracted a large audience—inducing, indeed, temporary atrophy of some of the other sections.

Of the Annual Museum, we will only remark that it has been copiously supplied and well arranged. Some account of it will appear in an early number.

Mr. Husband, who has ably filled the chair of President of Council for the last three years, has retired in consequence of the expiration of his term of office, and has been elected a vice-president of the Association; and Mr. George Southam of Manchester, an old, well tried, and approved friend of the Association, has been elected his successor.

The President's reception of members at the Town Hall on Wednesday night was largely attended, many ladies being present. In fact, all has gone well with the general meeting; and its President, and all those who have been concerned in its management, may confidently anticipate that one and all of their visitors on this occasion will carry away with them and long retain a pleasant and grateful recollection of their visit to Birmingham in the second week of August 1872.

THE DISPOSAL OF SEWAGE.

THE Merthyr Tydfil experiment is at this moment fixing the attention of all our municipal authorities. It is about to be followed by many other large towns, including Birmingham, and great interest, therefore, is centred in the recent meeting of the South Wales Branch of the British Medical Association, held on the 17th July, 1872, at Merthyr Tydfil, when the President, Mr. Dyke, read a paper on the "Downward Intermittent Filtration

of Sewage", as carried on at the sewage-farm near that town. This mode of disposal of sewage is new, and, in the opinion of Mr. Dyke, it is also true and successful.

The principles of downward intermittent filtration were enunciated by Dr. Edward Frankland in July 1870. They are stated thus : by passing the filthy sewage-stream downwards through at least six feet of porous earth, continuously for six hours, and then allowing an interval of eighteen hours to elapse before the stream is again turned on to the soil, the water would pass through the stated stratum of earth, leave behind all organic and mineral impurities, and pass off clear, transparent, and containing only some harmless inorganic salts in solution. This change would be effected by the perfect aëration of the stratum of soil, resulting from its being thoroughly drained to the depth of six feet from the surface ; and, as a consequence of its aëration, there would be perfect oxidation of the organic matters in solution, their partial retention by the soil as food for plants, and partial passing off with the effluent water.

Mr. Dyke described the mode adopted by Mr. Bailey Denton for carrying out the above laboratory experiment into practical working at Merthyr Tydfil. Twenty acres of flat land (the soil a porous loam over gravel) were divided into four filtering areas of five acres each. These were again subdivided, so that in all forty plots were formed. A main effluent drain, everywhere six feet deep, was made along the whole length of the land ; from each of the four areas a large lateral drain ran to the main ; and from each of the subdivisions other smaller drains ran to the laterals. The surface of the land was, by spade labour, so inclined that an uniform fall of 1 in 150 was maintained. Along the raised borders of each subdivision open carriers of earthenware were placed ; into these the sewage stream was turned at will from the main covered carriers. When turned on, the water ran into and along the open carriers, overflowed the margins, ran into the furrowed ground and along the furrows down to the lowest point ; sinking into and percolating through the soil, and, leaving its fertilising materials in the soil, passed off in the effluent drain, a clear pellucid stream. Previously to the sewage-water being allowed to go into the covered carriers, it had to pass through a simple and inexpensive filter, formed of broken furnace-cinder, which the town surveyor (Mr. Harpur) had constructed, and which was in use when Mr. Denton took the matter in hand. The Rivers Pollution Commissioners had anticipated a difficulty, believing that the land could not be made productive. Mr. Denton removed this difficulty by causing the land to be ploughed, and planting or sowing on the ridges only : thus the sewage-water ran along the furrows, and did not come into contact with the growing crops. On these ridges, cabbages, potatoes, onions, beans, peas, etc., have been grown; and large crops have been obtained, amply compensating for the outlay. The effluent water had been subjected to analysis, which resulted in showing that it contained barely one part of organic impurity in 200,000 parts of water.

Successful as this mode of abating the sewage-nuisance has been shown to be in its operation at Merthyr Tydfil, we entirely concur with Mr. Dyke, in asking that engineers and chemists should turn their attention from the wasteful formation of cumbering sewage-slush, by precipitating fertilising matters already dissolved in the water by the addition of lime, alumina, etc., to the discovery of efficient and inexpensive means of separating insoluble materials from the stream, and straining the soluble, but as yet undissolved, fertilising matters therefrom ; treating these in such a way as quickly to render them soluble, and passing the whole of the filtered stream on to land properly prepared, and on which growing crops would quickly convert the organic carbon and nitrogen into food for men and for animals.

MEDICAL FEES.

THE question of payment occupies now a large space in the columns of every journal ; and the items of expenditure occupy a larger space than ever before in the diary of every household. It is not without a purpose, therefore, that we direct attention to the subject of medical fees ; and we find a preface in some recent observations on this subject from the pen of Dr. Caffe, the veteran medical journalist of France, and the head of the recently formed Association of French medical writers for the press.

Dr. Caffe points out that, when we compare the fees claimed by barristers with those earned by medical men, we perceive between the remunerations for services rendered by two professions equally liberal a marked difference, which is not justified by the importance of the services rendered, nor by the conditions under which they are demanded. If health is the most precious possession, he to whom it is confided, to whom we apply for advice how to preserve or re-establish it when in danger—the doctor—has a right to a remuneration at least equal, if not superior, to that of the lawyer, who is more often only a safeguard to fortune.

When a lawyer is consulted, there is rarely any need for haste. He takes his time ; consults books, if necessary ; leisurely considers the matter, if it be at all obscure ; and finally gives a decided opinion. It is otherwise with the doctor. Called at any time of the day or night to attend a serious disease, he is obliged to make an immediate and important decision, without delay or hesitation—a decision of which he alone bears the responsibility, and which might compromise his reputation and his future. He acts not only before the invalid and his relatives, but before the whole world. It is a delicate position, often full of anxiety even for the man who has grown old in practice. In defence of the interests of his clients, the lawyer suffers no risk to life. In the exercise of his profession, it is not so with the doctor, as the mortuary tables during the prevalence of epidemics sufficiently prove. The life, moreover, of a doctor, is one of incessant fatigue, and often full of painful anxiety. Thus it is not astonishing to find from statistics that longevity is uncommon in the medical body ; and mental disorders are more frequent than among members of other liberal professions. It is needless to speak of the dangers attending a medical student's career, in the study of anatomy, and in the visits to the clinics and the wards of the hospitals. We would pass this by, and ask now, Why should not doctors exact a remuneration in comparison with the importance of their services? But, if the public does not give us a suitable remuneration, the fault is not, Dr. Caffe thinks, in ourselves ; the fault is assigned by him to the veterans of the profession, who, though making large fortunes themselves by attracting patients by their titles, have done nothing to raise the *prestige* of the doctor. What he advises is, that the medical man should follow the example of the barrister, whose fee is regulated by considerations as to the importance and issue of the suit, the amount of learning required, and the fortune of the client ; and he demands, accordingly, a round sum. Such also should be the practice of the doctor. The present plan of fixing the remuneration by the number of visits paid leads often to a ridiculous result ; for a doctor may be called to attend a serious and most onerous case of epidemic disease, such as cholera, the issue of which is decided in a few hours, and receive a smaller remuneration than if attending a persistent but not dangerous disorder, such as neuralgia, for many weeks. This is, he thinks, anomalous. Another complaint is urged against the custom of charging but half-fees for the second and third patients in the same house. The care for the patient is not diminished by his being under the same roof with another patient ; and it is for this care that the doctor is paid. The

lawyer does not claim only half-fees when he defends the interests of his client in two different suits, or of two clients when they are lodged under the same roof. Thus it is concluded that the doctor should, as far as possible, fix his remuneration at a round sum. But there are nevertheless many circumstances under which there would be no reason for a round sum, such as in the case of slight indispositions and simple complaints, which require but few and isolated visits: for these, the visit had better be the basis of the fee.

In Liege, the following minimum tariff has been adopted by the practitioners. A single visit or advice given in the consulting-room, 3 *francs;* the first visit, or an urgent visit demanded after the usual hour, 6 *francs.* The fee for a visit to a patient suffering from a contagious disease is left to the discretion of the doctor. Consultation during the day, 15 *francs;* the same during the night, 25 *francs.* A visit during the night between the hours of ten and seven, 15 *francs.* Every hour spent with the patient during the day, 15 *francs;* during the night, 25 *francs.* Certificates, according to their character, from 5 to 20 *francs.* A written consultation, 20 *francs.* A visit beyond the town is fixed at 20 *francs* a league, and the travelling expenses are charged to the patient.

The question of a general tariff of medical fees was brought forward at the Congress held at Rome; but it was negatived by M. Bargioti. The reasons brought forward were numerous: That visits cannot be in ratio with the gravity of the disease or the danger to the doctor; that such a custom would neutralise all progress and emulation; that a fixed rate of fees would be contrary to the interests both of the patient and the doctor; that, in the judicial evidence of experts, a tariff is not more admissible, because the physician ought never to accept the part of a witness, but only that of expert; while physicians, in their relations with their patients, have a varied basis for establishing their honorarium—viz., the nature and importance of the service rendered, and the social position and fortune of him who receives it; the scientific and honourable position of him that renders the service; and, finally, local custom. The doctor should avoid presenting a detailed account of his visits, but should fix the total sum. Some of these objections, however, obviously apply rather to a fixed and inflexible tariff of fees, which we presume that nobody ever thought of suggesting or applying, than to a minimum standard serving as an useful basis for common understanding of the remuneration which practitioners ought to require for their medical services. As a matter of fact, with a constantly and at this moment rapidly rising standard of expenditure, and with the greatly enhanced price of all the necessaries of life, it is a notable fact that medical fees are still nailed as by a changeless law to a definite mark. The moment seems to us opportune for a consideration of the question; and we are inclined to believe that M. Caffe's observation applies in some respects to this country as to his own, when he says that the indifference and the traditions of the successful and eminent practitioners at the head of consulting practice are among the chief causes which combine to stereotype, and therefore relatively to depreciate, the remuneration of practitioners in general. Our great consulting physicians and surgeons add to their incomes by large special fees, which they derive from operations or from country visits, and from the honourable gratitude of wealthy patients for important services. A thousand guineas for a visit to Paris, four thousand guineas for an operation on a monarch, baronetcies and great honoraria for repeated country visits, are incidents springing out of the guinea and two-guinea consultations which are still tolerated by the highest and most experienced consultants, both for these accessories and because they form the staple of a a large income, and allow a man of great reputation to acquire a large income by incessant and destructive labour. The propriety of establishing a more variable and higher tariff—one which should enable the highly placed consultant to fix his fee, according to a standard varying above a minimum, as the barrister fixes his—has been occasionally discussed. The question is one too delicate for us to attempt here a solution, which might have the appearance of being put forward as that of the Association or of its officers; but it would not, we think, be impossible to arrive at one. It is a question for which urgency is at hand. The exigencies of the professional standard of attainment, early education, social habits, and private expenditure, have been increased of late years, and are increasing in a ratio even more rapid than the ordinary increase which is observed in the general expenditure of all classes. It is difficult to say why the medical profession alone should consent to pay nearly fifty per cent. more for all the necessaries of life than they did a generation ago; should concur in enforcing on their body a larger and more costly education, and the rejection of all trade-profits from the sale of drugs, a general law of gratuitous service to necessitous persons, and habits of generosity—all of which well become and fitly adorn their character; and should yet approve of an arrest of honoraria at the standard fixed long years ago when different rates of value were current. It will be perhaps useful if these remarks attract further discussion and lead to serious conclusions. It might not be out of place to bring forward the subject at an annual meeting, or at an influential Branch meeting, and to move the appointment of a Committee which should take the sense of the leading consulting and general practitioners by a schedule of questions addressed to each, and report to the Association further on the subject, with a view to subsequent action.

SMALL-POX has broken out at Cinderford, in the Dean Forest, in virulent form, and some fatal cases were reported.

THE *Wiener Medizin. Wochenschrift* of August 3rd states that some isolated cases of cholera have occurred in Vienna, and complains of the tardiness of the local authorities in taking measures to meet the threatening visitation of the disease.

DR. COBBOLD, F.R.S., has been appointed to a Professorship of Helminthology at the Royal Veterinary College; so that, in addition to the summer course of medical botany, he will deliver Lectures on parasites and parasitic diseases during the Winter Session.

MR. HOLLOWAY, of pill and ointment reputation, is about to erect, at his own expense, a middle-class asylum at Virginia Water. The asylum will cost from £70,000 to £100,000, and will accommodate two hundred patients. It will be maintained for a year by Mr. Holloway, after which it is expected to be self-supporting, and shall be handed over to the management of trustees.

MANUALS for nurses are too often cumbered with fine writing and elaborately embroidered with extraneous reflections. Mr. Edward J. Domville, whose qualifications for the task do not appear on the title-page, has however produced an excellent little *Manual for Hospital Nurses and others engaged in nursing the Sick* (London, Churchill and Sons), which we warmly recommend as plain, sensible, clear, concise, and useful.

THE official report of the Wimbledon meeting contains a most favourable return of sickness. The average number sleeping in camp during the entire period was 2,638.8, and the general health of all has been remarkably satisfactory, the average daily application for medical assistance being at the rate of 2.42 per 1,000 only, which is the smallest on record for this camp. The sanitary arrangements were very satisfactory, and vigilantly supervised. No accident occurred on the review day. Altogether it was an unprecedently healthy meeting.

BY sacrificing an immense number of snails, M. Boussingault has collected one hundred *grammes* of their blood, the heart of each animal containing only a drop or two. It is an almost colourless or slightly yellow fluid, containing a small number of ovoid globules resembling those of the blood of an ox. He finds that the blood and muscle of invertebrata contain iron in definite proportion, the blood a little more than the muscle; and he concludes that iron is an essential element of the blood, a veritable aliment in these animals.

LORD NORTHBROOK has offered a gold medal for competition by the students of the Calcutta Medical College for the best essay on the exciting causes of fever with special reference to the calamity which has for a long time devastated the Burdwan district in India, and the measures, sanitary or other, to be adopted for their remedy and prevention.

A GOOD EXAMPLE.

THE local authorities of Bordeaux are about to elect by *concours* an officer to hold the appointments of town veterinarian, and inspector-general of food and of the public *abattoir*. His salary is to be 4000 *francs* (£160) with a residence at the *abattoir*.

THE LATE DR. ALDIS.

THE vestry of the parish of St. George, Hanover Square, have agreed to the following motion of the rector:—"That this vestry desire to record their sense of the great loss the parish has sustained by the death of their esteemed medical officer, Dr. Aldis. To his eminent qualities as a physician were added scientific attainments of a higher order, the whole of which were brought to bear upon the important interests intrusted to his charge with a conscientious zeal and faithful diligence that cannot be too highly appreciated."

POISONOUS DYES.

CHEMISTS have a singular way of reassuring the unscientific public. The poisonous effects of many aniline dyes and the mischievous results of wearing the bright-coloured socks and underclothing having been fully established and traced to the arsenical impregnation of the fabrics, M. Ch. Lauth announces to the Academy of Sciences that, "with proper precautions and in factories directed by veritable chemists, the preparation of the dyes of aniline, although requiring great quantities of arsenious acid, is not the cause of any serious accident." As, however, it is impossible for the purchaser of a pair of striped socks or a bright-coloured jersey to be fully certified of these points, and as even a trifling arsenical poisoning is an unnecessary toilet experience, M. Lauth's note is not so reassuring as it is intended to be.

PRESERVATION OF MEAT AND VEGETABLES.

AT a recent meeting of the Academy of Sciences, M. Sacca shewed specimens of meat and vegetables preserved by the aid of acetate of soda. The proportion which he recommends is two pounds of acetate of soda for eight pounds of meat or vegetable. To render the substances so preserved eatable, they must be treated with hydrochlorate of ammonia. Acetate of ammonia is then formed, which is "easily washed out"; and common salt, which serves as a condiment. Max Schultze of Berlin long since recommended the use of the alkaline acetate for the preservation of microscopical specimens; but no one was expected to eat them afterwards.

ALLEGED DETENTION OF A SANE MAN AS A LUNATIC.

MR. BARON CLEASBY lately tried an action at the Nottingham assizes, in which Mr. Walker, an upholsterer of that town, claimed from the Nottingham board of guardians £500 as damages for his illegal detention in the imbecile ward of the Nottingham workhouse. It was shown that on the 14th of April a man named Pilkington, a relieving officer of the Nottingham union, called at his house and induced Mr. Walker to get into a cab and go along with him. The relieving officer then conveyed Mr. Walker to the Nottingham workhouse, and he was detained there. On the following morning the plaintiff was placed among a number of people in different stages of insanity; his clothes were taken from him, and he was ordered to put on a dress which was used for lunatics in the workhouse, and which in this instance had been worn by lunatics before, and was not in a very cleanly state. In this condition the plaintiff was detained from the 14th to the 25th of April, although, on his arrival, he had been reported sane by the medical officer of the union. The plaintiff in his examination said that he was fed very badly. The breakfast was half a slice of bread, and what was called tea, but which was milk and water. At dinner there was half a slice of bread, potato, and an ounce and a quarter of meat. He had not enough food, and lost a stone and a half whilst there. At the end of ten days he was taken before a committee. He was asked a few questions, and was ultimately told to take his discharge. On the part of the guardians, Mr. Seymour, Q.C., contended that it had not been shown that the relieving officers were servants in the ordinary sense of the term. The judge, however, said that they had the guidance and control of the workhouse, and ought to have known that a person was illegally detained.—Mr. Cave said that the Visitors' Committee ought to have gone round the house and made inquiries amongst the paupers if any of them had any complaints to make. If they had inquired of this man, they would have heard a complaint that he was being kept there improperly. Mr. Seymour said the plaintiff's wife, frightened for her husband's safety, applied to Dr. Stanger, and from him received the following certificate: "13th April, 1872. I certify that I have this day seen Mr. George Walker, of Lister Gate. He is subject to uncontrollable fits of delirium, and the life of his wife is in jeopardy while he is under their influence. It is very necessary he should be at once placed under restraint." This certificate being brought to the knowledge of the relieving officer, he gave an order for Mr. Lille, one of the medical officers, to see plaintiff. Mr. Lille did not see the plaintiff personally, but inquired the facts of the case of the wife; and, having the certificate of Dr. Stanger before him, he wrote the following: "This is to certify that George Walker, of Lister Gate, is a person of unsound mind, and not fit to be at large. April 14th, 1872." Acting under the pressure put upon him by his wife, and on the strength of the two certificates, the plaintiff was removed by one of the officers to the workhouse, and there confined.

A SERMON FOR THE SEASON.

THE tendency to ridicule seaside and mountain holiday-making, which professed satirists commonly develope at this time of the year, may properly be encountered by an earnest protest from medical authorities in their favour. Brain-exhaustion is one of the most insidious and serious of modern maladies. Its early symptoms are often passed unnoticed, or left to a process of natural cure by readjustment, which sometimes succeeds and sometimes fails. To those, however, who have patients who, after long months of mental toil and urban excitement, are beginning to complain of sleepiness, weariness, and restless irritability, we would say, order them away till October next—to the lochs of Scotland, the passes of North Wales, the wild west of Ireland; then order the others away, as a mode of preventive treatment and an effective variety of public medicine, and start yourself for the quietest and freshest nook, by loch, mountain, shore, or fiord, that you can think or hear of. Think that, at this season of sunstroke and diarrhœa, the wind is blowing cool and fresh through the passes of Llanberis, along the sides of Ben Nevis, across the wilds of Connemara. Is there any remedy that can compare with this? Above all, forbid your patients to take books or writing-paper with them, and to leave their address or to ask for yours, while you are away.

MODERN OPIUM-EATERS.

IN a report to the Massachusetts State Board of Health on the use and abuse of opium, by Dr. Oliver of Boston, it is estimated, from the opinions of importers and druggists in New York and Boston, that one-half the opium imported is used as a stimulant (that used in quack medicines and in opium smoking not being included). The importation of opium into America has increased from 24,000 pounds in 1840 to 154,841 pounds in 1870; and the amount for the first half of 1871 was 123,000. Possibly, the arrivals of opium occur principally during the first six months of the year. It is intimated by Mr. Hayes, the Massachusetts State Medical Assayer, that of late years opium has entered more largely than ever into proprietary and family medicines. "One of the most diabolical manifestations" (says the *American Journal of Medical Science*, in a notice of the Board of Health Report) "of the sordid and heartless quackery which thrives in this age, is seen in the

fact stated by Mr. Hayes, that some of the advertised 'cures' for opium-eating contain potent doses of morphia. One of these, if taken as directed, would give six grains of sulphate of morphia daily. Truly the last state of the unfortunate believer in this 'cure' would be worse than the first. Dr. Oliver directs attention to the abominable 'cordials', 'cholera cures', and 'soothing syrups', as not only destructive of infant life, but as very probably sowing the seeds of an irresistible craving for stimulants in after life. When we learn that a recent analysis of "Winslow's Soothing Syrup" gave one grain of morphia to the fluid ounce, we are prepared to expect any amount and degree of cerebral or nervous disorder in the adult life of any child who might outlive its frequent administration."

THE EDINBURGH UNIVERSITY CLUB.

THE quarterly general gathering in London of graduates, alumni, and their friends, of the Edinburgh University, took place in St. James's Hall Buildings on the 1st instant; Dr. Sieveking, Vice-President, in the chair. The August meeting takes place, by custom, on the day of the annual capping at the Alma Mater; and the good wishes of the London Club were expressed in word by the Chairman at the dinner, and forwarded by telegram during the evening. The social business of the Ophthalmological Congress, expressed in the unbounded hospitality of Mr. Bowman, brought the proceedings of the evening to an untimely end. His Royal Highness the Duke of Edinburgh was elected at the meeting of Council an Honorary Member of the Club.

VACCINATION.

STRIKING instances such as the subjoined—which we extract from the interesting report by Dr. T. L. Rogers, of the County Lunatic Asylum at Rainhill—are sometimes more effective and more easily remembered, in argument and illustration, than great masses of figures. "As a precautionary measure," he says, "on the first outbreak of the small-pox in Liverpool, I had all the household revaccinated, and to this precaution our immunity is undoubtedly due, as patients have been admitted indiscriminately from infected places. My authority, however, not extending to the attendants' wives, one of these declined to be vaccinated when her husband was revaccinated, alleging that she had had small-pox when a child, and she subsequently died of a malignant attack, after only five days' illness; her husband's sister, who nursed her, and who had been revaccinated, escaped the disease."

ABATTOIRS IN BOSTON.

THE Massachusetts Board of Health is in a fair way of succeeding in removing a great public nuisance which has prevailed in Boston and its neighbourhood. Hitherto, the slaughtering of cattle for the use of the city has been almost entirely carried on in private establishments clustered together in the suburban town of Brighton, among a largely increasing population. The cattle-pens, slaughter-houses, and fat-rendering establishments, were becoming increasingly offensive. The Board obtained power to form a joint-stock company for the building of *abattoirs*, with all conveniences for the preservation of cleanliness. It was hoped that the butchers would join in the scheme; they, however, obstinately declined. The Board consequently obtained authorisation to close all establishments which were in their judgment inimical to public health or to public comfort and convenience. The butchers pleaded to be allowed to remain in their old houses; the Board, however, refused, and instituted proceedings which led to the closing of several of the establishments. This had the result of inducing the butchers to organise themselves into a company under the conditions which they had before refused. A large tract of land between and near two great cattle-bearing railways has been purchased. Upon this will be erected buildings for the reception, feeding, killing and dressing of all cattle, sheep, and pigs, needed to supply the city markets; and also all the varied establishments for preparing the hides, the fat, the blood, and all products whatsoever. Nothing will be wasted. It is believed that the entire system can and will be made entirely inoffensive. All will be constructed, and afterwards conducted, under the authoritative supervision of the Board. A rigid inspection will follow each beast from his arrival in the cattle-train till his dressed meat is exposed in the stalls, and his other portions converted into valuable and innocuous manufactured products. Cruelty will be prevented; the consumers will be ensured wholesome meat; and adjoining residents will be protected to the fullest possible extent from all the annoyances which have usually surrounded the slaughter-house. The energy and firmness displayed by the Massachusetts Board of Health on the matter are worthy of the highest commendation.

RECEIPT AGAINST CHOLERA.

ON the occasion of a great epidemic—probably one of cholera—which reigned in the seventeenth century, the following quatrain had much vogue. *La France Médicale*, which has disinterred it, thinks it still applicable.

"Tiens tes pattes en chaud.
Tiens vides tes boyaux,
Ne vois pas Marguerite,
Au cholera tu seras quitte."

MAUNDER *v.* WAKLEY.

THE *Lancet* has had its ordinarily recurring libel case, and, according to its modern custom, has apologised, retracted, and paid the costs. On this occasion, it chose to do so publicly; and it may be hoped that the opportunity which was afforded to Mr. Serjeant Parry of offering his clients a compliment, which apparently only a paid advocate could be found to pay, will compensate the feelings and the pockets of the proprietors for the injury which they must have otherwise suffered. It is, of course, not necessary to offer sympathy to a journal which at one time of its career became famous through its libels, and which is now chiefly remarkable for its apologies and its compromises—retaining throughout its notoriety and the attendant advantages. By a curious piece of self-satire, the article denouncing Mr. Maunder as a spy and an informer, for which the *Lancet* has now suffered a punishment which may be every way profitable, commenced by observing that, "with its customary indiscretion," this JOURNAL had already discussed the subject. This curious method of apologising for its own want of early information, which has become stereotyped with our contemporary, was then followed by the discreet observations which have just been the subject of discussion at the Kingston Assizes. From this lesson it may, we hope, result that the *Lancet* will at last learn that debility will not excuse irritability; that even "a failing circulation" will not justify an habitual recourse to unlawful stimulants; and that, painful as is the disease, it is possible for the remedy to be worse.

THE DIGNITY OF MEDICINE.

THE following remarks are extracted from an address lately delivered by Dr. B. E. Cotting before the Norfolk (Massachusetts) District Medical Society, and published in the *Boston Medical and Surgical Journal*. The main object of the address was to inculcate the importance of the study of the natural history of disease; the value of medicines, judiciously used, being at the same time fully recognised.

"As for the still often expressed fear that individual success would be ruined, and the profession reduced to a nullity, should such investigations become general, nothing can be more groundless. In all ages, and in all countries, the most successful, the most confided in, and ultimately the most honoured, have been those who, with no obnoxious pretensions to personal superiority, have been guided more thoroughly than others by Nature itself in their care of the sick. Of the truth of this, the late recipients of royal favour and a nation's gratitude, in old opinionated fatherland, are notable examples. Personal success depends upon far other qualifications than ability to deal out nostrums and specifics. To be eminently successful, say our teachers (and their words are worthy of all acceptation), requires, in addition to adequate learning and science, the kindness of heart and manner of a gentleman, to put one spontaneously in the place of the sufferer, however humble, that he may be done for as one would wish in like circumstances to be done by—balance of character—steadiness of purpose—uncomplaining patience—self-denial—rectitude—sagacity—sympathy, with firmness capable of assuming the expression of in-

flexible sternness—a certain amount of personal experience and responsibility, conjoined with the talent for comprehending and applying its results. These, according to our teachers, are some of the requisites for personal success. Whoever has these, need not fear a loss of occupation. That there are such in our Society, such in the State, such in all countries, admits no shadow of doubt; and they are they who, in the exigencies of individuals and of the State, will be sought out and chiefly depended upon. The medical profession is essential to every community; henceforth no civilised people can possibly do without it. Were any or all of the drugs in popular repute proved to be useless; were it even found that there is no particular medicinal agent essential to the best treatment of disease—of which, however, there is not the slightest apprehension—the value of the profession, as such, would not be diminished; nor would it become, as one reviewer has coarsely expressed it, 'just about good for nothing.' It has, as we have before and frequently intimated, higher and nobler purposes. Never in the memory of the oldest was less medicine given than at the present day; and never was the profession, the truly regular and scientific portion of it, held in higher regard by the people. Said a commoner within hearing a day or two ago, 'There is a great deal of *real respect* for educated physicians everywhere. After all, they are the best and most substantial men we have. In country towns, they are invaluable.'"

A NEW BRITISH MINERAL WATER.

HASTINGS has acquired a new claim to consideration as a health-resort. St. Andrew's Spa, which has just been brought into notice at Hastings, is a chalybeate of tolerable strength. According to Mr. Wanklyn's analysis, it contains 2¼ grains of carbonate of iron in a gallon. That the iron is actually present in the state of carbonate, and not as sulphate, is shown by the fact that sulphuretted hydrogen gives a black precipitate of sulphuret of iron when it is passed through the water. The black precipitate is, of course, instantly dissolved on the addition of a few drops of acid.

CHARITY ELECTIONEERING.

IT is to be hoped that the prominent attention being given to the subject of the present system of so-called charity electioneering may lead to some practical good results. The Charity Organisation Society has lent its influential voice in condemnation of the system, and Sir Charles Trevelyan has followed by a vigorous letter in the *Times*, supplementing the list of serious abuses which the present practice entails. We have often pointed out that the very aims of charity are defeated by those who support such a system of election as that which obtains in the case of the Hospital for Incurables and other kindred institutions. It is surely possible to secure a sufficient number of reliable ladies and gentlemen to select the most deserving candidates; and we believe that the funds would not ultimately diminish in consequence, for the great expenditure in affording aid to the candidates is really not so much in actual subscriptions, as in the waste of time, writing materials, and stamps, devoted to pressing the claims of the individual candidates, fit or unfit, as the case may be, whose election is desired.

A FATAL BEE-STING.

A CASE has been lately recorded in the daily papers which is sufficiently remarkable to be worth medical attention. Dr. Diplock held an inquiry at Twickenham, respecting the death of Miss Elizabeth Hough, aged 55, who expired suddenly from injuries caused by the sting of a bee. It appeared from the evidence that the deceased was in her garden inspecting the bee-hives, when she was stung behind the ear by a bee. She became unconscious soon afterwards, and was laid down on the drawing-room floor with a pillow under her head. Dr. Maughan was sent for, but when he arrived she had been dead a quarter of an hour. He made a *post mortem* examination of the body, but the only sign of injury he found was a great deal of discoloration behind the ear, caused by the sting of a bee. In reply to the coroner, Dr. Maughan said there was only one sting, and in his opinion death resulted from a shock to the nervous system induced by it. Witness added that deceased had been under the medical care of Dr. Julius and Dr. Fenn, who were of opinion that, although she had a weak heart, it was not diseased. Major Lewis Hough said the deceased, who was his sister, was of a delicate and nervous constitution. In the autumn of 1870 she was stung by a bee, and on that occasion it produced very peculiar consequences. She lost consciousness, and remained in that state for two hours. The coroner remarked that some persons were peculiarly susceptible; and in such cases, when syncope set in, the best remedy was a little brandy or ammonia. The jury returned as their verdict, "That deceased died from syncope, accelerated by the sting of a bee."

DIARRHŒA IN LONDON.

NOTWITHSTANDING the great fall in the mean range of temperature last week, the mortality from diarrhœa in the metropolis showed a further increase. The deaths from this disease, which had been 61, 148, 258, and 394, in the four previous weeks, further rose to 484 last week, and exceeded by 184 the corrected average weekly number in the corresponding week of the last ten years. No fewer than 460 of these fatal diarrhœa cases were of infants under two years of age, including 398 under one year. To "cholera" and "choleraic diarrhœa", 33 deaths were referred last week, against 17 and 19 in the two preceding weeks; 28 were infantile and 5 adult cases. What cholera and infantile choleraic diarrhœa may mean, it is difficult to say; but we may presume to class them for the most part amongst cases of simple infantile diarrhœa. The high mortality of last week, in spite of the rather low mean temperature, may, we think, fairly be explained by the history of infantile diarrhœa. The largely increased prevalence of this disease during the intense heat of the previous fortnight had not had time (for children do not generally succumb for a few days) to leave its broad mark in the mortality returns of the Registrar-General.

ACTION FOR MALAPRAXIS.

A CASE has this week been tried at the Manchester Summer Assizes, in which Mr. Balmforth, a commercial traveller, sued Mr. J. Buckley and Dr. Ogden Fletcher for malapraxis, in having failed to detect and reduce a dislocation of the hip-joint sustained by him on December 11th, 1871, in consequence of a fall in attempting to spring into a railway carriage in motion. About eleven weeks afterwards, the patient was examined by the late Mr. Beever, surgeon to the Manchester Infirmary, who said that a dislocation was then present which could have been reduced at the time of the accident, but that at that time it was too late to attempt reduction. At the trial, the surgeons of the Infirmary—Messrs. William Smith, Southam, Lund, and F. Heath—stated that there was a dislocation of the hip on the sciatic notch; that an attempt at reduction after the time that had elapsed would be attended with danger; and that, in their opinion, the dislocation ought to have been detected and effectually reduced at the time of its occurrence. On the other hand, it was alleged by the defendants themselves, and by Mr. Wheelhouse of Leeds, Mr. Favell of Sheffield, Mr. Broadbent, Mr. Windsor, and Mr. Bradley, that the dislocation was the secondary result of a fracture of the upper part of the acetabulum. The jury found a verdict for the plaintiff, with forty shillings damages against each defendant. We have had an opportunity of seeing some correspondence in reference to this case, which shows that Mr. Southam, on behalf of the surgeons of the Manchester Infirmary, strongly advised that the case should be submitted to arbitration; but that this was refused by the defendants—a proceeding on their part very much to be regretted.

THORACENTESIS.

THE discussion on thoracentesis drags its slow length along in the Academy of Medicine without adding much to our knowledge. Of course, M. Chassaignac has pronounced a long oration in favour of "drainage," and M. Jules Guérin in favour of subcutaneous puncture. M. Roger (July 16th) has maintained strongly, and with the aid of many observations, that thoracentesis should always be performed for empyema of infants, rarely for the large serous effusions of pleurisy, never for moderate serous effusions. M. Behier thinks the reserve of M. Roger overstrained. Air admitted by thoracentesis is innocuous, and does not favour the formation of pus.

THE HEALTH OF THE CAMP AT SHOEBURYNESS.

NOTWITHSTANDING the inclemency of the weather, the health of the men, so far, has been very good. A few cases of diarrhœa and indigestion have occurred, which may be attributed to wet feet and errors in diet. In addition to these, there have been several cases of contusion, the most severe being that of a gunner in the 4th Cinque Ports, who had a great toe-nail completely torn off by the wheel of a thirty-two-pounder passing over his foot. Fortunately, the bones were not injured, and he is progressing favourably. We are happy to be able to contradict a report which appeared in a contemporary, that the case was considered dangerous. There have been no other cases of sickness among the men so far; but, if the wet weather continue, an increase in the number on the sick-list may be expected. The camp is pitched on the same ground as last year—an excellent piece of turf just outside the barrack-wall, and close to the water-works. The latrines and urinals are well situated and thoroughly attended to. The dry-earth plan has been carried out by means of the "pail system", and has worked admirably. The field-hospital is in the paddock with the officers' tents, and consists of a hospital marquee containing nine beds, near which is a bell-tent containing the medicine-chest, etc., and used as a surgery. The hospital staff is as follows: Surgeon Hannan, R.A. (in charge of Royal Artillery at Shoeburyness), Consulting Surgeon and Principal Medical Officer, but not living in camp; Assistant-Surgeon Fiddes, R.A., in charge of camp; Staff Assistant-Surgeon Kilroy; and a Sergeant of the Army Hospital Corps. Assistant-Surgeon Fiddes acts, by the authority of the Council of the Artillery Association, as "Camp Surgeon".

SCOTLAND.

A BAZAAR, in aid of the funds of Miss Clugstone's seaside homes for the poor, was opened at Dunoon, on Monday, by the Marquis and Marchioness of Lorne.

THE Aberdeen Royal Infirmary has, we are glad to hear, been left £10,000. With this sum at the disposal of the Managers, improvements will, it is hoped, be effected, which have long been wanted.

THE NORTH OF SCOTLAND MEDICAL ASSOCIATION.

THE annual meeting of this Association was held in the Medical Society's Hall, Aberdeen, on the 3rd instant; Dr. Francis Ogston, President. There was a very good attendance. Dr. Ogston delivered an able and interesting address on the present position of medicine and its advance during the past forty years. A code of medical ethics, drawn up by a special Committee appointed at the last annual meeting, after some discussion, was amended and remitted back to the Committee. Dr. Turner of Keith was appointed President for the ensuing year. The meeting was concluded by a dinner in the Imperial Hotel, Dr. Ogston presiding.

IRELAND.

APOTHECARIES' HALL, DUBLIN.

AT the meeting of the General Council, held in pursuance of the Statute of Incorporation, on the 1st day of August, the following were duly elected as office-bearers for the ensuing year, 1872-73.—*Governor:* Thomas Collins. *Deputy-Governor:* Edward J. O'Neill. *Court of Directors and Examiners:* Edward Howard Bolland, Charles Holmes, Arthur Harvey, Charles H. Leet, Robert Montgomery, Charles F. Moore, Henry P. Nolan, Jerome O'Flaherty, George B. Owens, John Ryan, James Shaw, John Shea, and George Wyse, Esqrs. *Examiners in Arts:* J. W. Moore, M.D., M.A., and Edward W. Collins, M.D. *Representative on the General Medical Council:* Charles H. Leet, M.D.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE twenty-seventh annual meeting of the Medico-Psychological Association was held on Wednesday, July 31st, in the rooms of the Royal Society, Edinburgh. The attendance of members was large. Dr. Maudsley, London, the retiring president, vacated the chair in favour of Sir James Coxe, M.D., Commissioner in Lunacy.

The President delivered an able address, in which he touched on various questions, as "The Results of Asylum Treatment," on "The Causes of Insanity," on "How to Check the Growth of Insanity," and on "Moral and Physical Training." The President concluded his address by observing that insanity, so far from being a disease of civilisation, is a disease of ignorance, and that the only way in which its extension can be checked is by imparting to every man a knowledge of the structure of his own body, and of the relations in which he stands to the moral and physical world around him. He thought that their special branch of the medical profession has not hitherto fulfilled the utmost good that it is capable of accomplishing. We possess the best means of fully estimating the immense amount of evil that results from neglected bodily and mental training, but our efforts have hitherto been too much restricted to providing a remedy for it by asylum treatment. Of the manner in which this remedy has been applied, he spoke in terms of the highest admiration. In no country in the world does the condition of lunatic asylums surpass that of the asylums of the United Kingdom; and the very greatest credit is accordingly due to their superintendents for the intelligence, zeal, and perseverance which they have brought to the fulfilment of their important duties. But he expressed his wish to see them exercising their great and legitimate influence in their respective districts by pointing out how mind depends on matter, and how insanity is but the expression of a faulty physical constitution, having its origin in causes which we may readily trace, and which are in a great measure under our control. There is much that is hopeful for the progress of the people in the present movement among the working classes for increased wages and shorter hours of labour, but until their sources of enjoyment have been extended by the wider cultivation of their intellectual and moral faculties, there is only too much reason to fear that increase of wages and increase of leisure, instead of promoting their higher civilisation, will merely afford the means of increased indulgence to their animal propensities.

The general business consisted chiefly in the appointment of Dr. Christie as General Secretary, in the room of Dr. Harrington Tuke, resigned; that of Dr. Frederick Skae as Secretary for Scotland, in the room of Dr. Batty Tuke, resigned; the admission of twenty-two new members; and the adoption of a resolution to hold the next annual meeting in London. Papers were read by Dr. Lockhart Robertson and Dr. T. L. Rogers.

A dinner was given by Sir James Coxe to the members of the Association and others, in the Douglas Hotel, on Tuesday evening. The entertainment passed off with great success.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Wednesday, August 7th.

PUBLIC HEALTH BILL.—On the order for the third reading of this Bill, Lord Buckhurst said he could not but think that the public interests would have been much better consulted if a measure of such moment had been brought under the consideration of their lordships at an earlier period; neither could he see why a measure of this kind should not have originated in their lordships' House.—Lord Redesdale concurred with the noble lord who had just spoken. This important Bill had been only three days in their lordships' House.—The Marquis of Ripon moved that the Bill be read a third time.—The Bill was then read a third time. On the motion that the Bill do pass, the Marquis of Ripon said that the Bill did not increase the sanitary powers conferred by existing Acts. All it did was to vest their administration in one authority in each town or rural district. The Bill was then passed.

HOUSE OF COMMONS.—Saturday, August 3rd.

ON the vote of £18,785 for universities in Scotland, Sir D. Wedderburn called attention to the proceedings in the Court of Session at the instance of Miss Jex-Blake and others against the University of Edinburgh. Mr. Russell Gurney, Dr. Lyon Playfair, and Mr. M'Laren spoke in support of the Lord Ordinary's decision, and expressed the hope that the University authorities would see what their duty in the matter was. The vote was agreed to.

FORTIETH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BIRMINGHAM, August 6th, 7th, 8th, and 9th, 1872.

First General Meeting, Tuesday, August 6th.

The members assembled at 8 P.M. in the Classical School Room of King Edward's School.

Mr. Husband, the President of Council, occupied the chair in place of Mr. Whipple, the retiring President. In opening the proceedings, he said that all the members of the Association, especially those who were at the Plymouth Meeting, and enjoyed the splendid hospitality of the South, would be extremely sorry to hear that the retiring President was, through illness, unable to be present to hand over his office to his gifted successor. To show, however, his deep and continued interest in the Association, the retiring President had sent a valedictory address, which he desired should be read to the meeting, and which the members would receive with all the respect due to anything coming from a gentleman who had presided over them with so much ability. The address was as follows.

"I cannot express to you the very deep regret and great disappointment at being prevented, on account of severe illness, from taking my place at your meeting. More particularly do I feel this, as ere ceasing to be your president I desired to bring under your notice a question which will ere long come forward for discussion in the Commons House of Parliament. I refer to the Contagious Diseases Act, and to the grave question as to whether that Act is still to be the law of the land or the contrary. When I, from professional observations now extending over forty years, see the wonderful reductions in the number of cases compared with those that formerly came under my notice, and am also convinced that that number has been gradually decreasing during the last three years, I am compelled to ask myself the question, 'Whence is the cause of this condition of things?' And the only answer I can find is that to the Contagious Diseases Act is to be attributed this improvement; and I cannot but consider that Act a great blessing to the community, instituting as it has a supervision over those unfortunate women who have been drawn from the paths of virtue." After detailing the results of disease, the address went on to say: "I should hope there is not one medical man living in a seaport town who has opportunities of observation, but who would from his heart use all his energy for the continuation of the Act. I say in seaports, as, fortunately, the disease is not so rife in inland towns as it is in places filled with men long deprived of the society of women, unable to marry from having no fixed home, rushing thoughtlessly into vice of every kind, without one moment's reflection. Having thus expressed my opinion, I trust every member of this Association will agree with me on the necessity, in a sanitary point of view, for pressing on the Government the necessity of preserving the Contagious Diseases Act; they will thus be conferring a blessing on many families, and also upon posterity."

The Chairman added that he had now only to introduce the President who was to succeed Mr. Whipple; and Mr. Alfred Baker was the talented gentleman who would fill the chair for the coming year as President of the British Medical Association. In a town like Birmingham, which had been rich in eminent medical men, and boasted in the present, as it boasted in the past, many who stood very high in medical science—[*hear*]—it was to be expected that in the man to be the President, a man who was the choice of the medical brethren among whom he lived and carried on his profession, they would have a gentleman of high ability, of great moral worth, and of great experience; and from what he (Mr. Husband) had seen of Mr. Alfred Baker, he was sure that the gentleman who had been named by his medical brethren of Birmingham would fulfil all the expectations formed of him. In introducing to the Association Mr. Alfred Baker, the Senior Surgeon of the large General Hospital of Birmingham, he knew he was introducing a gentleman who was well worthy of being placed at the head of this important Association, and who would guide its destinies for the year with credit to himself and with advantage to the profession. [*Loud cheers.*]

Amid the continued cheers of the members, Mr. Baker took the chair vacated by Mr. Husband.

Dr. Chadwick (Leeds) then said that, after welcoming the new President, who, he was sure, would hold the office to which he had been called with dignity—[*cheers*]—it was but just that they should speak of one who was officially passing away; and, in intervening between the meeting and the new President's opening address, they would feel that it was only a simple act of duty and gratitude to tender the thanks of the Association to the gentleman who last year presided over them. [*Cheers.*] All who last year enjoyed the week at Plymouth, whether they derived much scientific information from the proceedings or enjoyed the splendid hospitality shown them, would most heartily join in thanking that gentleman who conducted so satisfactorily that most interesting and enjoyable meeting. [*Cheers.*] The occupancy of the chair of President of the Association indicated more than at first sight appeared. [*Hear, hear.*] Its holder must have lived a life of usefulness in the locality where he has practised his profession; and he must have, by his talent, his diligence, and, moreover, by his fair dealing with his medical brethren, secured the respect and approbation of those among whom his professional life had been passed. [*Hear, hear.*] It was one of the singular and most successful rules of the Association, that it recognised the feelings of the medical men of the locality which was to send the President of the year. It was not well to speak too highly in praise of any gentleman; but, as Mr. Whipple was not present, they might properly express their opinion of the high estimation in which they held him. He proposed—"That the thanks of this meeting be given to Mr. Whipple for his able discharge of the duties of President during the past year, and that he be appointed Vice-President of the Association."

Dr. Waters (Chester) seconded the motion, and said that it was to be remembered that the great object of this Association, in holding these annual meetings at different places, was not only the promotion of science, but the cultivation of a brotherly feeling among the members. [*Cheers.*] The President must, therefore, be a man highly respected among his brethren; and they all knew that Mr. Whipple was a man who thoroughly came up to all the qualifications looked for in a man to hold this high position, and had held forth the hospitality of Plymouth with an ungrudging hand. [*Cheers.*]

The motion was unanimously carried, amid loud cheers.

President's Address.—The President then gave his Address, which will be found at page 141. At its conclusion, he was most warmly applauded.

Report of Council.—Mr. Fowke, General Secretary, read the following report.

Your Council are happy to meet you in this important centre of manufacturing industry, remembering, as many do, the successful meeting of the Association held here in 1856. Last year, the magnificent scenery and attractive influences of Devonshire and Cornwall drew together a large number of members, who, after transacting the business of the Association, and listening to addresses of no ordinary merit, were enabled to avail themselves of the courtesy of the military, naval, and civil authorities of Plymouth and Devonport, and to visit scenes unsurpassed in natural beauty and historical interest, especially to the medical visitor. This year, we meet in a locality made important by the energy and enterprise of man, and from which have sprung many distinguished cultivators of medical science and art.

At the annual meeting in 1871, there were on the list 4,403 members. There are now 4,700 members—an increase indicating the continued progress of the Association.

The Treasurer's accounts for 1871 have been audited by Dr. E. L. Fox and Mr. Major, the public auditor, and were published in the Journal (April 20th, 1872), by which it was seen the liabilities exceeded the assets by the sum of £314 : 17 : 10. Your Council, however, believe that by the improved business arrangements inaugurated at the last annual meeting such balance will be speedily wiped off, and the financial position of the Association be brought to a more satisfactory condition. The General Secretary has hitherto had much to contend with in reducing the business of the Journal Office into more complete working order, but your Council believe that in a short time the necessary changes will have been completed, and a more simple and effective working of the business affairs of the Association secured. The experience of the past year fully justifies the necessity for the changes made at the last annual meeting in the secretarial department. Your Council feel, however, that it is due to Mr. Ernest Hart, the able editor of your Journal, to recognise gratefully the voluntary supervision which he gave to the business management, as distinguished from the duties of editor, previously to the appointment of a General Secretary resident in London, and venture to express a hope that some acknowledgement of those voluntary services will be voted by the members present at the annual meeting.

The Poor-law Committee has, on several occasions, had the opportunity of effectually acting in behalf of the interests of the Poor-law medical officers of Great Britain and Ireland. It has co-operated with the Poor-law medical officers of England in determining the kind and

degree of protection which shall be demanded for Poor-law medical officers when called upon to assume health-functions under the Public Health Bill; and, in a deputation to Mr. Stansfeld, the President of the Local Government Board, elicited from him satisfactory assurances, both on this subject, and as to the intentions of the Board to extend the Poor-law dispensary system in this country, and to readjust districts on a more equitable footing.

The subject of the working of the Superannuation Act for Medical Officers is under the consideration of the Committee, and the necessary steps are in progress to move the Government towards obtaining a more liberal interpretation of the provisions of the Act from various boards of guardians.

The Medical Reform Committee has suspended its labours during the past session of Parliament, in order not to embarrass the General Medical Council, the Universities, and Corporations, in their efforts at reform and in their action to realise conjoined boards of examination for admission into the profession in the different divisions of the kingdom. The Report of the Committee will be submitted to your consideration.

The Committee of Parliamentary Bills has given careful consideration to various measures of professional importance, in the course of their passage through the legislature. A report will be presented by the Secretaries, which will show the valuable work that it has accomplished.

During the past year, and especially during the last six months, the labours of the Joint Committee have been constant and very arduous. By deputations to the President of the Local Government Board, by correspondence and frequent conferences with members of the House of Commons, and by urging the branches of the Association to use their influence with their representatives, they have endeavoured, but as yet in vain, to secure the adoption of such amendments as would make the Public Health Bill in reality what it is only in name. A provisional report will be given in by Dr. Stewart, and it is hoped that a full and free expression of the opinion of the Association will be elicited, for the guidance of the Joint Committee in their future proceedings.

The Therapeutical Committee has not been able to pursue its investigations this year, in consequence of the enforced absence from Edinburgh, of Professor Hughes Bennett, through ill-health.

The Committee on the Registration of Disease will present a report. It is urgently necessary that the Association should continue their exertions to obtain a satisfactory system of registration of sickness. Although weekly returns of disease are still made by the Manchester and Salford Sanitary Association, and by Dr. Whitmore, of St. Marylebone, your Council regret to notice the partial cessation of the very complete records of sickness obtained by Dr. Hill, of Birmingham; and, as was mentioned in the report for 1871, the records were last year discontinued in Newcastle-on-Tyne. This failure of two of the most important voluntary efforts in the kingdom is a further proof of the necessity of establishing a national system of registration at the public expense.

Dr. Steele has given notice of the following alterations in the Laws.

That Laws 15 and 16 be so altered as to read as follows.

1. The subscription to the Association shall be one guinea *per annum*, which shall entitle each member to receive the publications of the Association for the current year. The subscription shall date, and be considered due in advance on the 1st of January in each year, except in the case of a member admitted on or after the 1st July, when the subscription for such part of a year shall be half a guinea in advance.

2. Any member whose subscription shall not have been paid on or before the 31st December of the current year shall be suspended from all privileges of membership; and at the end of the succeeding year, if the arrears be still unpaid, he shall cease to be a member, and shall be ineligible for readmission until he shall have paid all arrears due at the period of his suspension.

3. Any member wishing to withdraw from the Association shall give written notice of his intention to the General Secretary on or before the 1st December of the current year; and neither withdrawal, suspension, nor erasure of a member's name from the books of the Association, shall be deemed either in honour or equity to relieve such member from his liabilities to the Association.

Your Council believe the proposed alterations will not only conduce to a more regular payment of subscriptions, but will also secure the return of many members, who, under the present law, are deterred from rejoining the Association.

Communications from the Harvey Memorial Committee have been received, and your Council recommend that it be supported.

Your Council regret that no Essays have been received for the Hastings Prize Medal for 1872.

The thanks of your Council are specially due to the Honorary Secretaries of the Branches for the very effective working of their respective Branches.

Your Council have viewed with very great satisfaction the formation of a new Branch in Scotland, the Aberdeen, Banff, and Kincardine Branch, which has entered at once upon a promising career of energy and success; and strongly recommend the Scotch and Irish members to connect themselves with the Association.

The Financial Report was presented. It was as follows.

Financial Statement for 1871.

R. W. Falconer, M.D., as Treasurer of the British Medical Association, in account with that Association for the Receipts and Payments made by him from the date of the last account, to the 31st day of December, 1871.

Receipts.	£	s.	d.
Subscriptions	4400	0	0
Advertisements	1238	4	9
Journals sold for Cash	80	11	6
Dividend on Dishonored Cheque	1	15	6
	5720	11	9
Balance in Treasurer's hands, 31st December, 1870	38	3	2
Total	5758	14	11

Payments.						
Journal Expenses:						
Printing	3007	0	6			
Engraving	14	0	6			
Editorship	187	10	0			
Sub-editorship	56	5	0			
Contributors	485	18	3			
Work at office	37	10	0			
Office Clerk	91	13	4			
Office Expenses	183	15	9			
Office Printing and Stationery	136	18	0	4200	11	4
Executive Expenses, etc.:						
Secretary's Salary	225	0	0			
Secretary's Petty Cash	27	18	0			
Hastings Gold Medal	21	5	0			
Expenses relating to Charter	28	8	0			
Accountant, making up Annual Accounts	5	8	8			
Ditto, Special Statements of Liabilities and Assets	29	17	6			
Stationery, Printing, etc.	13	15	3			
Advertising	0	16	6			
Sundry other Charges	4	3	7			
Money returned for Subscriptions and Cheques	15	9	6	372	2	0
				4572	13	4
Balance in Treasurer's hands, 31st December, 1871				1186	1	7
Total				5758	14	11

R. Wilbraham Falconer, M.D., *Treasurer.*
Samuel Dobell Major, *Public Auditor and Accountant, Bath.*

I, the undersigned, being one of the auditors appointed by a general meeting of the members of the British Medical Association, held at Plymouth in the month of August 1871, having this day examined the General Secretary's cash-book, together with the lists forwarded by the Branch Secretaries, and the counterfoils of the receipts issued, certify the same to be correct, and that I am satisfied with the accounts which have been submitted to me.

Edward Long Fox, M.D., *Auditor.*

Bath, April 6th, 1872.

Statement of Liabilities and Assets, December 31st, 1871.

Liabilities.	£	s.	d.	£	s.	d.
Journal Expenses:						
Printing	2598	9	6			
Engraving	10	14	0			
Editorship	62	10	0			
Sub-Editorship	18	15	0			
Contributors	575	10	8			
Work at Office	12	10	0			
Office Clerk	15	2	8			
Office Printing, etc.—say	140	0	0			
Office Expenses	76	18	9	3510	10	7

EXECUTIVE EXPENSES:						
Secretary				125	0	0
Secretary's Cash—say				17	10	0
Branch Secretaries, etc.				23	1	1
Stationery, Printing, etc.				11	9	9— 177 0 10
						£3687 11 5

Assets.

	£	s.	d.	£	s.	d.
TREASURER:						
Balance in his hands				1186	1	7
GENERAL SECRETARY:						
Balance in his hands				230	10	0
JOURNAL:						
Due from Publisher, for Advertisements and Sales	109	11	6			
Book Debts, as per Ledger:—						
Stated to be Good (Less Commissions, Discounts, etc.) say 5 per cent.	1531	13	0			
Doubtful 257	7	2	128	13	7	
Bad 334	8	4	0	0	0—1660	6 7—1769 18 1
SUBSCRIPTIONS:						
Arrears apparently due (subject to Deaths, Resignations, Removals, etc.):—						
431 at 21*s.* 0*d.* (say one-third)				150	17	0
37 at 31*s.* 6*d.* (say one-fourth)				14	11	4
59 at 42*s.* 0*d.* (say one-fifth)				20	15	7
33 at 52*s.* 6*d.*				0	0	0
74 at 63*s.* 0*d.*				0	0	0— 186 3 11
634						3372 13 7
Estimated Excess of Liabilities over Assets						314 17 10
						£3687 11 5

SAMUEL DOBELL MAJOR, *Public Auditor and Accountant, Bath.* April 8th, 1872.

Mr. HUSBAND said that the accounts read consisted of a financial statement as to all money received and paid during the year; and besides this, the Committee of Council, in order to see the position in which the Association stood, had placed all the books in the hands of a public auditor, who had gone through the accounts for year after year, of all that had been received, of all which had been paid, and of all which was still owing. The result was that the Council stood before the members to confess that, on a valuation of the property of the Association, of the money to come and of the money to be paid, there was a small balance against the Association. Although this was the case, he believed that there need be no fear as to the financial future of the Association.

Dr. FALCONER said that the time had been when the Association was in debt to its treasurer; and the fact that its financial position was not better, was owing more to the members not sending their subscriptions than to any want of financial management. He asked the members to help the Council by promptly paying their dues. [*Cheers.*]

Sir WILLIAM FERGUSSON moved that the Report of Council and the financial statement be received, adopted, and entered on the minutes.

Dr. RUMSEY seconded the motion. He said that he could not do so without expressing the great satisfaction he felt in seconding the resolution as a restored member of the Association—[*cheers*]—for, for a few months, to his own very great dissatisfaction, he was a self-excommunicated member, and was now restored to their fellowship. [*Cheers.*] He expressed his sense of the great advantage which had resulted to this Association from the complete development of its departments, particularly by the institution of the department of State Medicine. He believed that by the institution of that department the Association would become one of the most influential associations in the matter of public health questions; and he expressed his regret that the Public Health Bill dealt with so small a part of the subject. [*Hear, hear.*] He hoped that this Bill would prove to be only an instalment, and that it would be followed with a more complete legislation upon the public health. [*Cheers.*]

The resolution was then put and carried unanimously.

General Secretary.—Mr. HUSBAND said that it was known to all the members that some changes had been made in the mode of carrying out the business of the Association. It was of no use to have a change unless it were a complete one; and all other changes would have been in vain if the Association had not secured an efficient secretary, who could devote his whole time to the business of the Association. The Committee of Council found the right man for the right place; they elected Mr. Francis Fowke of Birmingham, who was a gentleman of whom the Association might be sure that he would do his duty with firmness and courtesy. He proposed that Mr. Fowke be re-elected secretary.

Mr. HODGSON (Brighton) seconded the motion, and congratulated the Association upon having secured the services of Mr. Fowke.

The motion was carried unanimously, and Mr. Fowke acknowledged the vote.

Auditors.—Dr. E. L. Fox (Clifton) and Dr. Washbourn (Gloucester) were, on the motion of Dr. HOLMAN (Reigate), seconded by Dr. FOSTER (Birmingham), appointed auditors for the next year.

Payment of Members of Council.—Dr. STEELE moved—"That the Treasurer be authorised to pay the travelling expenses of members attending the meetings of Committee of Council, and its subcommittees, in all cases in which provision for such payment does not exist." He said this motion was founded upon equity and upon sound financial grounds: upon equity, because, if a gentleman were asked to leave his practice to transact the business of the Association, the expenses of his travelling should fall upon the Association and not upon himself. The present system amounted to this: if a gentleman wanted to become a member of Committee of Council for the honour of the position, he could do so without travelling and without having expenses; but if he discharged his duty conscientiously, he was subjected to an impost equal to the whole amount of his travelling expenses. It would be admitted that it was necessary to introduce on the Committee of Council some new blood; but when it was known that it cost about £20 a year to hold the position, it was not unlikely that many desirable men would decline to give their time and pay this amount. He was not at all personally interested, for he was one of those for whom the expenses, as a member of Council, were provided, and he was simply appealing for justice and equity for others. No doubt the Treasurer would say that the Association could not afford it; but the Association was in a critical financial position, and, indeed, in a position where boldness was the only policy of safety. The income had been doubled, yet the Association was no better off than it was years ago; and he could only compare it to a leaky cistern, which, the more water was put into it, only leaked the more, without giving the means of discovering where the leaks were. He asked the meeting, by adopting the resolution, to inaugurate a new system.

Mr. HARRISON (Liverpool) seconded the motion.

Mr. HUSBAND said that, when the matter was first mooted, the Committee of Council, if there had been money to spare, would have been happy to pay the expenses; but, for himself, he should feel degraded at taking money for doing that which he had done willingly for nothing for years, and was willing still to do for nothing. [*Cheers.*] Dr. Steele wanted to make the leaky cistern leak still more, and to drain it to an exceedingly large amount. It was probable that the Association would be asked to appoint a Finance Committee; and, if the Committee of Council were paid, then the Finance Committee would have to be paid also. His advice was that, before the Association entered upon paying the members of the Committee of Council, it should get a balance on the right side, and be just before being generous. [*Hear.*]

Dr. BURKE (Dublin) would vote against the motion. The balance against the Association appeared to him to be the result of previous years; and, in the face of this financial position, the Association was not justified in incurring this fresh tax upon its funds.

Mr. HECKSTALL SMITH (St. Mary Cray) considered that Dr. Steele's remarks implied that there was something wrong in the management of affairs; but those who had carefully attended to the proceedings from year to year knew that the Association had been paying off heavy debts, which were now diminishing rapidly, and, as stated in the Report, there was a fair prospect of their soon being annihilated. It had been hinted that young, active, and intelligent men would not accept appointments on the Committee of Council because they were not paid, as Dr. Steele desired they should be. This was a new thing; for he (the speaker) had seen a general desire by all the members of all ages to devote themselves to the business of the Association. His firm belief was that, if the experiment proposed by Dr. Steele were tried, it would fail at once.

Dr. A. P. STEWART (London) desired to point out what he had stated for the last dozen years—that the paid members of the Committee of Council were the most irregular attendants. [*Laughter.*] He meant those members who had their travelling expenses paid—the secretaries of the Branches. He was a secretary, and he insisted upon payment as a matter of principle, and he thought the secretaries should be paid their

expenses. But there was the fact, that they were the least regular in attendance, and the Association would benefit largely if they attended better. The best attendants at the meetings were the vice-presidents, who were not paid. These facts were worth a hundred theories, and gave a practical argument against the motion. [*Hear, hear.*]

Mr. BARTLEET (Birmingham), speaking for his Branch, said that the secretary was not paid his expenses.

Mr. WATKINS WILLIAMS (Birmingham) bore testimony to the excellent attendance of the Committee of Council for more than fifteen years. He knew that for eight years at least, there was rarely one of the ten members elected at the annual meetings absent; and he was certain that the proposed payment would not obtain the attendance of a single member. He advised that the matter should be left where it was.

Dr. FALCONER pointed out that the adoption of the proposal would lead to a cost of at least 258 guineas a year; and probably it would amount to between £300 and £400 a year.

Dr. STEELE said he was unshaken in his opinion that the Association would benefit by the adoption of his motion; and, in fact, he had been strengthened by the discussion in his opinion as to its beneficial policy. He held that, whatever the cost, the money would be well laid out.

The motion was then put, and was lost by a large majority.

Vote to Mr. Ernest Hart.—Dr. STEWART read the passage in the Report of Council relating to Mr. Ernest Hart, and the suggestion that the Association should recognise the services which he had given apart from his duties as Editor. A volunteer was worth ten pressed men. Mr. Hart had given such voluntary service as no member of the Council could forget; and no member of the Association would be unwilling to acknowledge the great service done through this assistance. This work was in connection with the resolve of the Committee of Council to place the business of the JOURNAL on a proper footing; and when this work was undertaken, Mr. Hart gave most valuable assistance ungrudingly. The result of this service was only known to those conversant with the management of the JOURNAL; and it would only be graceful and proper that the Association should testify, by some small acknowledgment, its estimation of Mr. Hart's good aid. He proposed that a sum not exceeding £25 be voted, so that the Council should be able to make some acknowledgment to Mr. Hart for the services which he had rendered. [*Cheers.*]

Dr. SIBSON (London) seconded the motion. Mr. Hart's advice regarding the management of the JOURNAL was of so valuable and practical a character, that every one of his suggestions were adopted. [*Hear.*] This was all outside Mr. Hart's duties as editor. [*Hear.*]

Dr. STEELE said he did not intend to oppose the motion, for he thought that Mr. Hart deserved all and more than the Association could give him; but he desired to hint that there was an inconsistency in voting money for one purpose, and refusing it, as it had been refused with regard to his motion, on the score of economy.

Mr. LORD (Hampstead) remarked that there was no parallel between the two cases. The one proposal was to vote £25 for good service rendered; the other was to expend a sum of £250 on gentlemen who refused to have it.

The motion was carried unanimously, and the meeting closed.

On Wednesday, August 7th, the members assembled in general meeting at 11 A.M.; Mr. BAKER, President, in the chair.

The President of Council.—The PRESIDENT announced that Mr. Southam of Manchester had been elected President of Council in the room of Mr. Husband, whose term of office had expired.

Dr. A. P. STEWART moved—"That the thanks of this meeting are due, and are hereby given, to Mr. Husband, for the able manner in which he has discharged the duties of President of the Council during the past three years; and that he be elected a vice-president for life." [*Applause.*]

Dr. WATERS (Liverpool) seconded the motion, which was unanimously carried, and acknowledged by Mr. Husband.

The Address in Medicine was delivered by Dr. WILKS. It is published at page 146.

Dr. SIBSON (London) proposed, and Dr. CHADWICK (Leeds) seconded, a vote of thanks to Dr. Wilks for his address. The motion was carried by acclamation.

Committee of Council.—Mr. SOUTHAM announced that the following ten gentlemen had been elected members of the Committee of Council for the ensuing year: P. R. Cresswell, Esq. (Dowlais); Balthazar W. Foster, M.D. (Birmingham); Reginald Harrison, Esq. (Liverpool); W. Roberts, M.D. (Manchester); H. W. Rumsey, M.D. (Cheltenham); T. Heckstall Smith, Esq. (St. Mary Cray); T. Underhill, M.D. (Tipton); W. F. Wade, M.B. (Birmingham); A. T. H. Waters, M.D. (Liverpool); and C. G. Wheelhouse, Esq. (Leeds).

Sectional Meetings.—In addition to the addresses delivered by the respective Presidents, the following papers were read in the Sections.

Section A.—Medicine. S. SPRATLY, M.D. A Case of Convulsions resembling Tetanus, occurring periodically.—J. ALTHAUS, M.D. On the Treatment of Rheumatic Gout by the Constant Galvanic Current.—S. M. BRADLEY, F.R.C.S. Tricœlian Human Heart.—A. RANSOME, M.D. On the Bending of the Ribs in Forced Respiration.—MARTIN G. B. OXLEY, L.K.Q.C.P.I. Case of Skin-Disease of Uncertain Type.—BALTHAZAR FOSTER, M.D. The Lactic Acid Treatment of Diabetes.—J. W. OGLE, M.D. On Lactic Acid in Diabetes.

Section B.—Surgery. REGINALD HARRISON, Esq. On the Relative Value of certain Methods of Treating Stricture of the Urethra.—WILLIAM ADAMS, F.R.C.S. Three Additional Cases of Subcutaneous Division of the Neck of the Thigh-bone: with Remarks.—CHARLES WARDEN, M.D. 1. Polypus of the Ear and Perforation of the Membrana Tympani, and the Instruments used in the Diagnosis and Treatment of Diseases in the Ear, at the Ear and Throat Infirmary, Birmingham; also upon a New Form of Artificial Drum. 2. Spinal Curvature, Club-Feet, and other Deformities, and the Instruments used in their Treatment at the Birmingham Orthopædic Hospital.—W. STOKES, M.D., F.R.C.S.I. Reduction of Dislocation by a Modification of Jarvis's Adjustor.—E. LUND, F.R.C.S. Removal of both Astragali in a case of severe Double Talipes.

Section C.—Midwifery. A. R. SIMPSON, M.D. The Removal of Portions of Morbid Tissue in Cases of Carcinoma Uteri.—A. WILTSHIRE, M.D. On the Plan of Treatment of Cancer proposed by Professor Simon of Heidelberg: with Cases.—C. H. F. ROUTH, M.D. 1. Further Remarks on the Treatment of Uterine Cancer, more especially by Gastric Juice. 2. The Use of Raw Beef-Juice in the Treatment of Disease.—A. B. STEELE, L.K.Q.C.P. On the Treatment of Puerperal Eclampsia.

Section D.—Public Medicine. A. E. SANSOM, M.D. The Disinfection of Air.—J. W. EASTWOOD, M.D. The Use of Alcohol in Health and Disease.—E. WILSON, M.D. Sanitary State of Cheltenham for Seven Years.

Section E.—Psychology. J. CRICHTON BROWNE, M.D. 1. Erysipelatous Encephalitis.—2. Instruments for measuring the Depth of the Grey Matter of the Brain.—J. BATTY TUKE, M.D. Morbid Specimens and Microscopic Slides demonstrating certain Forms of Cerebral Disease.—T. S. CLOUSTON, M.D. The Local Distribution of Insanity.

The report of the proceedings of the meeting will be resumed in next week's JOURNAL.

CORRESPONDENCE.

HIGH TEMPERATURE IN RHEUMATISM.

SIR,—In my clinical lecture, as represented in your last number, occurs the following passage. "The highest recorded temperature, on the first accession of nerve-symptoms, *in the case now under consideration* (see p. 122), appears to have been at most 105.5 deg., but this example is unique, and in another part of the same record the temperature is limited to 105 deg." The paragraph, as it stands here, is altogether at variance with my meaning, and with the facts given in the published report of the case. I was speaking not of my own case, but of the whole series of similar cases. The true sense might be restored by reading *cases* instead of *case*, and by omitting the reference, which is out of place here.

I am, etc.,
HENRY THOMPSON, M.D.

OBITUARY.

HENRY CURRAN, L.R.C.P.I.

WE regret to announce the death of Dr. Curran of Dublin. He had a very severe attack of typhoid fever some months ago, and resumed his arduous duties before he was sufficiently recovered. Though frequently advised by his friends to give up work, he laboured on through the whole of the present epidemic of small-pox, rarely absent from his post. At last, however, he was obliged to take to his bed, and, after a few days, he expired, deeply and deservedly regretted by all who knew him. Dr. Curran had for a long time been connected with the Carmichael School of Medicine, and was one of the most successful teachers in Dublin. He was also one of the physicians to the Mater Misericordiæ Hospital, and the Black Hall Street Dispensary. Vacancies have therefore occurred in both those institutions.

JOHN R. R. COULTER, M.B., ARMY MEDICAL STAFF.

DR. COULTER was born in Dublin in 1843, and was the eldest son of Dr. R. H. Coulter of that city. He graduated as A.B. in Trinity College, Dublin, in 1862. In the following year, he took the degree of M.B., and also become a Licentiate of the Royal College of Surgeons of Ireland. In 1864, he entered the Army Medical Service, and served six years in India. At the expiration of his term of foreign service, he returned to Ireland, whence he was sent to Penally, South Wales, on detachment duty with the 23rd Regiment ; but the change of climate proved too much for even such a strong constitution as his. He died of pleuropneumonia, at Penally Barracks, on July 3rd, 1872, at the early age of thirty, respected and beloved by all who had the pleasure of knowing him.

MEDICAL NEWS.

THE INTERNATIONAL OPHTHALMOLOGICAL CONGRESS : MEETING IN LONDON.

THIS Congress, the opening meeting of which we noticed last week, continued its sittings on Friday and Saturday. The next meeting will take place at New York in 1876. In addition to the *conversazione* given by Mr. Bowman on Thursday, Mr. Critchett gave a most successful *soirée musicale* to the members of the Congress and others, to the number of about three hundred, at his residence in Harley Street. On Saturday, the members dined together at the Crystal Palace, and on Monday they were entertained by Mr. Spencer Wells at a garden party at his residence at Hampstead.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH: DOUBLE QUALIFICATION.—The following gentlemen passed their first professional examination during the recent sittings of the examiners.

Thomas Huband Gregg, Ballymahon ; Henry Kirk-White Russen, Manchester ; George Henry, Newry ; William Henry Allen, Cork ; John Wilson Rhodes, Manchester ; Louis Gordon Leslie, Hants ; James Snodgrass Matthews, Londonderry ; Robert Edmund Hunt, Gort, Ireland ; William Beattie Smith, Walker-on-Tyne ; Samuel Coates, Cork ; and R. J. Hughes, Birkenhead.

The following gentlemen passed their final examinations, and were admitted L.R.C.P.Edin. and L.R.C.S.Edin.

Edward Charlton Fox, Derbyshire ; Frederick George Stanley Wilde, London ; James Simpson, Glasgow ; George MacGill, Wigtownshire ; Francis John Fitzgerald, County Kerry ; James Crawford Renton, Auchtermuchty ; John Playfair, Perthshire ; Edward James Louis Leslie, Hants ; David Lewis Parry, Liverpool ; William Brooke, Castlerea ; Terence Benjamin Brodie, Limerick ; John Hill, Clare ; Alfred Charles Godfray, Jersey ; Alexander Watson Milne, Canonbie ; John Richard Philpots, Banbury ; Richard Alexander Henry Hartford, Templemore ; George Mackay, Kinross-shire ; Thos. Dawson Stanistreet, Clonmel ; Horatio Nelson Fairbairn Huggins, St. Vincent, West Indies ; Robt. George Roe, Dublin ; Thomas D'Arcy Lucus, Nupanee, Canada ; Alexander Bowerbank Campbell, Kingston, Jamaica ; Edward Hussey, Somersetshire ; Francis Barry, County Wexford ; and James Findlater, Ayrshire.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their first professional examination during the July sittings of the examiners.

Robert Laidlaw, Ayrshire, and Alexander Stainforth Pryse, East Bengal, India.

The following gentlemen passed their final examination, and were admitted Licentiates of the College.

Thomas George Gordon Ritchie, Prestonpans, and William Creery, Dublin.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 25th, 1872.

Bomford, Gerald, Vernon Place, Bloomsbury
Canton, Frederick, Great Marlborough Street, Regent Street
Dorin, Arthur Frederic Lock, Thistle Grove, Brompton
Emms, Alfred Wilson, Ilminster, Somerset
Groves, Matthias, Radipole, Weymouth
Harrison, Henry Bascomb, St. Lawrence Road, Notting Hill
Hynes, John O'Connell, Park Street, Nottingham
Wallis, William, Hartfield, Sussex

The following gentlemen also on the same day passed their primary professional examination.

Rendall, John, Guy's Hospital
Thomas, Herbert Henry, University College

The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 1st, 1872.

Eminson, Luther, Scotter, Lincolnshire
Kessen, Andrew Emerson, Geneva Road, Brixton
Tattersall, Lord, Bacup, near Manchester
Williams, Leonard, Scarborough

The following gentleman also on the same day passed his primary professional examination.

Hudson, John, Leeds

As an Assistant in compounding and dispensing medicines.

Pearse, William Francis, Lowestoft

MEDICAL VACANCIES.

THE following vacancies are announced:—

ABERFOYLE, Perthshire—Parochial Medical Officer : £90 per annum.
BURTON-ON-TRENT INFIRMARY — House-Surgeon : £130 per annum, rooms, coal, and gas.
CASTLEBLAYNEY UNION, co. Monaghan—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballybay Dispensary District : £100 per annum, and fees.
CLITHEROE UNION, Lancashire—Medical Officers and Public Vaccinators for the Gisburn and Slaidburn Districts : £20 per annum and fees, and £15 per annum and fees, respectively.
DOVER HOSPITAL AND DISPENSARY—House-Surgeon : £80 first year, furnished rooms, coal, gas, etc., and attendance.
GLOUCESTER GENERAL INFIRMARY—Assistant Surgeon.
GORT UNION, co. Galway—Apothecary to the Gort Workhouse : £30 per annum.—Apothecary to the Gort Dispensary : £40 per annum.
GREAT NORTHERN HOSPITAL, Caledonian Road—House-Surgeon.—Junior Resident Medical Officer.
HOME FOR GENTLEWOMEN—Consulting-Physician.
HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square—Consulting-Physician.
LAMBETH, Parish of—Resident Medical Officer and Dispenser to the Workhouse : £100 per annum, board, apartments, and washing.
LISKEARD UNION, Cornwall—Medical Officer and Public Vaccinator for the Callington District : £65 per annum, and extra fees.
LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE—Lecturer on Comparative Anatomy and Zoology.—Demonstrator of Physiology.
LOCHCARRON, Ross-shire, and part of the parish of Applecross—Parochial Medical Officer : £145 per annum, and various perquisites.
LOUTH UNION, Lincolnshire—Medical Officer for the Withern District.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Two Entrance Scholarships : £25 and £20 per annum, for two years.
MONAGHAN UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Scotstown Dispensary District : £110 per annum, and fees.
NEWBURGH, Fifeshire—Parochial Medical Officer.
NEW ROSS UNION, co. Wexford—Medical Officer and Public Vaccinator for the Templeudigan Dispensary District : £50 per annum, and fees.
NEWTOWN AND LLANIDLOES UNION, Montgomeryshire—Medical Officer for the Newtown District : £80 per annum, and extra fees.
NORTH DUBLIN UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Blackhall Street Dispensary, North City Dispensary District : £125 per annum, and fees.
NORTHAMPTON GENERAL INFIRMARY—Dispenser : £100 per annum.
PROVIDENT MEDICAL INSTITUTION AND LYING-IN CHARITY, 20, Pimlico Road—Consulting Physician.
ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor—House-Surgeon : £80 per annum, board and residence.
ST. MARY'S HOSPITAL MEDICAL SCHOOL—Scholarship : £40 per annum for three years.—Exhibition : £20 for one year.
ST. PAUL AND ST. BARNABAS DISPENSARY, Ebury Street—Physician.
SUFFOLK GENERAL HOSPITAL, Bury St. Edmund's—Physician.
SURREY DISPENSARY—Physician.
TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery : £200 per annum, and fees.
UTTOXETER UNION, Staffordshire—Medical Officer for the Rocester District : £32 per annum, and extra fees
WARNEFORD LUNATIC ASYLUM, Oxford—Resident Medical Superintendent : £260 per annum, with board, furnished apartments, etc.
WATERFORD DISTRICT LUNATIC ASYLUM—Resident Physician Superintendent.
WESTMINSTER GENERAL DISPENSARY, Gerrard Street—Physician.—Resident Medical Officer : £100 per ann., furnished apartments and attendance.
WESTMINSTER HOSPITAL—House-Surgeon.
WEST RIDING OF YORKSHIRE LUNATIC ASYLUM, Wakefield—Clinical Assistant.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BULL, Wm., Esq., appointed House-Surgeon to the Devonshire Hospital, Buxton.
*MCRAE, A. E., M.D., appointed Public Vaccinator and Parochial Medical Officer for the Parish of Penicuik, and Medical Officer of Health to the Burgh Commissioners, *vice* T. J. F. Messer, M.D., resigned.
MAJOR, Herbert Coddington, M.B., C.M., appointed an Assistant Medical Officer to the West Riding Asylum, Wakefield.
*MANSER, Frederick, Esq., elected Surgeon to the Tunbridge Wells Infirmary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

IRELAND.—On August 6th, at the Limes, Linton, Cambridgeshire, the wife of *Edward Ireland, M.R.C.S.E., of a son.
MOORE.—On July 30th, at 7, Museum Street, Ipswich, the wife of *Harry Gage Moore, L.R.C.P.Lond., of a daughter.
PRANKERD.—On August 5th, at Langport, Somerset, the wife of Orlando Reeves Prankerd, M.B., of a son.

MARRIAGE.

DAVIES, W. R., Esq., Surgeon, Sandbach, Cheshire, to Louisa, elder daughter of R. Dambrill, Esq., of West Cowes, on July 25th, at Cowes.

DEATHS.

*JACKSON, Thomas D., Esq., Surgeon, at Slaiburn, near Clitheroe, aged 61, on July 25th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

COSMOS.—These matters do not come within our province.

J. S. W.—We are not acquainted with a work such as is desired by our correspondent.

MILK AND BUTTER FOR THE LONDON PAUPER.

SIR,—My attention has been called to a paragraph headed "Milk and Butter for the London Pauper", in the BRITISH MEDICAL JOURNAL of August 3rd. In this paragraph, it is stated as a "striking circumstance in connection with the official inquiry", conducted under my auspices, that "the names of the individual unions, and of the vendors, are suppressed."

Reference to pp. 21–24 of the report, where the analysts' reports are given, and to pp. 73-76, where the general results of the inquiry are tabulated, will show that in every instance the name of the union or workhouse is given.

The names of the vendors were also ascertained and reported; but it was not deemed necessary or desirable to publish them in a report of the kind made by

Your obedient servant, FRANCIS W. ROWSELL.

Freshwater, Isle of Wight, August 5th, 1872.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

EFFECT OF IODINE ON THE GROWTH OF THE FŒTUS.

SIR,—In reply to M.D.'s inquiry in your issue of to-day, as to the whereabouts of a notice of the administration of iodine to retard the growth of the fœtus, I beg to say he will find a reference to the subject in the *Medical Times* of June 8th, 1850. The treatment was suggested by a M. Delfrayssé, and some of his cases are recorded in the journal above named.

I have used the remedy in several cases extending over a period of twenty years; and if M.D. would think it worth while to communicate with me, I will, with pleasure, give him the results of my experience, as I have kept notes for publication of, I believe, all my cases. I am, etc.,

South Petherton, July 20th, 1872. HUGH NORRIS.

ROYAL COLLEGE OF SURGEONS.—The following questions were submitted to the candidates at the primary or anatomical and physiological examination held last week. 1. Describe the Internal Iliac Artery, stating its point of origin, length, direction, and relations. Then enumerate its branches in the order in which they arise; and give the course, relations, and distribution of the Internal Pudic Artery. 2. Describe the Muscular Tissue of the Heart, including an account of the general arrangement of the fibres, their minute structure, and their mode of action as contrasted with that of other involuntary muscles. 3. Describe the Metatarso-phalangeal Articulation of the Great Toe, and the tendons in connection with it, in their relative positions. 4. Enumerate the various forms of Cartilage, describing the minute structural characters of each; and mention the Joints in which Interarticular Cartilages are found. 5. Describe the Superficial Veins of the Hand and Forearm; and give the course and relations of the Cephalic and Basilic Veins. 6. Explain the effect of Complete Division of the Spinal Chord between the second and third Cervical Vertebræ in one of the higher animals.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

MR. BLACKSHAW (Stockport).—It is not required that a Poor-law Medical Officer should have devoted the whole of his time to the duties of the union to entitle him to a superannuation allowance. If it were so, very few medical officers indeed would be entitled to the grant.

MECHANICAL SUPPORT IN CASES OF ULCER.

SIR,—In the recent remarks in your pages on Ulcers of the Leg, all the writers agree as to the value of mechanical support, in some form or other. For ulcers, very large varicose veins, bad fractures, etc., I have for many years manufactured an elastic stocking of very strong texture, which is made only a quarter to half an inch less than the leg, with the same amount of pressure in every part. Of course, such a support must be made on purpose, and be a correct likeness as to shape of the limb, and made with an exactitude not to be obtained without some trouble on the part of the manufacturer; but, supposing this to be accomplished, the patient will have a support such as would be yielded by a starched bandage, with just sufficient elasticity to render it perfectly easy to wear. Ulcers, very prominent veins, etc., will, under these circumstances, give either patient or surgeon very little trouble. A piece of lint wetted with cold water may be placed so as to protect the stocking from discharge.

I introduced this plan to the late Mr. Liston many years since, and he furnished me with a test-case in the person of the Queen's nurse, who, from severe ulceration, was obliged to resign her post. Finding the ulcers dry up, as he described it, "magically", he adopted this treatment until his lamented death.

The material, whether cotton or silk, I regard as unimportant; but it must be very strong, the pressure light, and to a certain extent unyielding. Mr. Chapman suggests thread as preferable to either; but I never yet met with this material in a surgical stocking. I am, etc.,

12, Old Cavendish Street, July 1872. EDWARD HUXLEY.

ANIMAL TEMPERATURE.

SIR,—Is it generally known that the temperature of a healthy adult at this season of the year is scarcely ever less than 102 deg.? I have taken some trouble to obtain trustworthy thermometers; and of four applied to the same number of healthy people, each registered over 101 deg. I was also struck with the unmistakable difference between the instruments. One lately corrected by a first-rate London firm, was one degree below the other three tried; and a new one from the same firm, sent as correct beyond all doubt, registered the temperature of two healthy persons at 102 deg. What reliance, clinically, can be placed on such evidence? Does the temperature of a person suffering from any acute disease run up to a correspondingly increased height? and so, when it would be usually 103 or 105 deg. in severe cases, is it now 107 or 108 deg.? I shall be glad to learn from the experience of others as to these variations.

St. Ives, Hunts, July 24th, 1872. I am, etc., W. H. D. MENCE.

*** We are not aware that the temperature of a healthy adult varies to the extent referred to by our correspondent. The thermometer used must be inaccurate.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, August 3rd; The North British Advertiser, August 3rd; The Manchester Guardian, August 6th and 7th; The Tewkesbury Record, August 3rd; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. Alfred Baker, Birmingham; Dr. Wilks, London; Sir William Fergusson, Bart., London; Mr. B. Clarke, Hampstead; Mr. C. Holthouse, London; Dr. E. Waters, Chester; Mr. J. Bassett, Birmingham; Messrs. Zimmermann, London; Dr. Smyth, Great Yarmouth; Mr. Oliver Pemberton, Birmingham; The Secretary of the Female Medical Society, London; Mr. J. Sinclair, Slaidburn; Dr. Evory Kennedy, Dublin; Dr. Maudsley, London; Dr. Simpson, Edinburgh; Mr. F. Manser, Tunbridge Wells; Dr. James Thompson, Leamington; Dr. Tilt, London; Dr. T. Chambers, London; Mr. W. A. Napier, Aberdeen; Dr. Cobbold, London; Mr. Blackshaw, Stockport; Dr. Henry Bennet, London; Mr. Southam, Manchester; Dr. Henry Thompson, London; Dr. J. W. Eastwood, Darlington; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. Wanklyn, London; Mr. R. Davy, London; Mr. James Stewart, Nantwich; Mr. Ireland, Linton; Mr. J. Scaylor, Buxton; Mr. Francis Rowsell, Freshwater; Mr. Wesley, Tadcaster; Dr. Matthews Duncan, Edinburgh; Mr. G. H. Rogers, London; etc.

BOOKS, ETC., RECEIVED.

The Retrospect of Medicine. Edited by W. Braithwaite, M.D., and James Braithwaite, M.D. Vol. LXV. London: 1872.

The Affinity between the Hebrew Language and the Celtic. By Thomas Stratton, M.D. Third Edition. Edinburgh: 1872.

Preliminary Notes on the Constitution and Ethics of the Medical Profession. By a Graduate. London: 1872.

The Report of the Chester County Lunatic Asylum, at Upton, near Chester, for the year ending 31st December 1871. Chester: 1872.

The Contagious Diseases Act and the Contagious Diseases Preventive Bill. By Anthropos. 1872.

Vaccination and the Vaccination Laws: a Physical Curse and a Class Tyranny. By the Rev. Wm. Hume, Rotherby. Manchester: 1872.

The Twentieth Report of the Derbyshire County Lunatic Asylum. Derby: 1871.

Statements relating to the Home and Foreign Trade of the Dominion of Canada; also, Annual Report of the Commerce of Montreal for 1871. By Wm. J. Patterson. Montreal: 1872.

The Sanitary State of Edinburgh. By W. T. Thomson.

The Tenth Annual Report of the Peking Hospital for 1871, in connection with the London Missionary Society. By John Dudgeon, M.D., C.M. Shanghai: 1872.

On the Functional Diseases of the Renal, Urinary, and Reproductive Organs. By D. Campbell Black, M.D. London: 1872.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PUBLIC MEDICINE,

At the Annual Meeting of the British Medical Association, in Birmingham, August 1872.

BY

THE REV. SAMUEL HAUGHTON, M.D., D.C.L., F.R.S.,
Medical Registrar, Trinity College, Dublin; President of the Section.

IT is my intention to occupy your time as briefly as possible; and it will be in the consideration of two important subjects: the duty of the medical profession and the public in regard to epidemics, and the equally important question as to the mode of taking medical evidence in courts of law in civil and criminal cases. I am relieved of a considerable portion of what I might have considered I should say regarding the town of Birmingham, by the admirable address of the President last night. I think I threw out the suggestion last year at Plymouth, that the friends in Birmingham should tell us how it was that Birmingham possessed the enviable qualification of being almost entirely free from epidemics; and I think our President has thrown out two suggestions which appear to me to hit off the causes of this remarkable immunity from dangerous scourges. The President threw out that this immunity arose from Birmingham being situated in the centre of the great watershed which separates the hydraulic systems of England, being also at a great altitude, ranging from two hundred to six hundred feet above the sea, and resting upon a sandstone—a porous soil; and I agree with him that these were the qualities which medical science looked upon as necessary to constitute a healthy town. And the truth of these estimates will be seen in the fact that, from the earliest time, Birmingham has been free from serious epidemics; and this is shown by reference to the earliest records. During the fearful visitation of the cholera to England in 1832, there was hardly any of it felt here; and during the visitations of 1856 and 1866, it was also singularly free. Then, too, there are eminent physicians in this town—and they are not few—who have not seen a single case of spotted typhus in their lives. Through the courtesy of Mr. Woolley, the sanitary inspector of the town, I am allowed to state that the small-pox, which came here while raging over the other parts of the country, never rose to a greater height of mortality than eleven deaths in a week; while in the city of Dublin, which is a city of about the same size, and with a population of about the same number as Birmingham, the mortality from small-pox rose to seventy-eight in a week. Well now, Ireland affords us remarkable facilities for the study of epidemics. A "melancholy ocean" surrounds us, and separates us from the rest of the world; and we are so afflicted with epidemics, that I believe we should long ago have been destroyed but for the natural vivacity, wit, and love of fun of the Irish. I shall now have to bring before you some remarkable and serious facts regarding the epidemic of small-pox; and the Government of this country cannot wash their hands of serious responsibility in this matter. If the Irish, with their natural vivacity and cheerfulness under misfortunes, which they are ready to call dispensations of God, have borne these troubles uncomplainingly, that is no reason why the means in the hands of our rulers of preventing the spread of disease should not be employed. In 1866, it was proved, beyond the possibility of doubt, that the cholera was imported into Ireland; and we could trace the cases through the ports of Dublin, Belfast, Drogheda, Wexborough; and we could lay our hands on cases, and say that these came through the canals and other ways from Sheffield, Liverpool, or Bristol. Our isolated position gives us peculiar advantages for the study of epidemics, and for the determining whether they are, or are not, the result of contagion. With regard to small-pox, there is less difference of opinion than with regard to other diseases; but no one has undertaken the study of the subjects connected with epidemics who has not become, like myself, an ardent contagionist. One of the advantages of our isolated condition is, that we in Dublin can make Liverpool our medical barometer. We know when there is an epidemic at Liverpool that we shall have it as well. In all cases of an epidemic which affects Dublin and Liverpool, Liverpool has it first. I went to Liverpool when the cholera of 1866 was raging, and made the most minute inquiries; and Dr. Trench, with the greatest kindness and courtesy, placed his tables and all other information in his possession at my disposal. By the means of these tables and the information which Dr. Trench gave me, I was enabled to mark out the course the disease would take in Dublin, and this before it came to the city. In the mortality of Liverpool, a curve of a remarkable mathematical shape appeared; and, by enlarging the curve, I could predict, in a general way, what would be the mortality of the disease which was coming to Dublin. And this prediction was verified in a remarkable degree; for, afterwards, we found that the total mortality in Dublin was what we said it would be after looking at the mortality in Liverpool, and we were enabled to say when it was at its maximum. So you see that Dublin is as well off, or as badly off, just as you like, as Liverpool in regard to hygienic conditions; and neither town is what it should be in regard to sanitary regulations—in fact, they are upon a par. Now, when I come to small-pox, we have another element to deal with, which we have not in other epidemics; for in this disease we have a means of protection in vaccination, and we can see how well or how ill a town has been protected by the vaccination laws being carried out. We see the small-pox sweeping its way over this island, and its greater or less virulence is a test of our diligence, or of the diligence of those who have gone before us, in protecting the population against this terrible scourge.

Allow me here to say a few words upon vaccination. When I come to England, I am astonished to find intelligent persons in numbers, who, for some reason, come forward publicly to oppose the process of vaccination. Some of these people express a strong doubt—an honest doubt—whether the mortality from small-pox is really as fearful as the doctors say. To get a proper basis of calculations as to the mortality from small-pox among unvaccinated persons, we must go back to the records of past generations in this and other countries; and we find this astonishing result, that from sixty to seventy in every 100 persons attacked by small-pox must die, if not vaccinated. Some people have the idea that this is a bugaboo of the doctors, and that they need not necessarily die if not vaccinated. Of course it is impossible now to get the experience of an immense number of persons who have not been vaccinated, to give them the small-pox, and see how many would die. This experiment could not be easily carried out. Therefore I adopted another method. I took it for granted that the writers and records of the close of the last century were correct. The average which they gave was that 66 per cent. of every class—men, women, and children—must die if they had got the small-pox and were not vaccinated: whereas, of those who were attacked after being well vaccinated, the number of deaths was only 6.6 per cent. This reduction of the mortality from sixty-six to between six and seven per cent. represents what vaccination has done. The value of vaccination is, therefore, established beyond the possibility of a doubt, and I think that this is a subject on which the medical profession should speak out. Should not Birmingham, with her literary men and newspapers, lead the public on this great question? I wrote to my friend Dr. Hayden, of the Mater Misericordiæ Hospital in Dublin, to send me the total number of small-pox cases treated there, and of the deaths; and I undertook, from these figures, to calculate the number of those who were vaccinated, and those who were not. This forms a very simple problem in mathematics, of which I will not trouble you with more than the results attained. From the figures sent me, I calculated, though I had never seen a patient, that 120 of the cases treated at the Hospital had not been vaccinated. I wrote to tell Dr. Hayden this; and he wrote back to say that the number recorded as known to be unvaccinated was 119. Since I have come to Birmingham, Mr. Woolley has kindly placed at my disposal all the information he possessed, and I hereby beg to tender him my warmest thanks for his courtesy. Although Birmingham has suffered what I cannot but regard as a most contemptible epidemic, the facts are strikingly illustrative of what, to my mind, is the truth of the principle which I am placing before you. Since the 18th November, 1871, there have been 1,911 cases of small-pox, of which 262 have died. I leave out the cases remaining under treatment. I calculated from those figures that 230 persons in Birmingham who had been attacked with the disease had never been vaccinated. I found in Mr. Woolley's returns that the certainly non-vaccinated were 209, while doubtful cases numbered 44. Well, it was fair in such a case to split the difference and call it 22, and, as that suited my theory very well, I adopted it; and when I added them to the 209 it made 231, which was only one above my calculation. It is like the trick of a conjuror, walking into the town, asking the number of small-pox cases and deaths, never having seen the patients, and yet telling the people of the town how many were vaccinated and how many were not. Dr. Trench tells me that 1,616 cases were treated in the Liverpool hospitals; the deaths were 375; from that I calculated that the non-vaccinated cases numbered 451. The number actually recorded as non-vaccinated was 432, being 19 less; but I am perfectly certain that to those should be added several of those properly set down in

the reports as doubtful. This opens up a problem highly interesting to the profession of medicine. As the mathematician in his closet can direct the astronomer in what part of the heavens and when to look for certain planets, so the progress of science and medicine can tell with certainty when and where certain districts will be attacked with epidemics, The records of the fearful epidemics and the plagues of the Middle Ages have perished; the poor have perished with no man to regard them. Even the writings of Defoe may be searched in vain for any statistics of the Great Plague which would satisfy the demands of modern medical science. But, by examining into the records of our own times, we shall be able to read back the history of the epidemics of the past, the number and percentages of the mortality of those who suffered, who lie forgotten in their graves, and whose history no one has recorded.

I come now to what is the most difficult and painful part of my subject, from which I would gladly have shrunk if I had not been impelled by an imperative sense of duty. I am able to show, I believe conclusively, that unfortunate Ireland is now suffering, has suffered, and probably will suffer, more than her fair share of the epidemic of small-pox. In the case of cholera, I have shown that Liverpool, Dublin, and other towns, have suffered exactly in proportion to their different populations; and therefore, with regard to this disease, Ireland has no reason to complain, as compared with her neighbours. The number of deaths in Liverpool from small-pox, where the plague has now ceased, was 2,093. The calculation of the number of persons who ought to die in Dublin from the epidemic was 1,256, on the supposition that it was equally protected by previous vaccination with Liverpool. The result is, however, far otherwise; for, according to the statistics of Dr. Burke, up to Friday last, 1,581 persons had died in Dublin, showing an excess of 325 preventable deaths. I believe firmly that the number will be increased to 500 or 600. I stand here to ask for the sympathy of my brother medical men in an appeal against the injustice with which the Irish people have been treated.

Now let us look to the case of Cork. While much of the pestilence has passed away from other cities, it has hovered like a black cloud over the city of Cork, and the poor people are dying in numbers, the mere enumeration of the figures of which will convey but a poor idea. You may gather an idea by supposing that, while the pestilence was raging in London, the number of deaths amounted to 1,500 a week. The poor people of Cork have perished in the ratio of 23 per 1,000 a week from small-pox for thirteen weeks. I wish I could think no one was to blame for this. The poor sufferers themselves blame no one. They are attended by their priests, and with their last words express their kindly feeling and gratitude to their doctors and nurses, proclaiming their deaths to be "the will of God". That is a natural and becoming feeling in the poor sufferers; but we know better, and we know that most of those deaths might have been prevented. I have a right to present this as a solemn grievance. In the estimates for the present year, £10,050 was voted for the National Vaccination Institution of England; in addition to which, nearly as much more has been paid out of the public funds in payment for the services rendered by medical men in vaccination. Thus nearly £20,000 has been properly spent in providing the people of England with gratuitous vaccination. In Ireland, only £400 per year is expended on the same object. It is a mystery to me how much good has been done with this amount, and it is a miracle to me how it has been made to go so far, for with that amount we have had to send lymph to the Poor-law guardians. Now is this justice to Ireland? Then lymph is given in England, but it is sold in Ireland; and, when we apply for good lymph, we are told we can have it by paying for it, which is like giving a hungry dog a joint off his own tail for dinner. I appeal to all fair-minded educated Englishmen to help us to get this grievance removed, for we may talk in Ireland until the day of judgment without getting the aid we seek. I appeal also to the public press to help us to get this justice, for which we have been asking in vain for years. In 1852, we made the most humble application which could be conceived—such an one as only Negroes and Irishmen could make—to get £600 more, raising the grant to £1,000, which, it was calculated, by great economy and labour on the part of the officers of the Cow-pox Institution, would furnish lymph to vaccinate the whole population of Ireland; but it was refused by the Poor-law Commissioners, who were themselves a paid Board. They sent the people to live in fool's paradise some years ago; and the officials of the Board published a statement, couched in the language of the stable, to the effect that the small-pox was "stamped out" like the cattle-plague—language which, in the lips of paid officials, was adding blasphemy to insult.

I now come to a more pleasant part of my subject, and one in which I shall have the hearty co-operation of all my audience; and that is, as to the evidence of professional witnesses in the civil and criminal courts of law. Dr. Davey, at the end of an admirable address delivered at Bristol a few years ago, made a suggestion which met with the approval of the medical and local newspapers and circles, but no steps have since been taken. I allude, of course, to the shameful and degrading manner in which medical and scientific evidence of every kind is taken in courts of justice, and before parliamentary committees. Medical men are peculiarly sensitive on this point. Because of some peculiarities in their organisations, the doctor and the lawyer look at one another as from opposite poles. There is no greater contrast than that between the legal and the medical mind. The medical man is accustomed to see the best features and the best side of society; he stands by the bedstead where the best affections of the heart are displayed towards those who are suffering, and he forms a more charitable opinion of his neighbours than the rest of the world. Perhaps he thinks and acts more in accordance with the spirit of Christ than others. On the other hand, the legal man sees his neighbour under the vilest and foulest aspects; he comes into contact with swindling and every kind of knavery, until his mind becomes imbued with it. The lawyer becomes like the chameleon, tinged with the colours of those about him. There is an utter disproportion between such men and those whose lives are spent in doing good. I reckon myself a skilful professional beggar-man; but whether I collect for an orphanage, for building a church, or the Deaf and Dumb Institution, I can never extract money from a lawyer. And that is the experience of others. Where can they expect to go? When a barrister gets a medical man on the table, what does he do? He has the same natural antipathy to him that a terrier has for a rat. I am happy to say, however, that the rat sometimes turns out to be a badger; and sometimes a medical witness proves to be a badger and not a rat. I may mention here a trick which I played upon an eminent lawyer, who was leading counsel on one side in a great case of lunacy which was before the Dublin law courts. This gentleman did me the honour to ask me to dine with him a day or two before the trial. I knew it was for the purpose of getting a "grind". Well, I gave him his lesson; and the learned gentleman, who was one of the greatest bullies at the bar, trotted it out in such a style that we had such a scene as was rarely or never witnessed. In these cases, the doctors on one side swear A B C, while those on the other depose X Y Z; and anything like an impartial statement is carefully excluded. I will not mention the name of the lawyer, as he is now on the bench, and it might be disrespectful in a place where there are coercion laws. I told him a few facts about lunacy, and then added that, when the examination was nearly over, he was to say, "Now, sir, you are on your oath; you are giving your evidence". You know they always keep repeating, "Now, sir, you are on your oath". Well, I told him that all would go on smoothly up to a certain point; and then, just as the witness was about to leave the box, he was to say, "Now, sir, you know you are about to leave that table, and you are upon your oath; and upon your oath, do you not know that *crepitus redux* is the most fearful form of insanity which can afflict man?" I was base enough to ask my lawyer friend to get me a front seat when the case on; and I went to enjoy the fun. I heard him put his questions in his best style, and when he came to this one, just as the witness was going to leave the table, he called him back, threw his wig back—he was a great bully was my friend—then he put up his shoulders, and called out, "Now, sir, mind how you answer: On your oath, sir, is not *crepitus redux* the most fearful form of the affliction of insanity?" He said this in a perfect phrensy of passion; and the witness, startled at the sudden question, the question itself, and the manner in which it was put, became quite frightened, and, turning to the judge, said, "That man's mad, my lord; have him taken up".

It is unnecessary to dwell further upon this subject. The time is come when the medical profession, engineers, chemists, scientific men of every description, must peremptorily take their stand, and refuse to be treated in this fashion any longer. There is the case of the Rev. Mr. Watson, in which the most melancholy statements and counter-statements were pronounced by the medical men, and then an amateur was called in after all; and I must say, judging from what the man has written since he has been in prison, that he was a perfectly sane man, and there has been a gross failure of justice. And there has also been a most painful case in Dublin, in which the medical witnesses were carefully selected on each side, so as not to give an unbiassed judgment. They ought to be allowed to give their evidence in a dispassionate manner, without being pledged to one side or the other. The English railway companies have at length taken up the matter; and I believe that before long, in every case in which compensation is demanded in cases of accident from the great companies, a medical man will be selected by each side, as suggested by Dr. Davey, and will meet as a jury, and agree upon an umpire, without allowing any other medical man to be called; and will take down the evidence, which will be

presented as the facts in the case. Why, even in criminal cases, cannot we have such a supplementary jury sworn to examine nothing whatever but the physical facts connected with the case? The witnesses may be examined by the lawyers; for they are clever at that, if at nothing else. And the verdict of the supplementary jury should be handed to the common jury as the only scientific evidence to be admitted. Such a plan would save justice from the uncertainty which is the greatest injury to which it is now exposed. A man now never knows whether he is to be hanged or not, which is a very unpleasant thing.

The duties which the medical profession discharge to the public are at present but very imperfectly understood, and I turn with special pleasure to those which they discharge to the sick, and especially to the poor. The tongue of slander has never been able to say that any large portion of the medical profession has ever neglected or deserted that duty. The blessings of the poor are always their best and sometimes the only reward they get for many hours of lonely toil. It is a consolation to men working in the outskirts of civilisation in many parts of the country, in remote villages and mountainous districts, where they have few companions of equal education around them, and are perhaps neglected by those superior in society to themselves, toiling almost alone—it is always a satisfaction to them to know that they are labouring in a good cause, following the footsteps of Him who not only reclaimed the sinner from his evil ways, but also healed the sick. The records of no profession can show so long a roll of obscure, able, and clever men, making, in quiet, great discoveries in science, in solitude doing much good, whose names are not known during life, and to many of whom statues to perpetuate their memories are now being erected throughout England. Many an humble physician has thus worked, seen by no eye but that of the Great Master, and, at the close of his useful but neglected career, sees the shadow of the evening of life close upon these labours, and may well exclaim, in the words of the great Italian poet who died among us in England, far from his native land, and forgotten by his country—

"Morte me darai fama e riposo."
"Death will give me fame and rest."

This is glorious language; still it is the voice of despair.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF MIDWIFERY.

*At the Annual Meeting of the British Medical Association, in Birmingham, August 1872.**

BY EVORY KENNEDY, M.D.,
Late Master of the Dublin Lying-in Hospital; President of the Section.

CASE VIII. *The Whole Circle of the Os Uteri thrown off in Labour.*—A patient in her third labour, which was somewhat violent, had slight hæmorrhage. The head was well engaged in the pelvis, and some fleshy mass was found to protrude from the vulva. The pains increasing, a complete circular ring, about three-eighths of an inch thick by an inch in breadth, escaped, which, on examination, proved to be the detached os uteri in its entirety. The labour proceeded rapidly. There was very little hæmorrhage; and the patient made a favourable recovery, the lochial discharge continuing longer and being more offensive than usual. Of the after-history of this case, and whether she bore more children, I am ignorant.

CASE IX. *Procidentia of Gravid Uterus in the Sixth Month of Pregnancy reduced successfully: Living Child six Weeks after Reduction.*—M. B. was admitted into hospital April 4th, 1838, with the extraordinary displacement of the gravid uterus exhibited in this drawing. She considered herself just entering on the sixth month of pregnancy, and had suffered for some time from bearing down and pelvic distress. The tumour, now perceptible, had protruded suddenly beyond the parts the day before admission. It appeared larger than a pint mug, polished, dry, and red, with the os uteri enlarged, but not patulous; rather puckered, as you perceive; plugged with yellow mucus, and with several ulcers, as if the effect of abrasion, on the most pendulous part surrounding the os. The ulcers were touched with solid nitrate of silver. The patient was placed on her back with the pelvis elevated by pillows. The protrusion was smeared well with hog's lard; and then the protruding tumour was gently but steadily embraced with both my hands, and pressed with the points of the fingers all round at its connexion with the pelvis, whilst it was at the same moment gently forced up with the palms of my hands formed into a cup-shape. This pressure was continued steadily for some minutes in the direction of the outlet of the pelvis, upwards and backwards, and, as it yielded, directly upwards, when I had the gratification of finding it glide safely upwards into the replaced vagina; by following it still up with the fingers, it was pushed high in the pelvis. A full opiate was now administered. An assistant was placed to watch, with the hand on the perinæum; and the patient fell into a profound sleep, and awoke, after some hours, free from inconvenience. She was retained for some time perfectly quiet, with the hips slightly elevated, and went home well. At the expiration of six weeks, she was delivered of a healthy living child, which appeared of about seven and a half months' development, and it survived.

CASE X. *Acephalous Fœtus; totally brainless; acutely sensitive.*—A female child, otherwise fully formed and developed, was born acephalous—in fact, totally devoid of brain. It survived its birth one hour and a half, breathing and crying loudly; the expirations were rather convulsive in their character. Its voice was very strong. It was acutely sensitive to impressions made on the surface of the body, and moved its limbs. We could not satisfy ourselves whether it heard or saw. It cried so much on inserting food in its mouth, that it was impossible to ascertain whether it could perform the act of deglutition. In other cases of acephalous fœtuses, we usually found a rudimentary portion of the middle lobe of the brain; and they rarely survived beyond a few gasps, if so much. The malformation is occasionally combined with spina bifida and contortions of the limbs; but some, like this child, are fully developed—indeed, the shoulders were so much so, as to create a difficulty in their extraction. The *post mortem* examination, in which I was assisted by the late Dr. Todd of King's College, presented no feature worth recording, beyond what I have mentioned.

CASE XI. *Spina Bifida.*—In June 1872, I was consulted about a child four months old, reasonably well developed, healthy, and with every prospect of continued vitality and health, save the existence of a head somewhat large, but with tardy development of the parietal and frontal bones, leaving the large fontanelle unossified, congenital dislocation of the ankles forwards, and a spina bifida of the lumbar vertebræ. This measured two inches in diameter, with a projecting polished membranous covering, enclosing an elastic fluctuating sac. In fact, there was a total absence of the integumentary, ligamentous, and bony covering of the spinal chord, the thickened dura mater supplying their place. I exhibit a model of this case. The child, a girl, shows quite as much evidence of mind and powers of observation as four months' children generally do. My directions hitherto have been to take every precaution to prevent the injury or rupture of the cyst. A chambered shield of gutta percha, lined with padded silk, is being adapted to prevent the possibility of accidental injury; and I have it in contemplation to try a plastic operation when the age, promise of enduring life, and condition of the child justify it. It would be extremely gratifying to me to have the suggestions of my *confrères* with reference to the future dealing with this remarkable case; more especially of those who have met with similar cases in their practice. How long have they been known to survive, and how they were treated?

CASE XIII. *Vesico-vaginal Fistula cured by twisted Suture.*—On August 12th, 1837, H. Byrne, aged 25, was sent from the country suffering from vesico-vaginal fistula. The opening was longitudinal, about five lines long, with considerable loss of substance. It was about three inches from the urethral orifice. The bowels were well freed. She was placed on the abdomen on the edge of a table, with a bolster interposed. My four curved beak-tractors were introduced, and, her limbs being held fast by assistants, I pared the edges of the fistula with a scalpel, cutting on an ebony spatula; and, having introduced three short needles into the wounded edges, drew them together with a twisted suture. A perforated shot was now squeezed on the end of each needle, an elastic catheter introduced into the bladder, and the patient was placed lying on her abdomen, on bolsters stitched together longitudinally. She was retained in this position, and closely watched day and night, by a relay of nurses, who never left her. The urine flowed freely from the urethra into a bladder attached to the catheter. Her bowels were washed out by lavement. Not a drop of urine escaped from the vagina. The sutures were cut out on the fifth day, and the needles removed, when the union was complete. She left the hospital in a fortnight perfectly well. I had the advantage of the assistance of my late colleague, the distinguished surgeon Mr. Abraham Collis, in this case; and I cannot easily forget the gratification he evinced when he made a final examination of the bladder before the patient left the hospital, nor the significant manner in which he answered my inquiry whether he could find any hole. "No, doctor; I can't find a hole, unless I make one"; and added, with a peculiarly expressive shrug of his shoulders, with

* Concluded from page 163 of last number.

which those who knew him were familiar, "I am sure you don't wish me to do that."

CASE XIV. *Vesico-vaginal Fistula treated by Cautery.*—Honor Lattan was admitted in May 1836 with a vesico-vaginal fistula an inch and a half from the meatus, transversely oval, with the edges thinned off, and large enough to admit the point of the little finger. She suffered from constant escape of urine ever since her first of two labours in the country, which lasted for seventy-two hours. The vulva was excoriated, red, tumid, and tender, with gritty deposit. Lead-poultices and the use of the catheter were had recourse to for some days; and then she was placed on the abdomen on the table, the tractors were introduced, and the button actual cautery applied to the stricture surrounding the aperture. After this, she was slung from the bedposts in a sheet, lying upon the abdomen, with the catheter introduced. This operation was repeated at intervals, at first of five days, and subsequently at intervals of eight or ten days; and she left on the 26th of July, able to retain her urine for two hours, and only disturbed twice at night. The edges were again touched on the 11th of August; and, on the 30th, she described herself as free from inconvenience, retaining her urine regularly for three hours through the day, and being even able to go on often without relieving the bladder more than three times in the day and twice at night. The spot remaining ununited was reduced to a small pin-hole, such as you see represented in this drawing of Bridget Byrne, a case somewhat similarly treated, and with similar results.

CASE XV. *Vesico-Vaginal Fistula treated by Cautery and Pessary.*—Mary Cathcart (November 1837) suffered from a slough of the vesico-vaginal septum in her first labour in the country. The fistula was small, circular, about two inches and a half from the meatus, and rather to the right side. This was considerably diminished by one application of the actual cautery a month after her third delivery; but, as this was followed by peritonitis, it was determined not to repeat any operation. A cast model of the vagina, made of dentist's wax, was taken. This was done by introducing the soft wax, with a tape for extraction imbedded in its centre, through a speculum partially introduced. A caoutchouc mould was made from this, which fitted the vagina accurately, and was worn constantly as a pessary. The result of this simple contrivance, to use the words of my then clinical clerk, copied from his report, was, that "she experienced much comfort, being enabled by its use to retain her urine to a convenient length of time, and evacuate the contents of the bladder at pleasure, without withdrawing the instrument." I should, however, mention that I have since several times repeated this plan, using the cautery in preference to the ligature, or where this was objected to; and it has generally enabled the patient to retain her urine for some time. It has, however, not always been attended with the same amount of success. In fact, it is more adapted to very small fistulous apertures, or to those that have been reduced by the use of the cautery

CASE XVI. *Total Occlusion of Vagina: Operation: Animation suspended for upwards of twenty-two Minutes by Chloroform.*—Some years ago, Dr. Ringland and I were called upon to operate in a case of a lady with total occlusion of the vagina. The examination could only be made through the rectum. The anterior and posterior walls of the vagina were united almost throughout their whole length. There was a sense of fluctuation perceptible on pressing the finger high up into the bowel. A tumid fulness was perceptible over the pubes, to about the extent of a six months' pregnancy. The bladder and rectum were emptied; and the patient was placed on her back, on a high couch, with the limbs flexed and held by assistants, as in lithotomy. The patient was with some little difficulty brought under the influence of chloroform. I had commenced the operation, when she struggled so that I was obliged to desist, and assist in bringing her completely under its influence, before again commencing. A catheter was introduced into the bladder, and the dissection was proceeded with, cutting and separating the adherent tissues with the blade and handle of the scalpel alternately; now introducing the finger into the rectum, and again feeling through the anterior wall for the catheter, to avoid approaching too closely to either cavity—a scarcely appreciable divergence in either direction being fraught with misery to our patient for life. From the difficulties and risk attending the operation, it was necessarily a tedious one; "rapidity" in such an operation being a convertible term for "destruction". At length, after cutting for three inches upwards, and dissecting a new vaginal canal by dividing throughout this extent a layer of condensed structure not more than the sixth of an inch in thickness, we had the gratification of coming to a small pouch at the upper part of the vagina, which communicated with the distended uterus, and from which poured a quantity of grumous retained menstrual fluid. Having thoroughly enlarged the opening at the upper part, so as to correspond with the dimensions of the canal throughout, I got up from the operation to receive a shock such as I never experienced before or since. Our attention was called by the chloroformist to our patient, who lay with her head over the edge of the table, her jaw fallen, and to all appearance dead. There was no respiration; no pulse at the wrist; no action of the heart. I took out my watch, in order to take care that attempts to restore animation should be continued for a sufficient time before desisting, but without a hope that they could be attended with success. Experience in resuscitation of infants had led me to expect little from forcible inflation of the lungs by inserting a tube into the trachea, but much from a continuous and persistent imitation of the act of respiration by regular pressure on the elastic ribs of the subject—producing, as nearly as possible, the systole and diastole of the lungs and chest-frame, as observed in nature. Without a moment's delay, I sprang upon the high table, so as to command the prostrate woman; and, kneeling across her, placed a spread hand over the lower ribs, and kept up an artificial respiratory action in the lungs of about twenty pressures in the minute. In the meantime, all the available means of resuscitation were most assiduously carried out by my friend Dr. Ringland and his assistants. Friction and sinapisms were applied to the arms, legs, and surface. As speedily as buckets of warm water could be procured, her hands, feet, and limbs were immersed in it. These efforts were persisted in, whilst minute after minute was anxiously counted, with not the slightest evidence of restored vitality. At length, our souls absolutely sickened with disappointment, and, I may add, all hope having fled, we were, at the expiration of twenty-two minutes, repaid for our exertions by a convulsive gasp. Nearly a minute took place before a second occurred. Then they recurred at half-minute intervals; and eventually the natural breathing became established, and the artificial respiration was desisted from. Sickness now set in. She was unable to assist in the involuntary efforts to discharge the stomach. The food blocked up the œsophagus and posterior fauces; but, by drawing the head and neck over the edge of the table, and giving her the advantage of gravity whilst the finger was passed into the œsophagus, the obstructing food and mucus were removed, and respiration was established. A second collapse ensued after a few minutes, consequent on the evacuation of the uterus; but after this she recovered without a check. A curious circumstance, in a psychological point of view, should not be omitted. When she recovered her sensibility and powers of perception and speech, within a few minutes after respiration was re-established, looking steadfastly at one of the physicians present, she asked slowly and with some effort, "Is that Jesus Christ?" Where was her soul during that period of suspended animation? It might be surmised that this case would shake one's confidence in chloroform. With me, it had an entirely contrary effect, as it proved the power—perhaps I should say the capability—of restoring vitality suspended by its use under circumstances apparently hopeless.

CASE XVII. *Fall from Window in the Seventh Month of Gestation.*—In January 1834, I was called to see a woman in Beresford Street, who had fallen from a window three storeys high, whilst stretching clothes on a rope line made fast to a projecting pole. She not only fell about thirty feet, but, her hip striking a small wooden baluster that protected the area, the baluster gave way, and she was precipitated about seven feet lower into the area. This woman was in the seventh month of pregnancy. I found her still suffering from the shock, with a small quick pulse, very anxious countenance, the surface and extremities cold; but, with the exception of a contusion on the hip and some slight abrasions on her hands, she had received no apparent injury. As she was in very poor circumstances, I had her carefully carried into one of the surgical wards of the Richmond Hospital. A full anodyne was administered, and she awoke, after some hours' sleep, without any injury or ailment save the contusion and abrasions referred to. After resting in hospital for a few days, she left quite well. In the course of a fortnight, she made a voyage from Dublin to Liverpool, and suffered from sea-sickness. She returned and was admitted into the Dublin Lying-in Hospital. At the end of her ninth month, she had an easy labour of a living child, and recovered without a check. Sir Astley Cooper might well say, in reference to the patient who died from diffuse inflammation following the scratch of a pin, and the recovery after perforation of the thorax with a gig-shaft, "Gentlemen, you will thus perceive there are some cases that you cannot cure, whilst there are others that you cannot kill."

CASE XVIII. *Nursing Twelve Months after Delivery of a Dead Child.*—Mary Kenny, aged 22, had had a still-born child nine months after marriage, computed to have been a month dead. She secreted milk freely, and continued to have milk in her breasts for a month after delivery. At the expiration of a year, she took a relative's child to dry nurse. She had the child to sleep with her, and applied it to her breasts in the night. On the following morning, she noticed her chemise stained with milk that had escaped from the nipples. She

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continued nursing the child regularly for seven months. The child was satisfied, and throve remarkably well. Her catamenia, which had continued regularly from the time of her confinement, ceased, and did not return whilst she nursed. The child died of dentition when seven months old; and two years afterwards, when this case was noted, a milky fluid could be drawn from the breasts.

CASE XIX. *Obstinate Procidentia of Uterus cured by Actual Cautery.*—Mary Burke, aged 60, a widow with six children, had obstinate procidentia of the uterus, and could not retain any form of pessary. She suffered much distress; her general health was deranged; she was dyspeptic, and had lumbar pains. She was confined to the horizontal position, with the hips well raised, for a fortnight. The ulcers healed. The uterus was placed *in situ*, and astringent injections were used. The actual cautery was then applied about an inch and a half from the vulva round the surface of the vagina for the extent of about half an inch. My clinical clerk, who was somewhat of the Gil Blas school, in criticising his master, adds that the old woman was so indignant at this operation, which, for obvious reasons, it was deemed more considerate not to explain beforehand, that she left the hospital in a fit of indignation, because a hot iron had been applied to her inside, as she said, without saying, "With your leave, or by your leave." She eventually permitted the treatment to be followed up by the application of nitrate of silver; and the report is thus continued by my clinical critic. At the expiration of two months, she was able to go about again. The uterus was *in situ;* and she had derived much benefit to her general health and condition, and a distressing pain, descending down the front of the thigh, from which she had constantly suffered, had disappeared. The cicatrix formed by the eschar prevented the descent of the os. He adds, however, this caustic comment on my operation: "She certainly got a regular touching up."

CASE XX. *Procidentia Vesicæ treated by Vaginal Mould.*—In February 1839, Catherine Sullivan was admitted with complete procidentia of the bladder, the result of a tedious and instrumental delivery of her first child. She had had two pregnancies, and suffered from prolapsus; but the protrusion occurred suddenly, about two years before admission, whilst she was lifting a feather-bed. She was treated by a variety of pessaries, and the actual cautery was applied to the interior of the vagina; but the protrusion recurred despite of all. She was kept for some time in the horizontal posture. A cast of the vagina was taken in wax, with the bladder restored to its natural position. A plaster of Paris mould was made from it; and in this a cautchouc instrument was moulded. This she wore with great comfort and convenience. It should be mentioned that the difficulties in this case were added to by the existence of a growth supposed to be an exostosis, springing from the interior of the sacrum, and encroaching on the inlet of the pelvis.

CASE XXI. *Inversion of Bladder, with Procidentia, through the Vesico-Vaginal Septum.*—J. S., aged 50, suffered from lesion of the vagino-vesical wall in labour, to such an extent that the bladder protruded beyond the vaginal aperture to the extent of a small cricket-ball. The loss of substance was such that no operation could possibly be undertaken, and the intolerance of pressure was so great that no attempt at reduction or support of the bladder *in situ*, as in the former cases, could be made or tolerated. A shield of tin was adapted to prevent friction, but its advantages were not very great.

CASE XXII. *Procidentia of Uterus and Bladder, with Eversion of latter from Sloughing of Vesico-Vaginal Wall.*—This case was also the result of a tedious and instrumental labour. The patient had been a miserable and hopeless sufferer for years. Nothing could be attempted, not even reduction within the vagina, with any hope of advantage. A tin shield was adapted, as in the previous case, to preserve the sensitive parts from friction. The ulcerations on the utero-vaginal wall, which you perceive in this drawing, were healed by the application of caustics, and she was discharged to wear out her life of misery and torture.

Whether the ingenuity of our operating surgeons will ever arrive, by adaptation of a plastic operation or otherwise, at any means of curing these apparently hopeless cases, is problematical. One comfort is, that the earlier use of instruments would appear to render these incurable cases less frequent; certainly we do not meet them as we did when the rule was to leave Nature day after day to her unassisted efforts.

CASE XXIII. *Hypertrophy of Lips of Uterus.*—I formerly described some cases of this affection occurring in the unimpregnated uterus, with operations for their removal. The drawing now exhibited shows this condition in the impregnated organ. It is, no doubt, a cause of tedious labour, and, when the lips of the uterus are caught by the head against the pubes, retards its progress. My case-books show several instances where delay was referable to this cause, and in which the head remained stationary until the tumid lip was pressed steadily up so as to relieve it from the pressure, when the labour progressed. In minor cases this is all that is necessary, but in more severe cases I have derived benefit from punctures. In Quinlan's case, now exhibited, attention was called to what was supposed by the pupil on duty to be a polypus connected with the upper and anterior part of vagina. The head was at this time escaping the os, and pressed the tumour against the pubes. At noon, the head descended very little, but was forcing the tumour down before it. Two fingers were steadily kept against it during and in the interval of the pains, and the head descended to rest between the ischia, where it remained stationary, without making the turn into the hollow of the sacrum for ten hours. The pains became slack; there was no want of room; and the fœtal heart was audible. I passed up the lever and brought down a living male child. This woman went out well and returned at a subsequent period, when the projecting growth was removed by curved scissors which I had constructed for the purpose.

CASE XXIV. *Sudden and unaccountable Death on Fifth Day after Labour.*—Mary Caulfield, aged 30, was delivered April 14th, 1837, after a labour of ten hours. Her recovery was favourable. She was up for a short time on the 19th, apparently well, when she suddenly exclaimed, "What ails me? Oh, my God!" and almost immediately expired. After the most careful *post mortem* examination, there was not anything found that could account for death. In a case of sudden death occurring some months previously in hospital, a dissecting aneurism of the aorta was found that had opened into the pericardium. It is quite possible that a lesion might have existed in Caulfield's case also, that escaped detection; but every tissue in the body was examined most carefully, especially the respiratory, circulatory, and cerebral systems, and nothing abnormal could be detected.

CASE XXV. *Funis Prolapsed: Long Forceps: Advantage of Stethoscope.*—Biddy B. had her second labour in November 1837. The funis was prolapsed, with rupture of the membranes. The os was fully dilated, and the head entering the brim of the pelvis. I replaced the funis within the uterus, and retained it *in situ* by pieces of sponge pressed up in the posterior and right side of the pelvis, where the funis had descended. This practice I had frequently before adopted with great advantage. However, on applying the stethoscope, the action of the fœtal heart, that had been previously audible, became indistinct, and eventually could not be detected. My long forceps were immediately applied, and a healthy child was extracted, in which the respiration was speedily established.

CASE XXVI. *Procidentia of Uterus and Vagina during Labour; with retained Placenta: Replacement: Recovery.*—The last case to which I shall call your attention is one represented in this drawing, and which tells its own tale. The patient was sent into hospital as you see her, delivered by an ignorant midwife, after a labour of a few hours, with procidentia of the vagina. The funis was hanging out; the vagina lacerated at its superior part; the uterus was close to the external parts, and the placenta retained within it and adherent. There was little hæmorrhage, or she could not have reached the hospital alive. Reaction was established, and the uterus and vagina were restored to their natural position. The hand was slowly introduced into the uterus, and the placenta detached and removed. Fortunately, the laceration, which was flap-shaped, did not extend to the deep-seated tissues or bladder, and she recovered slowly but completely. She was retained for a long time in the recumbent posture; and the vagina and uterus kept their position without requiring artificial support.

TREATMENT OF SARCINOUS VOMITING.

IN the JOURNAL for July 20th, in the account of Dr. Murchison's clinic, a case of sarcinous vomiting with organic disease of the stomach is given, in which all the gastric symptoms, together with the vomiting, were relieved by kreasote and morphia. I can speak highly of the value of kreasote in these cases. Some three years ago, in a case of narrowing of the pylorus, with dilatation of the stomach and sarcinous vomiting, occurring in a young woman, I tried carbolic acid, chloride of sodium, and other remedies, in vain. Kreasote gave the most marked relief; the distension of the stomach, the vomiting, and the sarcinous fermentation, all abating very considerably under its use. I was much struck with the result at the time; and, although I am fully aware that single instances of this kind have but little value as evidence of therapeutic effect—for I believe, with Mr. Stuart Mill, that "recovery from a disease is an event to which, in every case, many influences must concur"—I nevertheless venture to publish the formula I employed: ℞ Sodæ bicarb. gr. x; tinct. lupuli ♏xx; sp. chloroformi ♏xv; misturæ kreasoti ℥j. Misce. To be taken three times a day.

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AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF MEDICINE.

At the Annual Meeting of the British Medical Association, in Birmingham, August 1872.

By T. BELL E. FLETCHER, M.D., F.R.C.P.,
Senior Physician to the Birmingham General Hospital;
President of the Section.

It is but very recently that I have understood that the address of the President, and those on Medicine and on Surgery, do not quite supersede the necessity for addresses from the President of Sections. But, however much they may have done so, I could not open the Section of Medicine without attempting to express my full conviction of the great honour that has been conferred upon me by selecting me to fulfil the important duties of the honourable post of President of the Section, and to express the high satisfaction which I feel in having associated with me as officers gentlemen of such high standing in their profession that, however inadequate I may be to perform properly the duties of President, the working of the Section is amply secured by their being associated with me in the performance of the task.

The list of papers we have to go through is highly satisfactory, and shows that the attention of the authors is taking a direction to secure permanent improvement in the study and practice of our art—a most desirable attainment, only to be secured by our observations being bounded by a correct knowledge of the sciences of Anatomy, Physiology, and Pathology. Those who are content to go on without a thoroughly practical knowledge of these sciences, must remain in the state of fifty years ago, when Dr. John Mason Good wrote his highly classical and elegant work, which gave an admirable account of all known up to that day, and now is a most desirable book of reference. But the only true progress in medicine is made by improving our knowledge both of the anatomy and healthy functions of the organs, and of their morbid anatomy and the corresponding derangements of their functions. What astounding starts have been made in all instances in the diseases of an organ from its anatomy having been correctly demonstrated, has been in all instances illustrated. The discoveries of the anatomy of the liver and of that of the kidney were followed at once by clear descriptions of the changes produced in them by disease; and the names associated with these discoveries are dear to us as physicians who have worked successfully in the amelioration of the health and comfort of their species. The great work of Corvisart admirably demonstrated to us the existence of the morbid changes which took place in the heart; but it remained for the school of more modern days to do away with the rigorous and lamentable epigram or motto—

"Hæret lateri lethalis arundo."

The knowledge of the anatomy, physiology, and morbid anatomy of the changes which take place at the onset of diseases of the heart, has put us in a position for treating them with success, and the older cases satisfactorily. Bouillaud wrote in 1830: "Aujourd'hui les maladies du cœur sont du nombre de celles dont l'histoire laisse moins à désirer"; but this is much more true in 1872.

Numerous are the illustrations of the progress of medicine which may be said to have been well dilated on in the admirable Addresses on Medicine which have been given at late meetings of our Association, and in none more than in the highly practical one to which we have listened. The writings of modern days are wonderfully illustrative of the same progress; and I am sure that I shall be excused if I say that, to secure any certainty in our observations, we must never consider ourselves too old to study anatomy and physiology. And I think that the journal published by Dr. Humphry and Dr. Turner gives us a convenient and an ample supply of material to keep us up to those subjects. Let our studies be honest, and the ephemeral delusions of the day need never enter into our consideration, but as examples of the imperfection of knowledge.

It is not my wish to detain you with any comments upon our position; but I would just wish to say that the applications of the present day—the ophthalmoscopes, the endoscopes, the sphygmographs, the thermoscopes—are valuable aids to our senses in a like manner to the stethoscopes, for their immediate objects of investigation, and they augment the efficiency of the power of our senses in the investigation of the functions, as the microscope aids us in the investigation of the organisations.

I will terminate at once, and begin the business of the Section; but allow me first to say, that it is the wish of the President and of all of us to make this visit of the Association useful and pleasant, in which the professional men of Birmingham are zealous and unanimous. I think Birmingham is an example of unanimity in this respect.

THE MODERN TREATMENT OF THE ADVANCED STAGES OF CONSTITUTIONAL SYPHILIS.*

By WILLIAM ACTON, F.R.C.S.

The presence to-day at Birmingham of my distinguished master, M. Ricord, has induced me to write a paper on a subject which has occupied more of his attention than that of any other European surgeon. It may not, however, be known to many of those who must have listened to the brilliant lectures of the French professor under the lime trees at the Hôpital du Midi, that he has ceased for some years to publish any of his opinions; and it is only by letter, or the international interchange of private patients, that even old pupils are acquainted with his present views. If, then, I can induce my distinguished friend to state his opinions on the important question of the treatment of syphilis, I think I shall have "done the State some service". Who is there but has often wished to know the matured opinions of our distinguished countryman, Harvey, on Generation? Would not every practical surgeon set great value on the opinions of John Hunter, if we could have possessed that author's remarks thirty years after his great work on the Venereal Disease had been published, canvassed, and tested, in all parts of the world, as has been the case with the investigations of my learned friend who has come to visit us to-day?

On what constitutes the virus of syphilis, I fear we know little more at present than we did thirty years ago. Experience, however, has corroborated M. Ricord's observations, that relapses of constitutional syphilis are not uncommon even after long periods of apparently perfect convalescence. These accessions of disease we may attribute sometimes to neglect of treatment; but we must admit, likewise, peculiarities of constitution and temperament as bearing on the tendency, which, in spite of the best regulated treatment, will be followed by relapses. In other instances it is noticed that any general disease which will debilitate the system may be followed by an attack of constitutional syphilis, which without such debilitating cause would never have occurred. The old theories about the influence of *ferments* seems to be borne out by some of these exceptional cases.

Practitioners, however, will agree with me that, in the present day, in some of these rebellious cases patients and medical men both lose confidence in remedies, and there are those among us who, after seeing such relapses, doubt if it be the effects of syphilis or mercury which we have to treat in these advanced cases.

The *treatment* should consist in ameliorating the symptoms, commencing with those that are most urgent. We should attempt to improve the broken-down constitution, too often found in these instances; if mercury have been given, we must leave it off till the constitution has somewhat recovered. Our object should be to place the patient in the best possible condition as regards air, diet, and freedom from anxiety, and, if possible, to give him confidence that the disease is curable, for the moral and mental depression to which the patients are reduced is often very painful to witness.

This being done, I commence with tonics and iodide of iron. If there be ulcers, I treat them with the ointment of nitric oxide of mercury. If the throat and voice be affected, topical applications must be used. If osseous or periosteal tumours exist, iodine or blisters should be applied to reduce the size of the swellings and prevent disfigurement, or pressure on the brain or spinal cord. This local and general treatment will act almost as by a charm in relieving sleeplessness and pain in the bones and joints.

In the commencement, notwithstanding that iodine may have been taken (according to the statement of the patient) without previous benefit, I commence the syrup of iodide of iron in bitter infusion, taken at meal-time in moderate doses. As long as the remedy tells on the constitution, I adhere to moderate doses; but as soon as convalescence tarries or progress is not made, I increase the dose even to two drachms three times a-day. When the system becomes tolerant of these doses, I change the syrup for the iodide of potasium in solution, beginning with ten or fifteen grain doses, taken at meals and dissolved in large quantities of fluid.

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

The subsequent treatment should be guided not by the number of grains given, but by the effect which the remedy has on the complaint. As soon as the disease ceases to retrograde, I augment the dose with the best possible effect. When the preparations of iodine and potash cease to benefit the best patient, I add bromide of potassium, not in combination with the iodide, but prescribe it at a different time of the day. It frequently happens that we succeed in curing the disease with these salts, but if the complaint be very persistent, if relapses occur after short intervals, I no longer hesitate to give mercury, and my hearers may be glad to learn what are the indications we follow in the administration of the remedy.

Treatment with Mercury.—As a general rule, it must be admitted that mercury is not required in the treatment of the advanced stages of constitutional syphilis. In fact, we attempt to cure our patients without resorting to the mineral. On the other hand, there are many instances in which the recovery hangs fire; the patient ceases to improve even under large doses of iodine. The disease becomes stationary. Yet such are the objections of some practitioners to a course of mercury, that, in spite of the recrudescence of severe symptoms, the anti-mercurialist will not give mercury in any form. This is an error of the day. The rule which experience teaches us is that, if a relapse occur, or if the progress of recovery be arrested, after the various preparations of iodine have failed, some of the mercurial preparations must be had recourse to, judiciously given and closely watched. In some cases, friction with mercurial ointment will be most beneficial; and I must admit that in England I find the old plan of rubbing in mercury answer better than almost any other that I am acquainted with. There are those who employ fumigations. M. Ricord is very partial to a prescription combining biniodide of mercury, iodide of potassium, and sarsaparilla. In these stages, the writers of the last century had a high opinion of corrosive sublimate; but this irritant poison has fallen into disuse in modern practice. Those of my hearers who are acquainted with the writings of the older authors on syphilis need not be reminded of the almost miraculous recoveries detailed after giving mercury, long before iodine was known; and it is stated that the patient never had a relapse. These old writers, however, omitted to state how often the remedy not only failed, but brought the patient to an early and untimely grave. I can bring to my recollection many instances which, I have every reason to believe, died from the administration of mercury given on the old plan, and which would now be rescued by the mercury being preceded by the different preparations of iodine.

If mercury be found beneficial, as I am sure it will be, if judiciously given and carefully watched, the symptoms of syphilis subside, and the preparation should be persisted in till every vestige of the disease disappears. The dose required is sometimes surprisingly small. I have known obstinate symptoms, which have withstood iodine, disappear in a week. In a case now under my care, of syphilitic nodules of the testis, a six weeks' course of frictions has been required to enable the testis to recover its former elastic feel, and its functions are now performed satisfactorily. It is singular to notice in these cases how the general health improves under mercury. The patient loses the habitual earthy expression, becomes florid, and gains flesh; his spirits improve as the local affection declines, and he ceases to be liable to relapses.

Such, then, is the course of syphilis, and we must admit that it is a very serious complaint; and the few minutes that are left to me cannot, I think, be better employed than in stating that, according to a recent return of the Registrar-General, the deaths of twelve infants and of one adult were directly referred to syphilis, showing an excess of five upon the corrected weekly average. Without an intimate acquaintance with the laws of syphilis, no one can venture to legislate on what are now popularly known as "Contagious Diseases."

The passing of the Acts bearing on these diseases must be attributed to the attention which has been called to the frequency and severity of syphilis. On sanitary grounds, 2,700 medical men have, during the last session, urged on Mr. Bruce the continuance of these Acts. In fact, no one now contests the beneficial influence of their operation on public health—the evidence we have brought together on this subject is overpowering; but we as medical men, and this Association more especially, have still a great task before us. We cannot conceal from ourselves that, if we wish to carry out our views, we have strong moral prejudices still to overcome. Granted (say our conscientious and well-intentioned opponents) the advantage on sanitary grounds, still we object to the Contagious Diseases Acts, because we fear we shall lower the high standard of English morality. I can only repeat what I have stated elsewhere: that if I thought the existence or the extension of the Acts would have such an effect, I for one would have long ago ceased to agitate this question; but the more the various bearings of this international question are considered, the more the ablest men of the day are convinced that the Contagious Diseases Acts have a moral tendency. I I hope that they will be more thoroughly year by year carried out, notwithstanding all the clamour that has been raised against them; and I have no hesitation in asserting that, the longer these Acts are in operation, the more beneficially will they be found to act on the morals as well as on the improved sanitary condition of our population. Our French *confrère* will, I hope, on his return to Paris, be able to tell his compatriots that the English sailor is gradually ceasing to be the disseminator of that foul scourge syphilis. The day is at hand, I hope, when foreign precautions against syphilis will not be defeated by the influx of diseased British sailors into foreign ports, because a minority of well-intentioned but narrow-minded English men and women refused to sanction the examination and seclusion, when found diseased, of common prostitutes. I hope to see the day when this disease (the ravages of which we have been describing) should be stamped out. This almost total extinction has been found successful at Malta, and, on a small scale, syphilis has been banished from the garrison at Colchester. It has diminished in all our large garrison towns where the Acts have been in operation; and I am pleased to hear that in the Lock Hospital of London, which at one time had not beds enough to accommodate the Government patients, there are not sufficient women to fill the wards appropriated to these cases.

But differing as we do about the benefits of the Contagious Diseases Acts, all are agreed that the agitation to which they have given rise must be attended by ultimate benefit; not the least of which is that the public women of England will be no longer allowed to disseminate a disease, the consequences of which I have, I fear, but feebly described in this paper.

THE TREATMENT OF SYPHILIS.*

By M. P. RICORD, Paris.

I MUST thank you very much for the reception you have accorded to me, and I am deeply gratified at finding that my name and reputation are known to you. I have not prepared anything to say, and I did not intend to speak; but Mr. Acton caught me, and has forced me to speak. It is a trick. I came here to listen, and not to speak—to learn, and not to teach; but, if I am to speak, it will be little, after what Mr. Acton has said; for he has entirely given my views on the phases of syphilis, on the peculiarity of symptoms, and on the manner of treatment.

There is one question which comes before the medical man very frequently: Can syphilis be cured radically? That is the question which we will consider. There is an immense quantity of venereal disease cured—clap, swelling of the glands, soft chancres, warts—all these "accidents", not belonging to syphilis, and not associated with secondary symptoms, being radically cured. Since these have been distinguished from real syphilis, there have been great differences in the treatment of them, and they have been radically cured. Doubts have been raised whether real syphilis can be radically cured; and those doubts are not new. Mercurialis thought that it was liable, even after the lapse of years, to break out again; and the doubts remain in the minds of many whether it can be cured radically, or whether it can be cured only temporarily. Well, that doubt may remain until I establish before you that the law regarding syphilis is the same as the law regarding the small-pox, measles, and such like. You can have at the one time only one small-pox, only one cow-pox; and as, just so long as the cow-pox influences the system, you cannot have another small-pox or another cow-pox, so in syphilis; for, as long as the patient is suffering under the syphilitic diathesis arising from an indurated chancre, he cannot have another indurated chancre. The application of this law is that, while a man is suffering under the effects of secondary symptoms, he cannot have a chancre of an indurated character; so that if you want to know whether the system of a man is altogether free from syphilis, you can do so by inoculating him with an indurated chancre; if it take, he was free; if not, he was insusceptible. That is a great point to be reached in the science of medicine. I say, and say distinctly, that syphilis can be radically cured.

Now as to the case of syphilis in the first stage—the primary sore. You have first to find if this be really the hardened chancre, and it comes with the swelling of the glands; but with it the glands never suppurate. I at once institute the mercurial treatment. Now, there is one point here upon which there is a difference of opinion, for some think that you cannot prevent the secondary symptoms; but I say that if the treatment be well done and soon done—and this is most important—you can prevent the first bursting out of the secondary symptoms.

* Speech in the Surgical Section, August 9th, 1872.

Why it is not prevented is, that the treatment is applied too late in the first instance, and the secondaries often come before the treatment of the primary is commenced. But if you make the treatment of the primary early and effective, the secondary will not appear; I can give you warrant for that. The best treatment for the secondary symptoms is the mercurial, and it must be continued and continuous. In Germany, and in other places as well, the treatment of the secondary symptoms is not continued long enough. You should choose a treatment which does no harm to the constitution, and continue it for five or six months, and you will have very few cases of relapse; and, after the mercurial treatment is finished, go on for another six months with iodine. When a person comes to me, I tell him that he will have to continue under treatment for twelve months. If he will, he will; but if not, then I say at once "good bye." But then, you know, there are complications. The treatment I have given you is for syphilis arising in a person who is otherwise healthy, and there is then but one enemy to fight against. But in other cases you may have, in addition, scrofula, or an otherwise bad constitution. Well, then the case is not the same; for many of these constitutional disturbances are interfered with by the syphilitic treatment. In many of these cases, the syphilis is the second thing to look at, and you must begin with the constitutional disease first; you must attack the strongest enemy first, and he sometimes waits until you come to him before he opens his attack. Then you must come on gradually with your syphilitic treatment; and that which I prefer in complicated cases is iodide of mercury, which causes little diarrhœa. One capital treatment is that of rubbing in—it is easy and effective. But there are cases in which the rubbing cannot be employed. In the next stage, I employ iodide of potassium. I use large doses of this, up to 60, 70, 80, and 100 grains a day, and even more. I have made experiments with this; and I have found that, half an hour after the dose has been given, it has passed through the urethra; and it is in reality a sort of broom to the blood. The supply must be kept up. In secondaries, a treatment partially of this iodide and of mercury has its advantages. I have had the potassium stop doing good, and I have gone back to the mercury with good results. That is what Mr. Acton has said, and I quite agree with him. When syphilis has lasted a long time, and has had great effect upon the constitution, it somehow disappears, and leaves the patient suffering from a complication of diseases which may have been existing before. Well then you must stop all syphilitic treatment, and repair the deterioration of the blood by iron and bark. Mr. Acton spoke about the use of bromide of potassium; and I agree with him in its use, for it is a splendid remedy for a complication of syphilis in some cases—in syphilitic diseases of the brain and nervous system; but you cannot depend upon it as an antisyphilitic remedy.

Now I would impress upon you that you can tell your patients that this terrible disease can be radically cured if they have the courage sufficient to go through the treatment, and their physician have the courage to go through it with them. I again thank you for the cordial reception you have given me.

REPORT OF COUNCIL.

*Presented and adopted at the Annual Meeting, August 6th, 1872.**

YGUR Council are happy to meet you in this important centre of manufacturing industry, remembering, as many do, the successful meeting of the Association held here in 1856. Last year, the magnificent scenery and attractive influences of Devonshire and Cornwall drew together a large number of members, who, after transacting the business of the Association, and listening to addresses of no ordinary merit, were enabled to avail themselves of the courtesy of the military, naval, and civil authorities of Plymouth and Devonport, and to visit scenes unsurpassed in natural beauty and historical interest, especially to the medical visitor. This year, we meet in a locality made important by the energy and enterprise of man, and from which have sprung many distinguished cultivators of medical science and art.

At the annual meeting in 1871, there were on the list 4,403 members. There are now 4,700 members—an increase indicating the continued progress of the Association.

The Treasurer's accounts for 1871 have been audited by Dr. E. L. Fox and Mr. Major, the public auditor, and were published in the JOURNAL (April 20th, 1872), by which it was seen the liabilities exceeded the assets by the sum of £314 : 17 : 10. Your Council, however, believe that by the improved business arrangements inaugurated at the last annual meeting such balance will be speedily wiped off, and the financial position of the Association be brought to a more satisfactory condition. The General Secretary has hitherto had much to contend with in reducing the business of the JOURNAL Office into more complete working order, but your Council believe that in a short time the necessary changes will have been completed, and a more simple and effective working of the business affairs of the Association secured. The experience of the past year fully justifies the necessity for the changes made at the last annual meeting in the secretarial department. Your Council feel, however, that it is due to Mr. Ernest Hart, the able editor of your JOURNAL, to recognise gratefully the voluntary supervision which he gave to the business management, as distinguished from the duties of editor, previously to the appointment of a General Secretary resident in London, and venture to express a hope that some acknowledgement of those voluntary services will be voted by the members present at the annual meeting.

The Poor-law Committee has, on several occasions, had the opportunity of effectually acting in behalf of the interests of the Poor-law medical officers of Great Britain and Ireland. It has co-operated with the Poor-law medical officers of England in determining the kind and degree of protection which shall be demanded for Poor-law medical officers when called upon to assume health-functions under the Public Health Bill; and, in a deputation to Mr. Stansfeld, the President of the Local Government Board, elicited from him satisfactory assurances, both on this subject, and as to the intentions of the Board to extend the Poor-law dispensary system in this country, and to readjust districts on a more equitable footing.

The subject of the working of the Superannuation Act for Medical Officers is under the consideration of the Committee, and the necessary steps are in progress to move the Government towards obtaining a more liberal interpretation of the provisions of the Act from various boards of guardians.

The Medical Reform Committee has suspended its labours during the past session of Parliament, in order not to embarrass the General Medical Council, the Universities, and Corporations, in their efforts at reform and in their action to realise conjoined boards of examination for admission into the profession in the different divisions of the kingdom. The Report of the Committee will be submitted to your consideration.

The Committee on Parliamentary Bills has given careful consideration to various measures of professional importance, in the course of their passage through the legislature. A report will be presented by the Secretaries, which will show the valuable work that it has accomplished.

During the past year, and especially during the last six months, the labours of the Joint Committee have been constant and very arduous. By deputations to the President of the Local Government Board, by correspondence and frequent conferences with members of the House of Commons, and by urging the branches of the Association to use their influence with their representatives, they have endeavoured, but as yet in vain, to secure the adoption of such amendments as would make the Public Health Bill in reality what it is only in name. A provisional report will be given in by Dr. Stewart, and it is hoped that a full and free expression of the opinion of the Association will be elicited, for the guidance of the Joint Committee in their future proceedings.

The Therapeutical Committee has not been able to pursue its investigations this year, in consequence of the enforced absence from Edinburgh of Professor Hughes Bennett, through ill-health.

The Committee on the Registration of Disease will present a report. It is urgently necessary that the Association should continue their exertions to obtain a satisfactory system of registration of sickness. Although weekly returns of disease are still made by the Manchester and Salford Sanitary Association, and by Dr. Whitmore, of St. Marylebone, your Council regret to notice the partial cessation of the very complete records of sickness obtained by Dr. Hill, of Birmingham; and, as was mentioned in the report for 1871, the records were last year discontinued in Newcastle-on-Tyne. This failure of two of the most important voluntary efforts in the kingdom is a further proof of the necessity of establishing a national system of registration at the public expense.

Dr. Steele has given notice of the following alterations in the Laws.

That Laws 15 and 16 be so altered as to read as follows.

1. The subscription to the Association shall be one guinea *per annum*, which shall entitle each member to receive the publications of the Association for the current year. The subscription shall date, and be considered due in advance on the 1st of January in each year, except in the case of a member admitted on or after the 1st July, when the subscription for such part of a year shall be half a guinea in advance.

2. Any member whose subscription shall not have been paid on or before the 31st December of the current year shall be suspended from

* The copy of the report which was published in last week's JOURNAL was not quite complete. We therefore reprint it.

all privileges of membership; and at the end of the succeeding year, if the arrears be still unpaid, he shall cease to be a member, and shall be ineligible for readmission until he shall have paid all arrears due at the period of his suspension.

3. Any member wishing to withdraw from the Association shall give written notice of his intention to the General Secretary on or before the 1st December of the current year; and neither withdrawal, suspension, nor erasure of a member's name from the books of the Association, shall be deemed either in honour or equity to relieve such member from his liabilities to the Association.

Your Council believe the proposed alterations will not only conduce to a more regular payment of subscriptions, but will also secure the return of many members, who, under the present law, are deterred from rejoining the Association.

A communication has been received from the honorary secretaries of the Harvey Memorial Committee: and your Council recommend to the members of the Association the propriety of warmly supporting the objects of the Committee.

Your Council regret that no Essays have been received for the Hastings Prize Medal for 1872.

The thanks of your Council are specially due to the Honorary Secretaries of the Branches for the very effective working of their respective Branches.

Your Council have viewed with very great satisfaction the formation of a new Branch in Scotland, the Aberdeen, Banff, and Kincardine Branch, which has entered at once upon a promising career of energy and success; and strongly recommend the Irish and Scotch members to form Branches, and thus connect themselves more closely with the Association.

Your Council have to lament the loss which the Association has sustained by the death of several valued members. Dr. Beatty of Dublin, by his genial courtesy, kindly disposition, and high professional reputation, was endeared to all who knew him; and Mr. Clayton of Birmingham was for many years one of the most active and useful members of the Committee of Council, and the Association has sustained a great loss in the removal of one who spared neither time nor energy when its interests were concerned, and whose presence at this meeting was looked forward to by his many friends as one of its greatest attractions.

W. D. HUSBAND, *President of Council.*

REPORT OF THE MEDICAL REFORM COMMITTEE.

Presented and adopted at the General Meeting, August 8th, 1872.

THE Medical Reform Committee, reappointed at Plymouth, in August, 1871, in submitting their present report to the Association, have chiefly to set forth the reasons and circumstances which have influenced them to suspend during the past year their previous active exertions. Your Committee have in no degree faltered in their zeal for the cause entrusted to them. They have been simply pursuing the course followed by the committees which have preceded them, in never opposing any practical measure of reform which did not clash with the principles to which the Association is committed by resolutions voted at their annual and special meetings since that held in Chester in 1866. Your Committee, soon after the meeting at Plymouth, became aware that serious efforts were being made by several of the most important of the medical corporations to combine for the examination of candidates for the medical profession. Already, in January, 1871, three English corporations, the Royal College of Physicians, the Royal College of Surgeons, and the Apothecaries' Society, had agreed to combine and appoint a joint board to examine and license candidates to practise medicine, surgery, and midwifery. The attempt, which was inspired by the General Medical Council, was not successful, and the last annual meeting still found the United Kingdom encumbered, as at present, with nineteen corporate bodies, each empowered to grant one, and some two and even more separate qualifications, any one of which qualifications entitled the possessor to be placed on the *Medical Register*. Your Committee, having ascertained that strenuous efforts were again being made, not only in England, but also in Ireland, to amalgamate the corporations for the purpose of forming a national board of examination in each division of the kingdom, and thus to make an approach to one system, deemed it right not to embarrass their proceedings by any independent attempt at legislation. Your Committee have reason to know that these spontaneous efforts on the part of the corporations have been favourably regarded by those members of the Legislature who supported the plans of the Association, and they sincerely hope these efforts may be brought to a successful issue. The history of the progress of Medical Reform during the past six years has confirmed the conviction of your Committee that, in the default of the Government taking up the question, the British Medical Association—yearly growing in numbers, and now fast approaching 5,000 members, an Association unprecedented in its power of welding the profession into one united whole—is the only body truly representative of the profession able to solve the question of Medical Reform, and to carry it to a successful issue.

EDWARD WATERS, M.D., *Chairman.*

REPORT OF THE JOINT COMMITTEE ON STATE MEDICINE.

Presented and adopted at the General Meeting, August 8th, 1872.

SINCE the last meeting of the British Medical Association, when an elaborate report of the position of the public health question was brought before the Association, the introduction of the Public Health Bill, (1872) by Her Majesty's Government, has engaged the earnest and continuous attention of the Joint Committee. In that measure the cardinal principles laid down by your Committee as essential to any well-considered scheme of reform of the laws relating to the public health, and of the authorities by whom such laws should be administered, have been entirely ignored. No attempt has been made to consolidate or amend existing laws, and the bill, which has been carried through the House of Lords without even a pretence of discussion, contents itself with reconstituting the existing sanitary authorities. It leaves the urban authorities as they were; and, while it makes a new uniform system between urban and rural districts, constitutes such portion of the Union as does not include any urban district into a rural district, presided over by such portion of the Guardians as does not include representatives from any urban portion of the Union. It further proposes to vest most important centralising functions in the Local Government Board, who are to appoint inspectors, not necessarily medical, who will have the power to supervise, and to a large extent to control the action of all those newly-constituted boards. Medical officers of health are to be appointed in every such district, in the first instance for a period not exceeding five years, and their salaries may be partially paid out of the Consolidated Fund. Your Committee have, on two occasions, had interviews with the President of the Local Government Board, and have pointed out to him their grave objection to this, which they could not but consider a most inefficient and faulty scheme. They feel that the medical profession is under much obligation to those members of Parliament, who exerted themselves to effect such amendments in the Bill as would have made it more worthy of the support of sanitary reformers. They would especially mention Dr. Lyon Playfair, Mr. Dalrymple, and Mr. Corrance, the first of whom exposed (on April 5) the serious radical defects of the measure; while the second placed on the votes of the House of Commons a series of amendments calculated to secure a more uniform constitution of local authority, and the creation of new county authorities; and the third courageously pressed to a division his important amendments having the same object. Many serious defects of the measure were also ably pointed out by Lord Robert Montagu, Sir Michael Hicks Beach, Mr. Ward Hunt, Mr. Goldney, Dr. Brewer, and Dr. Lush. Extended areas of local government intermediate authority, a local elected authority, representing both property and payment of rates, consolidation of medical and sanitary functions within each unit of area for administration, including a thorough and comprehensive regulation of sickness, efficient officers, special medical talent of a high order, and adequate protection for all officers in the discharge of their duties, were the great considerations continuously urged by your Committee on the Government—they regret to say, without effect. They feel that a local authority elected every year, and already fully occupied with important statutory duties, was at once too busy and too much under obstructive control to be useful as a guardian of the public health. They felt that while the Union might be most convenient, something more was wanted for efficient action and control, and it has been seen by all parties that eventually there must be constituted a County Board, and, in some cases, a water-shed authority, before really efficient action can be secured. The employment of the Union medical officer as the medical officer of health is a necessity, so far as the discharge of certain indispensable functions is concerned; but your Committee feel that they would be doing injustice to those gentlemen, as well as to the importance of the new duties they will be called upon to discharge, unless they urged the appointment in every county of one or more chief medical officers of health, to whom these gentlemen could act as deputies, and who would take the odium and the responsibility of carrying out the health statutes without the risk of loss of private practice, or fear of provoking the opposition of persons of wealth and influence. And while in the first bill of the Government the Medical Officer of Health was effectually protected

against any unfair treatment, both as to his salary and tenure of office, his position being controlled by the Local Government Board, in the Bill, as amended, this protection is wholly abrogated and destroyed, as it is entirely at the option of Boards of Guardians whether they invoke assistance from Imperial funds, in which case alone the Local Government Board can interpose. However inadequate, therefore, may be the salary, however arbitrary the treatment of the new sanitary boards in rural districts, the medical officers of health are practically without remedy or redress. Though the labours of your Committee have hitherto apparently had but little effect in controlling the action of the Legislature in the settlement of the first part of this great question, they cannot forget that the larger measure promised by Her Majesty's Government, namely, the amendment of the law itself, and the probable amendment of this statute, will fall to be considered in the next session of Parliament. They would, therefore, beg leave to suggest to their successors, if the Committee shall be continued, the extreme importance of collecting particulars of information relating to medical appointments under the new Act—namely the area and population of each district committed to a medical officer of health, specifying whether he receives the appointment as a Poor-law medical officer or not, the amount of his salary or remuneration for sanitary duties, and the conditions of his appointment.

A. P. STEWART, M.D.

REPORT OF COMMITTEE ON THE REGISTRATION OF DISEASE.

Presented at the General Meeting, August 8th, 1872.

AT a general meeting of the Association, held in Plymouth, on August 10th, 1871, the following resolution was unanimously passed : "That this Association, whilst it gratefully acknowledges the favourable receptions accorded to its views on the subject of the registration of disease both by the Government and the Royal Sanitary Commission, desires to urge the importance of making the returns accurate and immediately available in the localities from which they are procured, and therefore points out the need of a superior health-officer in every area of sufficient size, by whom, amongst other duties, the returns could be collected and immediately applied to the wants of the districts." In the now unsettled condition of sanitary legislation, your Committee are unable to do more than repeat their recommendations ; but it is the more necessary to do this, and to keep the subject before the attention of the Association, since neither in Sir Charles Adderley's Bill, nor in Mr. Stansfeld's original measure, was there any adequate provision made for the registration of disease attended at the public expense; and in the amended Public Health Act, which has now passed through Parliament, no reference whatever is made to the subject. It is, therefore, necessary that the Association should continue their exertions to obtain a satisfactory system of registration of sickness ; and, in order to obtain that object, your Committee recommend that next session a further memorial on the subject should be addressed to the Government and Parliament. Although weekly returns of disease are still made by the Manchester and Salford Sanitary Association, and by Dr. Whitmore of St. Marylebone, we have to notice the partial cessation of the very complete records of sickness hitherto obtained by Dr. Hill of Birmingham. As was mentioned in the Report for 1871, the weekly returns of disease were last year discontinued in Newcastle-on-Tyne. This failure of two of the most important voluntary efforts in the kingdom, from the extreme difficulty of obtaining returns from the contributors, is a further proof of the necessity of establishing a national system of registration at the public expense.

ARTHUR RANSOME, M.D.

REPORT OF THE POOR-LAW COMMITTEE.

Presented and adopted at the General Meeting, August 9th, 1872.

THE Poor-law Committee have, throughout the year, held frequent and close communication with the Poor-law Medical Officers' Associations of England and Ireland, with a view to render assistance in improving the administration of medical relief in the two countries, and of redressing the grievances of the Poor-law medical officers. After various conferences with the Council of the English Poor-law Medical Officers' Association, the Committee went in joint deputation to Mr. Stansfeld, the President of the Local Government Board, with the main objects of asking for the Poor-law medical officers of Great Britain, that they might, on the one hand, be invested with the preventive functions of health-officers, for which their curative duties, their training, number, and localisation eminently fitted them; and that they might be properly protected in the discharge of their functions, and adequately remunerated for their labours. With this view, they asked that the appointments should not be subject to the sole control of the small local bodies ; that the salaries should be fixed, and the duties arranged, with the necessary assent of the central authority; and that one-half of the charges should devolve upon the Consolidated Fund. These views Mr. Stansfeld accepted, and has acted upon them in committee. Your Committee regret that the Government have not afforded to the Poor-law medical officers the further protection which would have been accorded by the creation of a county medical officer acting over large areas, to whom they should report, and whose position would be one of complete independence and free from any conflict of interests ; they hope still to see such appointments made, but they regard the attribution of preventive functions as medical officers of health to Poor-law medical officers as an important advance in the right direction, as likely largely to conduce to the diminution of epidemic and preventable diseases, and of tending also to place that important body of medical men in a position of increased honour and usefulness. They feel satisfaction that the efforts of the Committee have conduced to this end. The Committee have once more directed the attention of the President of the Local Government Board to the unequal, and in some cases unjust, distribution of districts, and the excessive area and population of many of them. He has promised to take the matter into consideration, and endeavour to rectify avoidable inequalities. Other matters which have occupied, and will continue to occupy, the attention of the Committee are the extension of Poor-law dispensaries, so as to lessen the burden of labour and to remove the cost of drugs and dispensing from Poor-law medical officers. The principle has been admitted. It has been carried into large and successful operation in the metropolis and great towns, and the time has, we believe, arrived for a general application of it throughout the kingdom. There have been several cases in which guardians have wholly refused, and others in which they have greatly reduced, the superannuation allowances, which by a recent permissive Act they are now authorised to allow their medical officers at the close of a long period of faithful and laborious public service. There is no legal remedy for this : but a suitable circular letter from the Local Government Board to the Boards of Government on the spirit and purpose of the Act would have a beneficial effect ; and it is desired that members will forward to the Committee facts of an affirmative as well as of a negative character, bearing upon the working of the Act, in order that the Committee may have full data upon which to proceed in making representations to the Local Government Board.

ERNEST HART, *Chairman.*

August 8th, 1872.

REPORT OF THE COMMITTEE ON PARLIAMENTARY BILLS.

Presented at the General Meeting, August 9th, 1872.

YOUR Committee beg to report that they have continued during the present year to watch over the course of all measures introduced into Parliament affecting medical interests, or touching matters in which the knowledge and influence of the medical profession might usefully be brought to bear on behalf of the health and welfare of the public.

The most important of such measures was the Public Health Bill. The Association having the advantage of the services of a State Medicine Committee, whose efforts first procured the appointment of the Royal Sanitary Commission, and who have been the prime agents in obtaining sanitary legislation for the country, your Committee have thought it their duty to act strictly in accord with that committee, and have consulted them upon all occasions in reference to the provisions of the Bill. They have taken means to make apparent to the Government of the day the very great political influence which this Association is able to exercise—and justly to exercise—in such matters as this, upon which it brings to bear the full weight of intelligence and the local power of the most eminent physicians and practitioners throughout the kingdom. Communication was had with the secretaries of the Branches and with leading members of the Association ; the arguments and conclusions of the Joint State Medicine Committee of the Birmingham, Midland and South Staffordshire Association were widely circulated through the BRITISH MEDICAL JOURNAL, and in separate sheets ; the political influence of the branches was spontaneously and energetically exerted in drawing the attention of members of Parliament to the issues raised ; and so large an amount of political power was developed in the Parliamentary conferences and deputations that followed, that Ministers became aware that the fate of the Bill was in the hands of the Association. Of this the President of the Local Government Board was aware, and at any time during the earlier progress of the measure

it was in the power of your Committee to arrest it or prevent its passing into law. Of the ultimate character which the Bill assumed, the report of the State Medicine Committee speaks more fully. It is only necessary here to state that, although dissatisfied with the higher administrative machinery, and disappointed with the narrow and maimed scope of the measure in the ultimate shape which it has assumed, your Committee did not feel justified in preventing its enactment, or in urging to a division amendments which, in fulfilling their views of its proper shape and provisions, would have proved fatal to its progress according to Parliamentary rules. They, therefore, confined their action to strongly and repeatedly urging upon Mr. Stansfeld the necessity of strengthening and making more apparent the powers of the Government under the Bill to unite districts so as to afford an adequate area; to provide for and favour the appointment of a joint medical officer over a large area by the several urban and rural authorities; to protect the medical officers of health as to tenure of office and remuneration, by providing that half their salaries may be paid out of the Consolidated Fund, and that they shall not be removable except on grounds satisfactory to the central authority, and that area and salary shall be subject to the like protective supervision. They attach further great importance to the introduction of the amendment deputing powers of the new sanitary authorities to special committees, which will include a proportion of *ex officio* guardians. In all these respects they made urgent representations to Mr. Stansfeld, and they feel bound to recognise the candour, courtesy, and painstaking attention with which they were received. Mr. Stansfeld, and more recently Mr. Gladstone, have announced themselves in favour of the county organisation. There is reason, therefore, to believe that the principles of sanitary administration advocated by your Committee will be finally adopted, and much important Parliamentary labour in this direction lies before the Association.

The attention of the Committee has been given to the Mines Regulation Bill and the Masters and Servants (Wages) Bill. Their representations as to the necessity of continuing to allow deductions for medical payment were favourably reported upon by the Committee of the House of Commons.

The Infant Life Protection Bill—a measure mainly founded upon the inquiries instituted by the BRITISH MEDICAL JOURNAL, and upon the subsequent efforts of the editor and Mr. J. Brendon Curgenven, has been introduced into the House by Mr. Charley, aided by Lord Shaftesbury, who first interrogated Ministers at the time of the publication of the reports in the JOURNAL, by Dr. Playfair, and by Dr. Brewer. This most useful measure has passed into law, and it will afford to medical men the opportunity of interfering successfully to save life, to avert disease, and to arrest crime in a large class of cases in which they have hitherto been helpless and distressed spectators of excessive mortality and scarcely cloaked wrong-doing.

Other measures, such as the Registration of Births Bill and the Local Government (Ireland) Bill, have also received attention. Some of these will form the subject of future comment.

The Committee believe that the functions entrusted to them are of high importance to the public and the profession, and that the usefulness of the Association is largely exemplified in their active development. They trust that the Branches of the Association will continue to take an active share in their proceedings, and that the country representatives will, in an increasing degree, give their continued assistance.

August 7, 1872. ERNEST HART, *Chairman*.

DIGITALINE.—The discovery of a pure and crystallisable alkaloid which shall possess the active properties of digitalis has long been a *crux* for organic and pharmaceutical chemists. Recently, after many abortive efforts and long and tedious essays, M. Nativelle, in response to the challenge of the French Academy of Medicine, lodged a claim of having succeeded in producing digitaline as a crystalline and definite alkaloid possessing all the active properties of the plant. He deposited specimens of the substance and described his process. M. Buignet and others reported favourably, and some lofty pæans were sung over the accomplished success of the able French chemist. Subsequent investigations, however, have thrown doubt upon the value of M. Nativelle's process and his crystals. MM. Nativelle and Buignet had affirmed that crystallised digitaline is only procurable by alcoholic treatment to the exclusion of watery modes of exhaustion, and that in the digitaline of the *Codex* there was no trace of crystallised digitaline. Dr. Blaquart, however, in a thesis read this week before the faculty, declares that the process of M. Nativelle fails to give more than the most indefinite and scarce results: the crystals are not homogeneous; attempts to procure them commonly fail, and only a few crystals could be procured from thirty pounds of digitalis. He is able to procure crystals with greater facility, of the same character, from the digitalis of the *Codex*.

FORTIETH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in BIRMINGHAM, August 6th, 7th, 8th, and 9th, 1872.

THE following is the list of names of those members of the Association and visitors who entered their names at the Reception-Room at Birmingham.

Acton, W., Esq., London
Adams, E. B., Esq., Bungay
Adams, William, Esq., London
Adkins, Harry, Esq., Meriden
Adsetts, T., M.D., Royal Artillery
Alexander, Wm., M.D., Halifax
Allcock, Annerley, Esq., Smethwick
Althaus, Julius, M.D., London
Andrew, Edwyn, M.D., Shrewsbury
Archer, John, Esq., Edgbaston
Arlidge, J. T., M.D., Newcastle-under-Lyme
Armstrong, John, M.D., Gravesend
Ashford, Edwin C., Esq., Bridgewater
Askwith, R., M.D., Cheltenham
Atchison, T., Esq, London
Atkinson, Jas., Esq., Crewe
Atwell, G. H., Esq., Altrincham
Baker, Alfred, Esq., Birmingham
Baker, J. Wright, Esq, Derby
Baker, R. L., Esq., Leamington
Ball, Ancell, L.R.C.P.Ed., Spalding
Ballard, Thomas, M.D., London
Barclay, John, M.D., Leicester
Barkus, Benjamin, M.D., Gateshead-on-Tyne
Barlow, Charles, Esq., Birmingham
Barnes, Henry, M.D, Carlisle
Barnes, Robert, M.D., London
Bartleet, T. H., Esq., Edgbaston
Bassett, John, Esq., Birmingham
Bastian, H. Charlton, M.D., F.R.S., London
Beales, Robert, M.D., Congleton
Beckingsale, D. L., M.B., Isle of Wight
Begley, W. C. M.D., Hanwell
Bellot, W. H., Esq, Leamington
Bennet, Henry, M.D., London
Bennett, F. I., L.R.C.P.Ed., Droitwich
Bennett, L.M., Esq., Winterton
Berns, A. W. C., M.D., The Hague, Holland
Berry, Samuel, Esq., Edgbaston
Birt, George, Esq., Stourbridge
Black, W. S., Esq., Edgbaston
Blaikie, Robert, Esq., Oswestry
Blake, V. W., Esq., Birmingham
Bodington, G. F., M.R.C.P., Sutton Coldfield
Bogue, R. G., M.D., Chicago, Illinois
Bolton, John A., M.D., Leicester
Borough, Frederick, Esq., Derby
Bott, T. B., M.D., Bury
Bourne, T. S., Esq., Kenilworth
Bracey, Arthur, Esq, Birmingham
Bracey, Charles J., M.B., Birmingham
Bradley, J. P., Esq., Birmingham
Bradley, S. M., Esq., Manchester
Braidwood, P. M., M.D., Birkenhead
Braithwaite, James, M.D., Leeds
Briggs, H. M., Esq., Birmingham
Britton, W. S., Esq., London
Broadbent, S. W., Esq., Durham
Broadhurst, J., Esq., Lancaster
Brodhurst, B. E., Esq., London
Brookes, A. G., Esq., Shrewsbury
Brown, C. F., Esq., Leamington
Browne, J. Crichton, M.D., Wakefield
Browne, H. L., Esq., West Bromwich
Bryan, Edward, Esq., Idle, near Leeds
Bryan, John M., M.D., Northampton
Buck, J. R., Esq., Inkberrow
Bullus, Wm., Esq., West Bromwich
Bunch, John James, Esq., Wolverhampton
Burd, Edward, M.D., Shrewsbury
Buxton, T., Esq., Fazeley
Campbell, R. L., M.D., Stourbridge
Carden, H. D., Esq., Worcester
Carnegie, J., M.D., Chesterfield
Carter, Graham A., M.D., Lichfield
Ceely, Robert, Esq,, Aylesbury
Chadwick, Charles, M.D., Leeds
Chambers, T., M.R.C.P., London
Chavasse, J., Esq, Birmingham
Chavasse, Pye, Esq., Edgbaston
Chesshire, Edwin, Esq., Birmingham
Clark, Alfred, Esq., Twickenham
Clark, James, M.D., Chasetown, Walsall
Clarke, J Lockhart, M.D., F.R.S., London
Clarke, William H., L.R.C.P.Ed., Stratford-on-Avon
Clendinnen, W. Ellis, Esq., Market Drayton
Clouston, T. S., M.D., Carlisle
Coleman, J. M., M.D., Wolverhampton
Cooke, Francis, M.D., Cheltenham
Cooke, John, M.B., Tettenhall, Wolverhampton
Cooper, Frank W., Esq., Leytonstone
Cope, George A., Esq., Etwall
Copeland, W., Esq., Durham
Copeland, William, jun, M.B., Durham
Corbin, M. A. Bazille, Esq., Guernsey
Cordwent, George, M.D., Taunton
Cornbill, J., Esq., Birmingham
Corner, F. M., Esq., London
Cossar, Thomas, M.D., King's Lynn
Cowell, George, Esq., London
Craighead, Robert D., M.D., Indianapolis, U.S.A.
Crespi, Alfred J. H., Esq., Edgbaston
Cresswell, Pearson, R., Esq., Dowlais
Cripps, Edward, Esq., Cirencester
Crossby, H. E., M.D., Nice
Cullingworth, Chas. J., Esq, Manchester
Curry, Wm., Esq., East Rainton, Durham
Dartnell, George, R., Esq., Henley-in-Arden
Davey, J. G., M.D., Northwoods, Bristol
Davidson, Alex. D., M.D., Aberdeen
Davies, Andrew, Esq., Swansea
Davies, H.N., Esq., Cymmer, Pontypridd
Davies, John, M.D., Ebbw Vale
Davies, J. S., Esq,, Oswestry
Davies, John Birt, M.D., Edgbaston
Davies, Robert Alex., M.D., County Asylum, Lichfield
Dawson, W. H., Esq., Malvern
Day, Henry, M.D., Stafford
Demarquay, M., Paris
De Muralt, William, M.D., Zurich
Denham, J. S., M.D., South Shields
Denne, Henry, M.D., Birmingham
De Renzy, A. C. C., Esq., Lahore, India
Dewes, Edward, M.D., Coventry
Dickson, J. Thompson, M.B., London
Dixon, Joseph, Esq., Brighton
Dobell, Horace, M.D., London
Dolman, A. H., Esq., Derby
Downs, William, Esq.. Handsworth
Drage, Charles, M.D., Hatfield
Drever, E., Esq., Winson Green
Drummond, A., M.B., Birmingham
Duke, A., M.D., Rugby
Dunn, Frederick, Esq., Wolverhampton
Dunn, Robert, Esq., London
Dyke, T. J., Merthyr Tydfil
Eames, Henry, M.D., Dublin
Easby, W., Esq., Darlington
Eastwood, J. W., M.D., Dinsdale Park, Darlington
Ebbage, Thomas, Esq.. Leamington
Edginton, Robert W., Esq., Birmingham
Edwards, John, M.D., Sparkbrook
Edwards, M. J., M.D., Ynisher, near Pontypridd
Elkington, George, Esq., Birmingham
Elliot, Robert, M.D., Carlisle
Elliott, William, M.D., Sowerby Bridge
Evans, A. P., Esq., West Bromwich
Everett, D., Esq., Worcester
Falconer, R. Wilbraham, M.D., Bath
Farquharson, Robert, M.D., London.

Fegan, Richard, M.D., Charlton
Fenwick, J. C. J., M.B., London
Fergus, Andrew, M D., Glasgow
Fergusson, Sir William, Bart., F.R.S , London
Fernie, Edward, M.D., Stone
Fitch, Frederick, M.D., Chaddesley Corbet
Fletcher, Bell, M.D., Birmingham
Folker, W. H., Esq., Hanley
Forster, J. Cooper, M.B., London
Fosbroke, G. H., Esq., Bideford
Foster, Balthazar, M D., Birmingham
Foster. William J., L.R.C.P.Ed., Birmingham
Fothergill, J. Milner, M.D., London
Fox, Edward Long, M.D., Clifton
Frain, Joseph, M.D., South Shields
Francis, D. J. T., M.D., Northampton
Fraser, John, M.D., Wolverhampton
Freer, R. L., Esq., Stourbridge
Gamgee, Sampson, Esq., Birmingham
Garman, J. C., Esq., Wednesbury
Garman, W. C., Esq., Wednesbury
Garner, J., Esq., Birmingham
Gaunt, J. S., Esq., Alvechurch
Gaye, Henry S., Esq., Newton Abbott
Gaylor, Edward, Esq., Belper
George, A. B., Esq., Whitchurch
Gervis, W. S., M.D., Ashburton
Good, Thomas, Esq., Launceston
Gornall, John H., Esq., Warrington
Goss, Samuel Day, M.D., London
Goss, T. Biddulph, Esq , Bath
Greaves, Charles A., M.B., Derby
Green, John, Esq., Wolverhampton
Greene, John, Esq., Birmingham
Greenway, A. G., M.D., Birmingham
Greenwood, John William, Esq., Ossett
Gross, S. D., M D., D.C.L., Philadelphia
Hadley, Clement, Esq., Ashted, Birmingham
Hadley, G. Percival, M.D., Birmingham
Hadley, J. J., Esq., Birmingham
Hailey, H., Esq., Newport Pagnell
Hale, Edmund T., Esq., Abertillery
Hall, J. G., Esq., Swansea
Hall, William, Esq., Lancaster
Hall, William, Esq., Salford
Handcock, G., Esq., Leeds
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Harday, George, Esq., West Haddon
Harland, Charles, Esq., London
Harmar, J., Esq., Birmingham
Harris, Henry, M.D., Redruth
Harrison, Alfred, M.B., Walsall
Harrison, Reginald, Esq., Liverpool
Hart, Ernest, Esq , London
Hartshorne, F. H., L.R.C.P.Ed., Broseley
Haslehust, J. W., Esq., Bridgnorth
Hastings, G. W., Esq., Malvern
Haughton, Rev. Samuel, M.D., F.R.S., Dublin
Hayden, T., F.K.Q.C.P., Dublin
Haynes, Stanley, M.D., Malvern
Hayes, John, Esq., Beech Cliff
Heathcote, J. N., Esq., Shrewsbury
Henry, Alexander, M.D., London
H nsley, Henry, M.D., Bath
Hic'inbotham, James, M.D., Nechells, Birmingham
Hickman, J., Esq , Shrewsbury
Hickman, R. M., Esq., Newport, Salop
Hill, Alfred, M.D., Birmingham
Hill, Berkeley, Esq,, London
Hinds, W., M.D., Birmingham
Hinton, James, Esq., London
Hiron, J. Hickman, Esq., Studley
Hitchman, John, M.D., Cheltenham
Hodgson, G. F., Esq., Brighton
Hollingshead, T., Esq , Selly Oak, Birmingham
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Holthouse, C., Esq., London
Holyoake, Thomas, Esq., Kinver
Hughes, Robert, Esq., Stafford
Humble, Thomas, M.D., Newcastle-on-Tyne
Humphreys, F. H., M.D., New York
Humphreys, J. R., Esq., Shrewsbury
Husband, W. D., Esq., York
Hunt, Benjamin, M.D., Edgbaston
Hunt. J., Esq., Birmingham
Hutchinson, Jonathan, Esq , London
Hyde, G. E., Esq., Worcester
Ingle, Robert, M.D , Manchester
Inglis, Alexander, M.D., Worcester
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Jackson, John H., M.D., London
Jackson, Vincent, Esq., Wolverhampton
Jeston, T. W., Esq., Henley-on-Thames
Johnson, Christopher, Esq., Lancaster
Johnson, C. H., Esq., Shiffnal
Johnston, Jas., M.B., Birmingham
Jolly, Robert, M.D., Birmingham
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Jones, Edmund, M.D., Ross
Jones, George, Esq., Birmingham
Jones, G. Turner, Esq., Denbigh
Jones, T. Eyton, Esq , Wrexham
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Jordan, William Ross, Esq., Moseley, Birmingham
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Kenny, J. H., Esq., Birmingham
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Kerswill, R., Esq., St. Germans
Kettle, Henry, Esq., Small Heath
Keyworth, John A., M.D., Birmingham
King, J. B., M.D., Bengal
Labbé, Léon, M.D., Paris
Lankester, H., Esq., Leicester
Lang, John, M.D., Southport
Lawrence, Alfred E. A., M.B., Handsworth
Leech, D. J., M.D., Birmingham
Leeson, Oliver, M.B.
Liddle, John, Esq., London
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Lingen, Charles, Esq., Hereford
Little, David, M.D., Manchester
Lloyd, Samuel, Esq., Birmingham
Lord, C. F. J., Esq., Hampstead
Lowne, B. T., Esq., London
Lund, Edward, Esq., Manchester
Lynes, Edward, M.D., Coventry
MacCormac, W., Esq., London
M'Crea, John, M.D., Belfast
McEwen, William, M.D., Chester
McGill, A. F., Esq., Leeds
Machin, E. S., Esq., Erdington
McIntyre, John, M.D., Odiham
Mackay, Allan D., M.B., Stony Stratford
Mackey, Edward, M.B., Birmingham
Macpherson, R., L.K.Q.C.P.I., Birmingham
McVeagh, D. J., L.K Q.C.P., Coventry
Male, William, Esq., Fincham
Malim, Geo. W., Esq., Rochdale
Malins, Edward, M.D., Birmingham
Manby, F. E., Esq., Wolverhampton
Manifold, M. Fenton, Esq., Edgbaston
Manley, John, Esq., West Bromwich
Mann, W. S., Esq., Birmingham
Markby, T., Esq., Martley
Marshall, John, Esq., F.R.S , London
Marshall, H. F., M.B., Birmingham
Martin, Robert, M.D., Manchester
Martin, William, Esq., London
Mash, James, Esq., Northampton
Mason, Frederick, Esq., Bath
Masser, H. C. P., Esq., Foleshill
Matterson, Wm., M.D., York
Maudsley, Henry, M.D., London
Maunder, C. F., Esq., London
May, Bennett, Esq., Birmingham
May, Henry, Esq., Aston
May, J., jun., Esq., Devonport
Mellor, T., Esq., Manchester
Melson, John B., M.D., Birmingham
Miller, John Favre, M.D., Paris
Miller, John James, Esq., Birmingham
Millington, W., M.D., Wolverhampton
Monckton, D. Henry. M.D., Rugeley
Morgan, T., I.K Q.C.P., Madeley
Montgomery, J. Barclay, M.D., Penzance
Moore, C. F., M.D , Dublin
Moore, William, M.D., Dublin
Moore, E., Wilson, Esq., Wednesbury
Moore, R. B , Esq., Wolverhampton
Moore, W. M., Esq., Coventry
Morgan, H. M., Esq., Lichfield
More, J., M.D., Rothwell
Morley, John, Esq., Barton-on-Humber
Mould, G. W., Esq., Cheadle
Moxon, William, Esq., Northampton
Nager, Gustave, M.D., Lucerne
Napper, Albert, Esq., Cranleigh
Nason, John J., M.B., Stratford-on-Avon
Newman, Augustus, M.B., Alrewas
Newnham, C. A., Esq., Wolverhamptou
Niven, D. G., Esq., Langernhill, Worcester
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Oakes, A., Esq., Birmingham
Ogle, John W., M.D., London
Orton, Charles, Esq., Newcastle-under-Lyme
Owen, D. C. Lloyd, Esq , Birmingham
Oxley, Martin G. B., L.K.Q.C.P., Liverpool
Page, E. S., Esq., Solihull
Parr, Alfred, M.D , Little Kimble
Parsey, William H., M.D., Hatton
Parsons, T. H., M.D., Barking
Partridge, R., Esq., F.R.S., London
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Pemberton, Oliver, Esq , Birmingham
Phillips, Hevgate H., M.B., Reading
Pollard, William, Esq., Torquay
Pope, Edward, Esq., Tring
Probert, James, Esq . Merthyr Tydfil
Procter, William, M.D., York
Prosser, R., Esq., Bromsgrove
Purvis, Prior, M.D., Blackheath
Quirke, Joseph, L.R.C.P.Ed., Handsworth
Raitt, Thomas, M.B., Walsall
Ramsay, W. F., M.D., London
Ransome, Arthur, M.D., Manchester
Raper, W.A., M.D., Lozells, Birmingham
Ravenhill, T. Holmes. Esq., Birmingham
Richards, Owen, M.D., Bala
Rickards, Edwin, Esq., Birmingham
Ricord, M., Paris
Ringland. John, M.D., Dublin
Ritchie, C. Currie, M.D., Manchester
Ritchie, John James, Esq., Leek
Roberts, D. Lloyd, M.D., Manchester
Roberts, R., Esq., Portmadoc
Roberts, R. Chambres, Esq.. Ruabon
Roberts, Wm., M.D., Manchester
Robertson, W. H., M.D., Buxton
Robson, J., Esq., South Shields
Robson, R. N., Esq., Durham
Roden, S. S., M.D., Droitwitch
Roden, W., M.D., Kidderminster
Rogers, T. L., M.D., Rainhill
Routh, C. H. F., M.D , London
Rowland, H. M., M.D., Malvern Wells
Rugg, G. P., M.D., London
Rumsey, H. W., M.D., Cheltenham
Russell, James, M.D., Birmingham
Sainsbury, H., Esq., Oldbury
Sansome, Thomas, Esq., West Bromwich
Sansom, A. Ernest, M.D., London
Savage, G. H., M.D., London
Savage, T., M.D., Bordesley
Sawyer, James, M.B., Birmingham
Scofield, W. J., Esq., Birmingham
Scurrah, John D., M.B., Birmingham
Seaton, Joseph, M.D., Sunbury
Sharman, Malim, Esq., Birmingham
Sharp, G., Esq . Walsall
Sheen, Alfred, M.D., Cardiff
Shettle, R. C., M.D., Reading
Shrimpton, Charles, M.D., London
Sibson, Francis, M.D., F.R.S., London
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Simpson, Alex. R., M.D., Edinburgh
Sims, Charles, Esq , Birmingham
Skeate, Edwin, Esq., Bath
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Smith, E. R., Esq., Dudley
Smith, Gilbert, Esq., Birmingham
Smith, R. W., Esq., Harborne
Smith, T. Haywood, Esq., Alcester
Smith, T. Heckstall, Esq., St. Mary Cray
Smith, J. P., Esq., Birmingham
Smith, Walter, Esq., London
Smith, Wm., Esq., Redditch
Solomon, J Vose, Esq., Birmingham
Southam, George, Esq., Manchester
Spratly, Samuel, M.D., Rock Ferry
Sproston, W. H., Esq., Birmingham
Steele, A. B., L.K.Q.C.P., Liverpool
Steele, Charles, Esq., Clifton
Steventon, William, M.D., Jamaica
Stewart, A. P., M.D., London
Stewart, H. H., M.D., Dublin
Stokes, William, jun., M.D., Dublin
Stone. R.N., Esq., Bath
Sutcliffe, H., Esq., West Bromwich
Sutton, H. G., M.B., London
Swain, Thomas, Esq., Birmingham
Swinson, H., Esq., Leamington
Sympson, T., Esq., Lincoln
Szcrygielski, —, M.D., Warsaw
Tait, Lawson, Esq., Birmingham
Taylor, M. W., M.D., Penrith
Taylor, R. Hibbert, M.D., Liverpool
Taylor, Thomas, Esq., Birmingham
Taylor, William, M.D., Cardiff
Teevan, W. F., Esq., London
Terry, H., jun., Esq., Northampton
Thomas, Jabez, Esq., Swansea
Thomas, Llewelyn M., Esq., Dudley
Thomas, Robert, Esq., Rawdon, Leeds
Thomas, William, Esq., Birmingham
Thompson, James, M.B., Leamington
Thomson, Spencer, M.D., Torquay
Thorne, Frederick, Esq., Leamington
Thursfield, T. W., M.D., Leamington
Thursfield, W. N., M.D., Wellingtou, Salop
Tibbits, John, M.D., Warwick
Tilt, Edward J., M.D., London
Tilton, Rowland, Esq., Stonehouse, Gloucestershire
Toller, Ebenezer, Esq., Gloucester
Totherick, James Y., M.D., Wolverhampton
Tomkins, A. W., M.D., Leamington
Tuke, Harrington, M.D., London
Tuke, J. Batty, M.D., Cupar Fife
Turner, E. P., Esq., Birmingham
Turner, Edwin, Esq., L.S.A., Wordsley
Turnour, Arthur E., M.D., Denbigh
Turton, Frederick, Esq., Wolverhampton
Tylecote, J. H., M.D., Sandon
Tylecote, E. T., M.D., Great Haywood
Underhill, Francis W., Esq., Tipton
Underhill, Thomas, M.D., West Bromwich
Underhill, W. L., Esq., Tipton
Veale, Henry, M.D., Cheltenham
Veale, Richard S., M.D., Hampthwaite, Ripley
Wade, Willoughby F., F.R.C.P., Birmingham
Wales, T. G., Esq., Downham, Norfolk
Walker, Richard P., Esq., Birmingham
Walker, T. J., M.D., Peterborough
Walker, T. O., Esq., Edgbaston
Walker, T. Shadford, Esq., Birmingham
Ward, Fred. H., Esq., London
Ward, J. Bywater, M.D., Hatton, Warwick
Warden, Charles, M.D., Birmingham
Warrington, F. W., M.D., Congleton
Waters, A., M.D., Liverpool
Waters, Edward, M.D., Chester
Waterson, John, Esq., Birmingham
Wathen, J. Hancocke, Esq., Fishguard
Weddell, J. C., M,D., Birmingham
Weir, William, M.D., Glasgow
Welch, J. B., M.B., Birmingham
Wells, T. Spencer, Esq., London
West, E. L., L.R.C.P.Ed., Launceston
West, James F., Esq., Birmingham
Westall, Edward, M.D., Kensington
Weston, E. F., Esq., Stafford
Whitcombe, Edmd. B., Esq., Birmingham
White, Charles, Esq., Warrington
Whitehead, A., Esq., Birmingham
Wilcox, R. W., Esq., Aylesbury
Wilders, John St. S., Esq., Birmingham
Wilks, Samuel, M.D., London
Williams, Edward, M.D., Wrexham
Williams, John, M.D., Pontypool
Williams, T. Watkin, Esq., Birmingham
Williams, William, M.D., Mold
Willington, A. G., M.D., Handsworth
Wilson, E. T., F.R.C.P , Cheltenham
Wiltshire, Alfred, M.D., London
Wood, Horatio, Esq., Birmingham
Wood, William, M.D., London
Workman, C. J., M.D., Teignmouth
Workman, John W., Esq., Reading
Worley, W. C., Esq., London
Wrench, E. M., Esq., Baslow, Chatsworth
Wright, C. J., Esq., Leeds
Wright, M. H., Esq., Birmingham
Wyman, George, Esq., Alcester
Yates, George, Esq., Birmingham
Yellowlees, D., M.D., Bridgend
Young, H. J., M.D., Erdington
Young, W. B., Esq., Reading

SECOND GENERAL MEETING, *Wednesday, August 7th.*

THE members assembled at 11 A.M.: ALFRED BAKER, Esq., President, in the Chair.

President of Council.—The President announced that, at a meeting of the General Council held that morning, Mr. George Southam of Manchester had been elected President of Council for the ensuing three years in the room of Mr. Husband of York, whose term of office had expired.

Dr. A. P. STEWART (London) said that it would not require many words from him to secure a very hearty response to the motion which he was about to propose. All the members knew Mr. Husband, and had known him for many years, as one of the most devoted friends of the Association; for he had given his time and money ungrudgingly to the furtherance of its interests; and for the last three years, moreover, had filled the responsible post of President of the Council. [*Cheers.*] All that the Association could do was to thank Mr. Husband for the energy and zeal he had displayed in the position which he now resigned; and though he passed out of sight as President of Council, the members might be assured that his interest in the Association would be as warm and active as ever it had been, and he would still continue to devote all the energies he possessed to the promotion of the welfare of this now great and prosperous body. When he came down into the ranks, they would have as great a regard, respect, and love for him as when he was in the chair, and before that time—[*applause*]—and he would carry with him throughout life the warmest wishes of every member of the Association. [*Hear, hear.*] He moved—

"That the thanks of this Association be given to Mr. Husband, for the able manner in which he has discharged the duties of President of Council for the past three years; and that he be elected a Vice-President of the Association for life." [*Applause.*]

Dr. WATERS (Liverpool) seconded the motion, and said that no member of the Association could forget the zeal and ability with which Mr. Husband had carried out his work.

The motion was carried unanimously.

Mr. HUSBAND thanked the members for the honour which they had conferred on him in electing him a permanent Vice-President, and also for the vote of thanks. He assured the members that during the last three years he had felt the great responsibility cast on him. During two of these years, matters of serious import required the most earnest attention on his part and on the part of every member. The last year had also been a transition year, and duties of no ordinary kind and interest had fallen upon him. He was, however, glad to say that he believed now that the business of the Association would be placed on a sounder footing than ever. [*Hear, hear.*] They possessed in their Council, and especially in their Committee of Council, a body of men determined that the advantage of the Association should be their sole endeavour, and that they would carry out their duty without regard to anyone. [*Applause.*] He took the post of Vice-President not as a mere honorary position, but with a determination, in future years, to bring all the experience he had gained during the many years he had been connected with the Association, to bear in the promotion of its welfare and success. [*Hear, hear.*] He should never be an idle member of the Committee of Council, but as long as he had health, strength and time he should be glad to devote what energy he had to the interests of an Association which would, he believed, do great good to the noble professsion of which they had the honour to be members. [*Applause.*]

The Address in Medicine was delivered by SAMUEL WILKS, M.D., F.R.C.P., F.R.S. It was published at page 146 of last week's JOURNAL.

Dr. SIBSON (London), in moving a vote of thanks to Dr. Wilks for his paper, said the silence and attention with which the members had listened to him were far more eloquent than any vote of thanks could be. They in London who belonged to the same body knew how thoroughly he was qualified by his sagacity to take the position he did—a sagacity which had been described by Mr. Hawkshaw, the faculty of seeing both sides of every question. [*Hear, hear.*] They could not thank him too highly for his thoughtful and thought-engendering address. [*Applause.*] He moved—"That the warm thanks of this Society be given to Dr. Samuel Wilks for his able Address in Medicine."

Dr. CHADWICK (Leeds), in seconding the motion, said that, in listening to so high an intellectual treat, none of them could doubt that they had been hearing principles expounded that, in themselves, proved beyond measure their own entity and the power they must exercise eventually upon the profession. [*Hear, hear.*] They must, however, bear in mind that, in listening to these great efforts from time to time, they were very often told contrary things, and, therefore, they should not draw hasty conclusions. The paper was pregnant with thought for them, and let them take it home, as it were, with them, and digest it as a psychical treat. Some of the great axioms might have been startling to them; but let them bear them in mind in their ordinary practice, and, so far as they should tally with the great principles they involved, they might adopt them.

The motion was unanimously carried, and Dr. WILKS returned thanks.

The names of the ten elected members of Committee of Council (se page 178 of last week's JOURNAL) having been announced by Mr. SOUTHAM, the meeting adjourned; and the members assembled in the several sections at two o'clock.

Public Luncheon.—During the mid-day adjournment on each day of the meeting, the members partook of a sumptuous luncheon, hospitably provided by the Birmingham and Midland Counties Branch, in the Exchange Assembly Rooms, adjoining the place of meeting of the Association.

THIRD GENERAL MEETING, *Thursday, August 8th.*

The members assembled at 10 A.M.; ALFRED BAKER, Esq., President, in the Chair. The business before the meeting was the reception of the reports of committees.

Report of the Medical Reform Committee.—Dr. E. WATERS (Chester) read this report, which is published at page 189.

Dr. WILLIAM ROBERTS (Manchester) moved, Dr. A. HILL (Birmingham) seconded, and it was resolved—

"That the Report of the Medical Reform Committee be received and adopted, and the Committee re-appointed."

Report of the Joint Committee on State Medicine.—Dr. A. P. STEWART (London) read this report. It is published at page 189.

Mr. DUNN (London) moved—"That the Report of the State Medicine Committee be received and adopted." The report, he said, recommended itself.

Mr. EYTON JONES (Wrexham), in seconding the motion, said that, as Chairman of the Health Committee of a Town Council, he could fully understand the difficulties which medical officers would experience under the present Bill with regard to the performance of their duties. Town Councils, as well as Boards of Guardians, were very crotchety, and looked to the question of the public purse rather than to the question of the public health. [*Hear, hear.*] And if there were to be Boards to carry out the proper sanitary arrangements throughout the kingdom, those Boards must be composed of gentlemen who could take large views of the subject of sanitary arrangements, and must necessarily be advised by medical officers of health. He could not conceive it possible that any gentleman who was not a medical man would be able to give advice on large questions to Boards of Health, without possessing the education which the medical man necessarily required to have. It had once or twice been his duty, in the position he held, to come into contact with Boards of Guardians in relation to questions of health; and on one occasion in particular he was soundly rated because of a fever which had broken out in consequence, it was alleged, of some matters which required removal being allowed to remain, but which he knew to be a case of typhus fever resulting from overcrowding and want, and which really needed the attention of the Guardians and their relieving officer. Gentlemen who had had any experience in those positions would know that Town Councils and Boards of Guardians were in constant conflict as to the carrying out of their respective duties—[*hear, hear*]—and unless a medical man were present to state what the difficulties really were, and which Board should arrange them, it would be impossible, he was certain, for the sanitary arrangements required in this country to be properly administered. [*Hear, hear.*]

Mr. G. W. HASTINGS (Barnard's Green, Malvern) said he entirely agreed with what had been stated in the report, but there was one point which had not, perhaps, been fully brought out in the document, and which to his mind was a considerable consolation for, as he regarded it, the very imperfect nature of the measure just passed through parliament, viz., the perfect assurance they might feel that that measure would not be left on the statute-book as it at present exists. [*Hear, hear.*] He thought they might take the assurance which was given a few nights since in the House of Commons by the Prime Minister, that Her Majesty's Government intended during the next session of Parliament to deal with the whole question of local taxation and local government, with the view of placing both in a more satisfactory position than they at present occupied, as a certain guarantee that the measure would have to be revised. It would be impossible for any general measure of local government to be passed without the authors of that measure taking into consideration the placing of the sanitary administration of the country upon a wide and uniform system; and whenever that consideration was entered into, all who had paid any considerable attention to the matters which had come before the committee, felt certain that the measure just passed would have to be extensively modified. [*Hear, hear.*] He was very much struck, and he might say disappointed—although a rather long acquaintance with public business, and especially legislative matters, had taught him that no wise man was ever disappointed with anything Parliament did [*laughter*]—at an observation made by Mr. Stansfeld, while the Bill was passing through com-

mittee. On its being pointed out to him—and most truly, as in fact the committee of the Association had previously done—that the Poor-law Union was not an area sufficiently wide to make sanitary legislation thoroughly satisfactory, he replied that the reason why the Government had adhered to the Poor-law Union was this—that they did not want to pass a sanitary measure for the purpose of carrying out great works, or of dealing with the public health in a wide way, but that they wanted to place sanitary administration in such hands as would allow attention being given to its minutiæ, such as house-to-house visitation, house-drainage, and so on. He was disappointed at this observation, because it showed to him conclusively that Mr. Stansfeld could not understand, or must have been greatly misinformed as to the actual facts with regard to rural unions; and he was not now speaking of any controversial subject or anything that might produce difference of opinion, but of actual facts. He himself was an *ex-officio* guardian of the Upton-on-Severn Union, in Worcestershire, and it was not a question of opinion, but he knew it was physically impossible for the Guardians of that union to discharge the duties, however desirable it might be to do so, which Mr. Stansfeld said he had placed upon them. The Union consisted of twenty-two parishes, and it ranged geographically the whole length of the Malvern Hills, embracing a large district of country. The Board met once a fortnight at Upton, and he wanted to know how upon earth a score of guardians, meeting in a town in the centre of a very wide district, could possibly carry out the system of house-to-house visitation, and an inspection of house-drainage, and all those smaller matters which, Mr. Stansfeld said, he had placed in their hands because he did not want to give them larger things to do, the control of a wide sanitary administration. If that were so, the measure stood condemned at once out of the lips of its author. If it were really desired that the new sanitary administration should be confined to those things, then the Union was far too wide an area, and parish administration was the only one which it would be possible to use for the purpose of carrying out the wishes of Mr. Stansfeld. At the present moment he (Mr. Hastings) was entirely at a loss to understand the real object of the measure just passed into law. [*Hear, hear.*] He could only hope that, like many other measures passed in this country, it would work better in practice than theoretically it might be thought capable of doing, and that Mr. Stansfeld's administrators, who would, no doubt, honestly desire to make the best of the measure, would falsify his own words and prophecies. If, instead of the smaller, Mr. Stansfeld would place the larger matters in the hands of the guardians, and would enable districts to unite together for the appointment of a common medical officer, thus making the measure work in an opposite direction to his own observations, then it was possible that it might be productive of some good. If that were so, then he was sure that the new measure to be introduced next session with regard to local government—and which, whether passed in that session or not, would at some time or other probably become law—would considerably modify the present Act in the direction of county administration, and place sanitary administration over a larger area than the present measure contemplated. In consequence of the action which had been taken with reference to the measure, it had been made so small that it could be easily altered, but a further Bill must be brought in to consolidate and amend the sanitary laws, and then there would arise the occasion, which he trusted they would use to the utmost, of placing the sanitary law of this country, and its administration, upon a worthier basis that it had hitherto occupied, or would occupy under the Act about to receive her Majesty's sanction.

Dr. RUMSEY (Cheltenham) said he entirely agreed with Mr. Hastings as to the probable inefficiency of the present Act, which was of a miserably imperfect character; and he wished he could feel the same assurance as Mr. Hastings, that no serious obstacle had been raised by this measure to future legislation. His own fear was that a very serious obstacle had been raised, for he believed that, in the creation of a number of petty, ill-informed authorities, and in the consequent appointment of small officers of health, throughout the country, such an enormous mass of vested interests would be created as would render any reasonable and methodical legislation on the public health, he would not say impossible, but a matter of very great labour. Mr. Jones had hit a blot in the bill of very considerable magnitude—a blot which the Joint Committee pointed out to the Association last year—viz., that in every town, under the present arrangements, there would be two authorities who had more or less to do with the public health. If there was one thing which the Government and the Royal Sanitary Commission asserted most positively and repeatedly, and with much self-satisfaction, it was this—that there should be only one authority in each place. He (Dr. Rumsey) did not hesitate to say that that condition had not been fulfilled. There would be as one authority the Town Council, and as another the Board of Guardians. The latter, as in the case of Birmingham, would appoint public officers, such as vaccinators, registrars of births and deaths, and in other respects would have almost as much influence with regard to the public health as the Town Council. No provision was made in the Bill for the joint action, in medical matters, of the Board of Guardians and the Town Council; and this, as was stated last year, was a most serious defect. The Bill, therefore, did not fulfil the pretensions of its authors, and constituted in every urban district two authorities having more or less to do with the public health; consequently, there would be a conflict of interests, and a repudiation of liability which always existed where two authorities were at work. Mr. Stansfeld and the gentlemen who objected to county administration expressed their views in one particular phrase, at which he (Dr. Rumsey) was much amused, viz., "that the Public Health Bill required intensity of local action," and because it required intensity of local action Mr. Stansfeld disapproved of county boards. The right hon. gentleman, however, did not secure intensity of action by Boards of Guardians, and such action was equally possible under a wide area with superior officers. Take the police force as an instance. It was governed by a county authority, but if a policeman saw a ragamuffin robbing an orchard, and apprehended him, that was a specimen of intensity of local action, which was all that was wanted. If, then, there were proper officers, they would have intensity of local action over a large area. Dr. Rumsey, in conclusion, said he agreed with the suggestion of the Committee with reference to the importance of obtaining information relating to the appointment of officers under the Act, whether medical or not, in order that the Committee might have facts at their disposal to bring before the Government in an influential and telling manner next session. [*Applause.*]

Dr. RANSOME suggested that a copy of the report should be sent to every member of Parliament.

Dr. STEWART explained that the report was a joint one of the Committee of this and the Association for the promotion of Social Science, and could therefore not be used until it had been adopted by that Association as well.

The motion was carried; and the following gentlemen were appointed as the Committee for the ensuing year:—J. T. Arlidge, M.D., Newcastle-under-Lyme; J. S. Bristowe, M.D., London; W. Budd, M.D., Clifton; W. M. Burke, L.K.Q.C.P., Dublin; D. Davies, Esq., Bristol; T. J. Dyke, Esq., Merthyr Tydfil; R. W. Falconer, M.D., Bath; W. T. Gairdner, M.D., Glasgow; Ernest Hart, Esq., London; T. P. Heslop, M.D., Birmingham; E. Lankester, M.D., F.R.S., London; J. Lewis, M.D., Maesteg; J. Liddle, Esq., London; W. Mc Ewen, M.D., Chester; E. D. Mapother, M.D., Dublin; J. E. Morgan, M.D., Manchester; G. H. Philipson, M.D., Newcastle-on-Tyne; A. Ransome, M.D., Manchester; W. Tindal Robertson, M.D., Nottingham; Joseph Rogers, M.D., London; E. J. Syson, L.R.C.P.Ed., Salford; T. Heckstall Smith, Esq., St. Mary Cray; W. Strange, M.D., Worcester; H. G. Sutton, M.B., London; W. S. Trench, M.D., Liverpool; N. Tyacke, M.D., Chichester; B. Washbourn, M.D., Gloucester; A. T. H. Waters, M.D., Liverpool; E. Wilson, M.B., Cheltenham; and A. P. Stewart, M.D., London, *Hon Sec.*

Report of the Committee on the Registration of Disease.—This report was read by Dr. RANSOME (Manchester), and is printed at page 190.

Mr. HALL (Lancaster) moved, Mr. CULLINGWORTH (Manchester) seconded, and it was resolved—

"That the Report be received and adopted, and the Committee re-appointed."

Dr. RUMSEY (Cheltenham) moved—

"That a memorial be addressed to the Local Government Board, and a petition to Parliament, at the commencement of next session, embodying the views of the Association on the subject of the registration of disease."

Dr. BURKE (Dublin) seconded the motion, and said that in Ireland there was a machinery for the registration of disease in connection with the dispensary physicians, whose conduct had been beyond all praise; but that machinery could not be kept up and in motion without lubrication—[*a laugh*]—and the work ought to carry pay. [*Hear.*]

The Address in Surgery was delivered by OLIVER PEMBERTON, Esq., Surgeon to the General Hospital. It was published at page 153 of last week's JOURNAL.

Sir WILLIAM FERGUSSON moved—"That the best thanks of the meeting are due, and are hereby given, to Mr. Oliver Pemberton, for his able Address in Surgery." Merely to ask for a response to that motion would not, he said, be doing justice to the gentleman who had read one of the most interesting discourses in surgery that surgeons had ever listened to. [*Hear, hear.*] He had on the previous day referred to Mr. Pemberton as one of the brightest lights in surgery in the present day—[*hear, hear*]—and they would all agree that he was a most worthy representative of the many great dignitaries in surgery

who had preceded him in this distinguished town. [*Hear, hear.*] He had shown in years gone by, and he had especially shown that day, that he had the true spirit within him that had actuated those gentlemen who contributed so much to rear the fabric of surgery to its present high position. It had been a matter of great gratification to him that Mr. Pemberton had in his address laid hold of a subject most deeply exciting to them all—namely, that of aneurism; for it was a tribute to that distinguished man Joseph Hodgson, who first put the subject of aneurism, of disease of the arteries, on a scientific footing. It was most interesting to hear Mr. Pemberton's eminently original remarks on aneurism, and to listen to his experience in regard to that most important operation—lithotomy. He looked on the address as being infinitely superior to any address that could have been concocted by putting together reviews and opinions only of other men. [*Hear, hear.*] Owing to the facilities offered by the press, they could all of them collate for themselves; but what they wanted on occasions of that kind was for a man to give from the fountains of his own knowledge that kind of knowledge which he alone, as it were, possessed. [*Hear, hear.*] He was quite sure they would all agree with him that Mr. Pemberton had, besides holding up the reputation of the surgery of his native town, done that which they were all deeply concerned in—kept up the reputation of the annual meeting of the British Medical Association. [*Hear, hear.*]

Dr. GROSS (Philadelphia) seconded the motion, and said he endorsed all that Sir William Fergusson had said. Hodgson's work had been familiar with him from his earliest professional boyhood, and it was now one of the most cherished books in his library. The fame of Birmingham was as well known on his side of the Atlantic as on this, both in regard to the surgeons of former times and to those now flourishing here.

The motion was carried unanimously.

Address from the Corporation.—The President announced that he had received the following address from the Corporation of Birmingham.

"*To the President and Members of the British Medical Association.*

"Gentlemen,—We, the Mayor, Aldermen, and Burgesses of the borough of Birmingham, in Council assembled, have much pleasure in welcoming the British Medical Association to this borough, on the occasion of the celebration of the fortieth anniversary of the foundation of the Society.

"We fully recognise the great importance of an Association, which has for its object the promotion of the public health and the alleviation of human suffering, and which has already, by directing attention to the important subject of sanitary science, created a state of public opinion which has resulted in legislative action.

"It is a source of much gratification to us that many of our fellow-citizens, distinguished for their scientific and medical attainments, have been prominent in the formation and development of your valuable Association.

"We have no doubt that the objects the Association have in view will be materially aided by bringing together annually from all parts of the world men celebrated alike for scientific and professional knowledge, thus promoting the diffusion among the profession generally of many important facts and discoveries which might otherwise remain comparatively unknown.

"Given under the Corporate Common Seal of the said borough this 7th day of August, 1872."

The PRESIDENT proposed that the Association should send the following reply to the address.

"The British Medical Association receive the address of the Mayor, Aldermen, and Burgesses of the borough of Birmingham with much satisfaction.

"Whilst accepting it as a corporate expression of simple welcome, the Association is pleased to recognise in it an enlightened appreciation of the importance of a rigid adherence to those laws of health by which alone large communities like that of Birmingham can be preserved in safety.

"The British Medical Association congratulate the Mayor, Aldermen, and Burgesses of the borough of Birmingham on the natural sanitary advantages of the town, and feel confident every human means will be taken to improve them."

This reply was unanimously adopted.

The CHAIRMAN then announced that a telegram had been received announcing the arrival of Dr. Ricord and Dr. Demarquay in this country, and the intention of Dr. Ricord to speak in the afternoon, in the surgical section, on the paper which would be brought before the section by Mr. W. Acton of London. [*Applause.*]

The meeting then adjourned for luncheon; and the Sections met at 2 P.M.

FOURTH GENERAL MEETING, *Friday, August 9th.*

The concluding general meeting was held at 2 P.M.; ALFRED BAKER, Esq., President, in the Chair.

The Report of the Poor-law Committee was read by the President, in the absence of Mr. Ernest Hart, the Chairman. It is published at page 190.

Dr. BELL FLETCHER (Birmingham) said that the duty of moving the adoption of the report had been placed in his hands. With the general bearing of the question he was well acquainted, for he had been consulted by the Guardians of the borough several times as to the remuneration of the parish surgeons, and his advice had always been, "Double your number, and double your pay". [*Hear, hear.*] In his opinion, it was abominable that these gentlemen should have to work for the small pay they had at present. [*Hear, hear.*] It was sad and disastrous to themselves on another account, for those men who were occupied in going among the poor so much were debarred from going to the houses of the rich, who would not have for their medical men those who had to tend a mass of epidemic and contagious cases. [*Hear, hear.*] With respect to the report, he fully agreed with it, and he should be very glad to assist the Committee in any way he could. He had had considerable experience in this department, and anything he could assist them in he would be very happy. He moved—"That the Report of the Poor-law Committee be received and adopted, and the Committee re-appointed."

Dr. ALFRED HILL (Birmingham) seconded the motion. For ten years he was local medical officer himself, and from that experience he could fully endorse the opinions just expressed. The remuneration was disgraceful; and when he left, at the end of the ten years, he was receiving exactly the same salary as when he commenced. Surely lengthened services deserved some recognition and reward; but the ground always taken by the Guardians was, "If you don't like the appointment, give it up, and some one else will take it". Such treatment was most ungenerous and unfair. It might be commercial, but it was not of the kind a professional man should receive. [*Hear, hear.*]

Dr. WILTSHIRE (London) thought that the action recently taken by the Local Government Board would eventually remedy the state of affairs complained of, as paid inspectors would be appointed for various districts. The principle was, that gentlemen would be appointed and relegated to those districts, and would have sanitary charge of them, being paid out of the Government funds; whereas, in the case of county officers elected by the county, the expense of his salary would fall upon the funds of the county. He believed that at present nobody in the country was treated so badly as Poor-law medical officers. [*Hear, hear.*]

The motion was unanimously adopted.

Report of the Committee on Parliamentary Bills.—This report was also read by the President. It will be found at page 190.

Mr. W. H. FOLKER (Hanley) moved, and Mr. LLOYD OWEN (Blrmingham) seconded—"That the Report of the Parliamentary Bills Committee be received and adopted, and the Committee re-appointed."

Mr. HECKSTALL SMITH (St. Mary Cray), in supporting the resolution, said that when the Public Health Bill was being discussed, he had reason to believe from its promoter and from several members of Parliament that it would provide for the payment of part of the stipends of the officers of health throughout the country by the Government. He had been told that in the progress of the Bill during its later stage that had been altered, and now this very important arrangement had been arrived at; namely, that Boards of Guardians would have the power, by declining to receive the stipend, or the portion of it, from the Government, to retain the directing power they now had. This was the most unfortunate arrangement that could have been made. [*Hear, hear.*]

Dr. BELL FLETCHER was quite certain that if the Government desired to do the work well, or to obtain a proper and just remuneration for medical men, they must not depend upon local authorities. [*Hear, hear.*] They had suffered a good deal from the treatment they had received from local boards, and he himself had seen no less than six deaths resulting simply from attention to their duties—duties for which they received comparatively no remuneration. [*Hear, hear.*]

Dr. WILTSHIRE said that he had seen most distressing cases, and he concurred with Dr. Fletcher that Boards of Guardians were the most obstructive bodies in the whole kingdom.

Dr. SPRATLY (Rock Ferry) said the fault was a good deal with the medical men themselves, for they would not be true to each other and be united. They should take a lesson from the trades unionism they saw in the country, and, if necessary, strike. [*Hear, hear, and Laughter.*]

Dr. A. B. STEELE (Liverpool) thought they must not be too hasty

in condemning Boards of Guardians. Their peculiar case was that they were the custodians of public money, and their duty was to provide the poor with efficient medical relief; but at the same time it was their bounden duty to do that at the least possible burden to the rates, and the course they adopted was to advertise for thoroughly competent medical men. They never found any difficulty in filling up the posts, and the only means they had of judging of efficiency was to see that those selected were qualified according to law. The solution of the matter lay in a nutshell—the taking the question of remuneration entirely out of the hands of Boards of Guardians, and placing it with the Government.

The resolution was then passed.

The Meeting in 1873.—Dr. ROBERT FARQUHARSON (London) moved—"That this meeting directs, and hereby empowers, the Committee of Council to arrange for the next annual meeting in 1873, and further to appoint a President-elect." He referred to the great hospitality with which visitors had been received in the great medical centre—Birmingham. [*Hear, hear.*]

Mr. J. St. S. WILDERS (Birmingham) seconded the motion, which was carried.

Foreign Visitors.—Dr. ARLIDGE (Newcastle-under-Lyme) moved—"That this meeting, cordially recognising the distinguished position of the illustrious visitors in their respective countries, begs now to tender them the warmest thanks of the Association for their presence, and for the additional interest and importance thus given to this annual meeting."

Dr. BALTHAZAR FOSTER (Birmingham), in seconding the motion, remarked that it must have given all who had been present at the meetings the greatest pleasure to meet their distinguished visitors. [*Hear, hear.*] They were all somewhat given to hero-worship, and in the general way the nearer heroes approached the more they dwindled, but in this instance their acquaintance had only served to enhance their high opinion of them they had before, as heroes in the art of cure. [*Applause.*]

Mr. FOLKER suggested the advisability in future of inviting distinguished medical men from other countries to the meetings of the Association.

The motion was carried unanimously.

Votes of Thanks.—Dr. JAMES JOHNSTON (Birmingham) moved—"That the cordial thanks of the Association be given to the Bailiff and Governors of King Edward's School for their kindness in granting the use of the School for this meeting."

The resolution was seconded by Mr. YATES (Birmingham), and carried amid applause.

Mr. ROBERT DUNN (London) moved—"That the cordial thanks of the Association be given to the Local Secretaries—Mr. Bartleet, Dr. Foster, and Mr. West—for their arduous labours in connexion with this successful meeting."

Dr. SPRATLY (Rock Ferry), in seconding the motion, characterised the meeting as one of the most successful that had ever taken place, no fewer than five hundred and thirty-four members having taken part in it.

The resolution was carried unanimously; and Dr. FOSTER, in acknowledging the vote on behalf of his colleagues and himself, spoke of the assistance which they had received from the members of the profession who had co-operated with them.

Mr. HAILEY (Newport Pagnell) moved, Dr. ROWLAND (Malvern Wells) seconded, and it was unanimously resolved—"That the warmest thanks of the Association be given to the President and Members of the Birmingham and Midland Counties Branch for their hospitable reception."

The PRESIDENT then left the Chair, which was taken by Mr. SOUTHAM, President of Council.

Dr. WILTSHIRE (London) proposed—"That the warmest thanks of the Association are due and are hereby given to Mr. Alfred Baker, for the ability and courtesy with which he has presided over this annual meeting, and for his generous hospitality." He said that one of the greatest advantages of the Association was, that by these meetings it brought the members together, and enabled them to form friendships of the highest and most interesting character. [*Hear, hear.*] All must feel proud of seeing how the hospitality of England had been represented in Birmingham; and one especial feature of the meeting had been the opportunity of meeting eminent foreign gentlemen, and as well those who could not be altogether regarded as foreigners by Englishmen—our American brethren. [*Cheers.*] The hospitality shown to all could not have been surpassed, and no President could have conducted a meeting better. [*Cheers.*]

Dr. EVORY KENNEDY (Dublin) seconded the motion, and said that a more grateful task could not have been confided to him; for personally he felt deeply indebted to Mr. Baker for his courtesy and hospitality, as, indeed, must every member of the Association. Devoted as the members were to science, and great as was the pleasure they took in the meetings for that reason, the courtesy and hospitality which they received secured good feeling and fellowship. This meeting had been a perfect "bumper"—[*laughter*]—and there had been an invasion of Birmingham the like of which had not been seen for a long time. He hoped, however, that this invasion would not be followed by such an event as followed Rupert's invasion of the town; and he trusted that another plague like that was far distant indeed. [*Hear.*]

Mr. SOUTHAM said he did not rise to speak from any thought that the meeting would require many words to urge them to adopt the motion—[*hear*]—but many members who were absent had desired him to tender their personal and hearty thanks to Mr. Baker and the profession in Birmingham for their splendid hospitality. As President of Council, he had the feeling that the gentlemen referred to had treated the Association so handsomely, that there would be a difficulty in getting any other than the large metropolitan towns of the provinces to undertake the reception of the Association, under the thought that to do so on the same scale as this meeting had been conducted at Birmingham would be greater than the resources at their command. He hoped, however, that other towns which might invite the Association would not think that they were called upon to give the members hospitality as well as science. [*Cheers.*] There were places which could give the Association science, beautiful scenery, and natural advantages—matters which the members of the Association could appreciate; but the members of the profession in those places, being fewer in number than in a town like Birmingham, could not give hospitality to the same extent; and he was sure that the members would flock to such places as readily as they had come to Birmingham. [*Cheers.*] He should consider the motion carried by acclamation. [*Repeated cheers.*]

The PRESIDENT (who was received with cheers) said his part at this meeting had been comparatively easy, for he had met with the greatest courtesy and aid from all sides—aid from the older members of Council, and courtesy from all. [*Cheers.*] As to the hospitality which had been mentioned, that had not been his alone. The invitation to Birmingham had come from the Branch, and every member of the Branch had his heart full of hospitality. [*Cheers.*] The number of those who had attended was highly satisfactory, and he could not accept for himself altogether their expression of pleasure; but he must at once say that it belonged fairly to the members of the Branch. He had not only to give his thanks to those friends who had come to discuss the scientific facts, but to thank those gentlemen who had come long distances to tell of their practice and theories, and to give the meeting a large increase of interest. [*Cheers.*] He hoped, with the President of the Council, that wherever the Association went the numbers would be as large as at Birmingham, and he was sure that the members would attend whatever might be the degree of hospitality offered, for hospitality, after all, was but one of the accidents of a meeting. He looked forward to the time with hope, when the number of members assembled would, by reason of the great increase of the Association, be far greater than it had been in Birmingham in 1872. [*Cheers.*]

The meeting then closed.

PRESIDENT'S SOIRÉE.

ON the evening of Wednesday, August 7th, the President of the Association gave a *soirée* at the Town Hall. There was a very large attendance of ladies and gentlemen, and the room was handsomely and pleasingly decorated. From the edge of the gallery was hung figured muslin in festoons, relieved by crimson baize and fluted columns of blue and white muslin; and against these columns were placed mirrors and candelabra. At the foot of the orchestra were arranged flowering plants; and around the orchestra and the great gallery ran a screen of crimson cloth, relieved by pilasters bearing roses filled with flowers. The space under the side galleries was appropriated to refreshments. During the evening, the following selection was performed on the organ by Mr. Stimpson: "Coronation March," Meyerbeer; "Second Sonata," Mendelssohn; Overture, "Fra Diavolo," Auber; March, "Tanhauser," Wagner; Selection, "Martha," Flotow; "Lobegesang," Mendelssohn; Selection, "Faust," Gounod; Overture, "Zampa," Herold. These pieces were interspersed with glees by Messrs. Bickley, Woodhull, Underwood, and Campion, who performed the following selection: "When Evening Twilight," "Absence," "Strike the Lyre," "Napolitaine," "Would you know my Celia's Charms," "Sleep, Gentle Lady." The galleries were set aside as a promenade.

DINNER.

THE annual dinner of the Association took place at the Exchange Assembly Rooms on the evening of Thursday, August 9. The President of the Association (Mr. A. BAKER) occupied the chair; and amongst those present were: Sir William Fergusson, Bart., M. Ricord (Paris), M. Demarquay (Paris), M. Labbé (Paris), Dr. Miller (Paris), Dr. Gross (Philadelphia), Dr. Jackson (Kentucky), Dr. Smith (New York), Dr. de Muralt (Zurich), the Rev. Canon Wilkinson, D.D., the Rev. Canon O'Sullivan, the Rev. G. J. Emanuel, the Rev. J. Heath, Mr. G. Dawson, Mr. John Marshall, F.R.S., Dr. Wilks, Dr. A. P. Stewart, Mr. Southam (President of Council), Mr. O. Pemberton, Mr. W. D. Husband, Dr. Bell Fletcher. Dr. Birt Davies, Dr. H. Maudsley, Mr. Spencer Wells, Dr. Francis Sibson, Mr. W. Adams, Mr. W. Mac Cormac, Dr. Wiltshire, Dr. Henry Bennet (London), Dr. Wade, Mr. Ernest Hart, Dr. Falconer (Bath), Dr. Chadwick (Leeds), Dr. Waters (Chester), Mr. Partridge (London), Surgeon-Major De Renzy, Mr. J. Hutchinson (London), Dr. Lockhart Clarke, Dr. J. Johnston, Mr. Berry, Mr. Heckstall Smith, Dr. Sutton, Mr. Vincent Jackson, Mr. Bartleet, Dr. Foster, Mr. J. Vose Solomon, Mr. T. Underhill, Dr. Milner Fothergill, Mr. W. Acton, Dr. Althaus, Mr. Bassett, Dr. Russell, Staff-Surgeon Manifold, Mr. Goodall, Mr. Lawson Tait, Dr. Eames (Dublin), Mr. Chesshire, Mr. Dobson, Mr. Rickards, etc.

After the usual loyal toasts, the PRESIDENT gave "the Army, Navy, and Auxiliary Forces."

Mr. JESTON (Henley-on-Thames) responded. He had had the honour of serving under the Duke of Wellington. [*Cheers.*] He assured them that it was the greatest honour of his life to serve under so great and gallant a commander as the Duke of Wellington, who was fearless to the utmost degree, exposing himself, as he had seen, within twenty yards of the enemy's pickets. For his services in the Peninsular campaign Her Most Gracious Majesty was pleased to bestow him the medal with four clasps. (*Cheers.*)

The PRESIDENT proposed the "Bishops, Clergy, and Ministers of Religion." He said that the ministers of religion were not only working together for the national good, but they were working in perfect harmony for that highest aim—charity. In Birmingham originated that practice that was now spreading itself over the whole country in the shape of "Hospital Sunday." [*Applause.*] They found that every form of religion appreciated the importance of this work, and, to the best of its ability, helped it on. They did this without any dispute as to religious views. This practice, he might tell them, he had seen from the old minutes of the hospitals, had been carried on years and years ago by the clergy of the Established Church, and it was one of the advancements of later times that this system was extended among professing Christians of other denominations. [*Applause.*]

The Rev. Dr. WILKINSON responded. He said the clergy were at all times glad to receive assurances of good-will from any of their fellow-men, and there was no body of their fellow-men from whom they should more feel it to be a high honour to receive assurances of good-will than from such an intelligent, high-minded, earnest body of workers in the cause of humanity as he saw around him. [*Cheers.*]

Mr. GEORGE DAWSON also responded. He said the most benevolent profession he knew was the medical profession. The poorest people received the benefits of the highest skill: they had the kindliest care that could be bestowed upon them. The palace was no better served than the meanest house by the faithful physician. Of course there were black sheep in all callings. Sometimes there were wicked things said by the clergy of the medical profession. Of Paracelsus it was said that nobody ever saw him at prayers or at church. If they were never seen at prayers, it was because their prayers were short, because their prayers were hearty, and not wearisome by their length. [*Hear, hear.*] People would be ill on Sunday, and no Sabbatarian law could prevent it, or prevent the medical profession from working on that day. [*Laughter and applause.*] His little tribute to the medical profession he paid with all his heart. [*Applause.*]

Canon O'SULLIVAN, the Rev. G. J. EMANUEL, and the Rev. J. HEATH also responded.

Sir WILLIAM FERGUSSON, Bart., proposed "The British Medical Association, and the President of the Committee of the Council." He said they must bear in mind what that Association had been established for, how it had worked, and its age. When they looked to the circumstance of the scattered nature of the medical profession in this country until a very recent period, and how that institution had, as it were, brought a very large section to unite in an association in such a way as they were never united before—[*hear, hear*]—it must be admitted that, although they could not claim antiquity, they could claim a certain amount of strength which showed that the British Medical Association was one which was likely to be developed into great magnitude. [*Applause.*] The Association stood in a very peculiar position in this respect—that when they looked at the medical profession of this country and its varied heads, they saw those heads included in what were called corporations, often called ancient, and in some even effete corporations, that might probably as well be allowed to die. But it would be unwise to cherish views of that kind. Let the corporations stand as they might—that great Association should stand by them irrespective of its incorporative character—[*hear, hear*]—because he firmly believed that if the Association should unhappily once become corporate, it would lose its popularity. [*Applause.*] He believed—and he did not hesitate to say it as one connected with several corporations of considerable antiquity and of great position—that this Association had had a most wholesome effect upon the ancient corporations. [*Applause.*] Were it to become a corporate body, he believed it would immediately fall into the line of the other corporations, and be entirely overlooked and ignored, if not despised. [*Hear, hear.*] Its great strength was in not being a corporation, but an association of highly educated men, connected with a great professional body, which body had for its object the amelioratng of human suffering, and doing the greatest possible good to the greatest possible number. [*Applause.*] He believed that if the Association went on as it had hitherto done it would prosper, and prosper to such an extent that, whilst it would not have the name of corporation, but keep the name of association, it would become the embodiment of the profession of medicine and surgery in this country. [*Hear.*] Year by year, as they watched the progress of the Association, they saw that its influence was progressing, and it was difficult to anticipate what it might be in course of time. They knew that corporations in this country would not associate with each other in an entirety to do that which might be expected from them. [*Hear.*] They had had ample proof of this, but the members of the British Association had been joined together in such a way that in reality they were able to put a pressure upon the Government such as could not be put by any individual corporation in the country, and he thought the strength of the Association was further verified by what was going on. Let him draw their attention to what had happened at the meeting on that day. There had been discussed questions of the greatest moment regarding a most important feature of modern hygiene. Varieties of opinions had been advanced, and two sides were ranged as it were against each other. From the expressions which he had heard at the meeting that day, he imagined there was but one feeling on the part of the Association, and that was to support the efforts of the Government to stamp out one of the most wretched and miserable diseases which had ever afflicted humanity. [*Applause.*] If he were asked to lay before them one proof stronger than another that there was a feeling in their profession that this should be done, so far as lay in their power, it would be the circumstance that the most distinguished authority now living, with regard to the disease to which he had referred, had come a distance of five hundred or six hundred miles to give expression to the views which he entertained on the subject; and, happily, by a question put to him by a member, that expression was elicited from him in a way which left them no doubt as to his meaning. [*Hear, hear.*] That meaning, he believed, they all endorsed; and it was a grand thing with regard to this Association, that it had taken upon it that which a corporation had been unable to effect, or which it had not taken upon itself to effect—viz., the stamping out of that frightful malady which for thousands of years had been the scourge of mankind. [*Applause.*] In doing so, he believed they would best pay that great tribute of respect which they were anxious to accord to those reverend gentlemen who had favoured them with their presence that night, and who had spoken so highly of the medical profession. Sir William Fergusson concluded by proposing the toast, and associating with it the name of Mr. Southam, the representative of Charles White, who had done so much for the advancement of modern surgery in this country. [*Applause.*]

Mr. SOUTHAM, in responding, said that he had all along felt that, though he might be able to discharge the duty of the President of Council's position in its general work, yet he could not well represent the Association at a gathering like that. That the advantages of the Association had been appreciated by the profession, was seen in the fact that during the forty years of its existence it had gone on increasing, and its name had now so spread that eminent gentlemen from all parts of the globe gathered at its meetings. He warmly appreciated the honour of standing in the position occupied for many years by Sir Charles Hastings, who had been followed by other experienced gentlemen. Sir Charles would have looked upon the present numbers of the Association as forming the most glorious success he could have anticipated, for the Association now numbered nearly five thousand members, and formed the largest of its character in the world.

[*Cheers.*] America and France had followed the example, and had medical associations of their own, thus showing the truth of the principles upon which it was founded. [*Cheers.*]

Dr. CHADWICK (Leeds) proposed the "President of the Association." and referred to the admirable address given by Mr. Baker, who, he said, well deserved the honour which they had conferred upon him. It was their duty to wish him, in the pleasant retrospect which he would enjoy of that week, health, happiness, and long life. [*Loud applause.*]

The PRESIDENT responded. He referred to the aid given him by the band of gentlemen with whom he was associated, because he thought every one should have the credit of his own actions and his own virtues. It was very gratifying to him to know that hitherto the meetings of the Association had been, from first to last, thoroughly successful, and that they had been honoured with addresses which were worthy of any society in this kingdom or upon the face of the globe. He thanked the visitors who had not only honoured them with their presence, but had given them valuable experience as the result of their long service in that profession they all loved. It would be his effort to hand over the office which he should enjoy for a short period to some successor more worthy to hold it than himself, although none could fill it more heartily. [*Applause.*]

Dr. BELL FLETCHER proposed, "The Reader of the Address in Medicine," and Dr. WILKS responded.

M. RICORD (who was received with loud applause) gave "the Reader of the Address in Surgery," observing that the attention which the Association had paid to him that morning was one of the greatest honours which could have been conferred upon him.

Mr. PEMBERTON, in replying, said that one of the circumstances which made it agreeable to him that M. Ricord should mention his name, was his membership of the Academy of Surgery of France, which he deemed to be one of the greatest honours he possessed. He might, therefore, be considered to have an association with that school, which was second to none for the cultivation of surgery. [*Applause.*]

The remaining toasts were "The Treasurer," "The Presidents and Officers of Sections," "The Chairman and Secretaries of the Local Committee," "The Visitors," "The Editor of the JOURNAL, "The General Secretary," and "The Ladies."

During the evening an excellent selection of glees was sung by Messrs. Bickley, Woodhall, Underwood, and Campion.

EXCURSIONS.

WORCESTERSHIRE EXCURSION. — Mr. Prosser, of Bromsgrove, having invited the members to make an excursion to Stoke Salt Works and the Lickey, etc., on Friday a large saloon carriage was attached to the train at New Street. Mr. Prosser and several Bromsgrove friends met the party at the station, and when they arrived at Stoke Works Mr. Corbett, with two of his managers, were there to receive them and show them over the works, which cover about twenty-five acres. They are the largest salt-works in the kingdom ; and in connection with them Mr. Corbett has erected at his own expense a school and chapel, a dispensary, a master's house, etc. The party then visited the new Sanatorium in the process of completion at Blackwell. They were then conveyed in breaks to view the splendid gardens at Hewell, by the kind permission of Lady Mary Windsor Clive, and returned thence through the private drives in the Lickey Woods to the Lickey Monument, which is a large obelisk erected to the memory of the late Lord Plymouth. The day was very fine, and, had it been clear, the view from the Lickey—which possibly is the highest cultivated land in England—would have been very extensive. South-east are to be seen the Breedon Hills and Gloucestershire, then Malvern and Abberly, the Clee and Shropshire Hills, and beyond all the black mountains of Herefordshire and Monmouthshire, and nearer home the Clee Hills and Black Country, and over Warwickshire. The party proceeded to the old Rose and Crown Hotel, where the proprietor had provided a splendid cold collation. A number of ladies from Birmingham and several from the immediate neighbourhood joined the party. The table was tastefully decorated with heath, ferns, grasses, and wild flowers gathered on the Lickey. Mr. Roger Prosser occupied the chair. Amongst those present were : Mr. W. Adams (London), Dr. Bogue (Chicago), Dr. Jackson (delegate from the American Medical Association), Mr. Manby (Wolverhampton), Dr. Walker (Peterborough), Mr. F. Dunn (Wolverhampton), Messrs. West, Swain, Scofield, S. Till, F. Sims, the Rev. Llewellyn Jones, the Rev. J. Goodwin, Dr. H. Savage (London), etc. The loyal and patriotic toasts having been drunk, the Chairman proposed the "Bishops and Clergy," to which the Rev. L. Jones and the Rev. J. Goodwin (of the Lickey) responded. The Chairman next gave "Mr. Saunders, the High Bailiff of Bromsgrove," to which Mr. Saunders replied. Mr. West then gave "The Host, Mr. Prosser," and warmly eulogised that gentleman for his great kindness in entertaining them, and also spoke highly of the good social effect which the meeting of the Association would have upon the profession. The toast was drunk with three times three. The Chairman responded, and proposed "The Visitors." Dr. Bogue, in responding, said he had come over from the American Medical Association to the British Association. Their Society, which was as large as the British, was formed after the model of the latter. He expressed a wish to see some of the medical gentlemen of this country visiting the Association on the other side of the Atlantic, and assured them that they should receive an equally warm reception as had been accorded to the American delegates in Birmingham. Mr. Adams (London) also responded, and paid a tribute of praise to the hospitality of the profession in Birmingham, and particularly that which they were then the recipients of at the hands of Mr. Prosser. Dr. Jackson likewise responded. "The Hostess" (Mrs. Prosser) and "The Ladies" were the remaining toasts.

DUDLEY EXCURSION.—On Friday, August 9th, about 150 members of the Association, and a numerous company of ladies, left Snow Hill Station at 1.20 P.M., under the direction of Messrs. Manley, W. Garman, and Frank Underhill. The train went direct to Round Oak, where the extensive ironworks and furnaces belonging to the Earl of Dudley are situated. Here the whole party alighted, and were shown through the works by the General Manager, Mr. Smith Casson, who took care not only to explain the whole process of iron manufacture, but that no accident should happen to those who visited the Black Country for the first time. After spending an hour here, the visitors returned to Dudley, and were conducted through the ruins of the castle. In the court-yard, Mr. Frank Underhill read a short paper on the chief events in the history of the castle, and pointed out the various objects of interest. The party was here joined by a numerous party of ladies and gentlemen from the district ; and together visited the curious caverns in the Silurian limestone, for which Dudley is celebrated, and which had been beautifully illuminated for the occasion through the liberality of the Earl of Dudley. Here a short geological sketch of the neighbourhood was given by Mr. E. Hollier. At 6.30, a dinner, given by a number of medical men of South Staffordshire and East Worcestershire, was served up at the principal hotel, to which about 150 members and 20 ladies sat down. The chair was occupied by Mr. T. Underhill. The whole excursion was a great success, and all present seemed extremely pleased with the result.

EXCURSION TO LEAMINGTON AND WARWICK.—On Saturday, a large number of members went to Leamington. At the station, they were met by Mr. Ebbage, the President of the Birmingham and Midland Counties Branch, and by several other practitioners of Leamington. They first visited the pumping appliances of the sewage-works, and then proceeded to Warwick Castle, to which they were admitted, and afterwards went to Guy's Cliff. They returned to Mr. Ebbage's house, where about seventy members partook of luncheon. Later in the afternoon, some of the party went to Stoneleigh Abbey and Kenilworth Castle.—About sixty or seventy members of the Association were entertained at Warwick by the Mayor, Dr. Tibbits, at luncheon. They visited Warwick Castle, Leicester's Hospital, St. Mary's Church, and the Beauchamp Chapel ; several of them afterwards availing themselves of the opportunity of seeing Guy's Cliff and Kenilworth on their return.

EXCURSION TO STRATFORD-ON-AVON.—On Saturday, August 10th, a number of the members visited Stratford-on-Avon. On arrival, they proceeded to the birthplace of Shakespeare, where they were met by Dr. Nason and some of the members of the Shakespeare Committee, and inspected the various objects of interest in the building. They afterwards visited the parish church containing the monument of Shakespeare ; and there listened to an interesting archæological description of the building, kindly given by the Vicar. The remains of New Place, the residence of Shakespeare, were then visited ; and a few of the members proceeded also to Ann Hathaway's Cottage at Shottery, and to Charlecote.

Fifty or sixty visitors, including several ladies, were very hospitably entertained at luncheon in the Town Hall by Dr. Nason. Among those present were—the Vicar of Stratford-on-Avon, M. Léon Labbé of Paris, Dr. Berns of the Hague, Mr. R. Dunn, Dr. C. Holman, Dr. Arlidge, Mr. Ernest Hart, Dr. Shrimpton, Dr. Henry, Dr. Wiltshire, etc. After luncheon, the health of the host, Dr. Nason, was proposed by Dr. Holman ; and that of the foreign visitors by the Vicar. The visit was highly interesting, and the reception of the visitors by Dr. Nason and his colleagues in Stratford was most cordial.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 17TH, 1872.

THE BIRMINGHAM MEETING.

THE Annual Meeting of the Association this year has been one which will be long remembered in the history of the medical profession. It has been in every way remarkable. Unsurpassed in numbers, if, indeed, it has ever been equalled; most notable for the perfection and liberality of all the arrangements; fortunate in the complete success of the sectional system of working; memorable for its large-hearted and universal hospitality—it has in no detail fallen short of the highest standard. The President's Address was a most careful and able exposition of the local medical topics, as to which visitors to Birmingham would naturally desire information, and an eloquent and instructive summary of the medical and vital statistics of the midland metropolis. In assuming, at the request of his fellows, the office of President, Mr. Baker waived his claim to a hearing on subjects of purely professional interest in the department of surgery, of which he stands at the head in Birmingham, leaving the treatment of that subject to any other hand to which local circumstances might make it desirable to entrust it. The President of the Association rose to the full height of his onerous post; and, both by the character and manner of his opening address, and by his complete devotion to all the scientific, administrative, and hospitable duties of the presidency, he fully justified the selection which conferred on him this high office. Nor were any of his fellows—compeers, many of them, in age and position—less zealous in supporting their representative and doing honour to their invited guests. Dr. Bell Fletcher, the Senior Physician of the General Hospital, and President of the Medical Section, Mr. Furneaux Jordan, Mr. Oliver Pemberton, Mr. Bartleet, Dr. B. Foster, Mr. West, Mr. Lawson Tait, Mr. Ebbage of Leamington, Mr. Nason of Stratford-on-Avon, Mr. Prosser of Bromsgrove, Dr. Tibbits of Warwick, and numerous others, were, each in his sphere, unwearied in their exertions and in their hospitality.

The public luncheon provided was on a scale hitherto unknown at such meetings; and the President's *soirée* was pronounced by *habitués* to be the most brilliantly provided entertainment which had been seen for long in the Birmingham Town Hall. Thus professional and private generosity compensated for a niggardliness and tardiness which have disgraced the Corporation. That body contented itself with sending a letter, on the third day of meeting, to say that it was glad to hear the Association had come to Birmingham. If it were possible to do a shabby thing more shabbily, they would probably have found out how to do it; for the Corporation seems to possess in perfection the art of meanly avowing its own meanness, by publicly acknowledging the services of those whom it declines to honour, and by making public confession of the duties which it found it more economical to avoid performing. It is reported that the fault was with individuals, and that there was a municipal "hitch" which gave rise to the failure. It is none the less discreditable.

The array of addresses which we have printed—unprecedented for total ability, variety, and interest, in the history of the Association, and in medical journalism—speaks more than qualifying adjectives can do of the vigour which was this year thrown into the Sections. The younger Sections came well abreast of the senior departments, if they did not pass them. That of Public Medicine especially was remarkable for the importance of the subject-matter of its debates, and the ability with which the subjects were presented. The President, Dr. Haughton, opened it in the powerful and suggestive address which we print in another column. With characteristic felicity, he has applied his varied attainments to the solution of a very difficult problem—how to drive sense into the dunderheaded opponents of vaccination, and by a simple and striking test to dispose of their wearying fallacies and wicked misstatements. He has devised such a test. The most impressive gift which science bestows is prophecy. It is that which most quickly and easily affects popular apprehension, and furnishes the most solid ground for public faith. The astronomer who predicts an eclipse, who calculates first, and then finds the position of a previously unseen planet—the chemist who premises the character of a decomposition—are regarded with just admiration and trust. But Medicine, it is said, is uncertain; it relies upon factors confessedly of diverse value, and depending upon the capacity of many uncertified observers for their authenticity or accuracy. When we talk of past mortalities from small-pox, we are reminded of the possibility of change of type, of the irregular and unreliable character of the bills of mortality, of the distance in time and place of such epidemics, and of the probable sources of error which thus arise. Dr. Haughton meets and confutes such objections by a very simple method. Past records estimate the mortality among the then unvaccinated populations at 66 per cent. of those who were struck with small-pox. Present records on a very large scale show the mortality amongst well vaccinated persons, who are nevertheless afflicted with small-pox, to be at the rate of six per cent. Going now into any hospital or asylum in which proper records are kept, he shows that, from the comparison of the total number admitted with the number of deaths, he is able by the above data to predict, without seeing the books, what are the numbers of unvaccinated persons among those admitted. The accuracy with which his figures, so calculated, have in every instance tallied with the actual records of the marks upon the arms, triumphantly establishes the accuracy of the relative mortality-rates above stated, upon which the calculation is based, and proves, by a demonstration which a child can understand, the enormous value of vaccination in lessening the mortality of small-pox, and how accurately that value has been estimated by medical men hitherto. It is a great sum in medical science, of which he furnishes the arithmetical proof. With other grave matters discussed in Dr. Haughton's address, we shall shortly deal separately; they touch the national conscience, and concern the national honour. They must be laid before the people of England clearly and calmly, for their dispassionate consideration; and, if the wrong done be such as Dr. Haughton has firmly and carefully stated, it clearly calls for reparation and redress.

Additional interest was imparted to the meeting by the pre-

sence of a number of foreign visitors from various countries. Besides Ricord, Demarquay, and Labbé of Paris, and Gross of Philadelphia, there were present as welcome guests Berns of the Hague, Bogue of Chicago, De Muralt of Zurich, and A. Smith of New York; and, we may be sure, they will return to their own homes impressed with reciprocal feelings of fraternity towards their medical brethren in England.

Of our fellow-associates who have been in recent years in the habit of attending the meetings of the Association, every one, we feel assured, will sympathise fully with the brief but heartfelt remarks made at the end of the Report of Council on the deaths of Dr. Beatty and Mr. Clayton. All will regret that the hearty geniality of the one, and the *bonhommie* and sound sense of the other, have disappeared from among us.

The excursions this year were judiciously arranged so as to interfere as little as possible with the business of the meeting. The result was satisfactory: the sections on Wednesday and Thursday had a fair attendance, and on Friday and Saturday the members in considerable numbers visited the industrial regions of the Black Country and Worcestershire, the health-restoring waters of Leamington, and the historically interesting towns of Warwick and Stratford-on-Avon. In each place visited, professional hospitality vied with that which had been shown in Birmingham.

It is not necessary that we should dwell here at greater length on the features of the meeting. They will be apparent in the reports which we publish. Never has a more influential gathering been assembled in the name of common professional interests, to exchange greetings of good-fellowship, to renew friendships, to join in new ties of fraternity and good-will, to promote scientific objects, to further professional interests, to advance the public welfare. They have never worked more harmoniously or more earnestly; nor were they ever received more hospitably, or with a more thoughtful, liberal, and intelligent provision for all their wants and possible wishes.

THE MISSION OF ANNUAL MEETINGS.

It is perhaps impossible not to have some admiration for the severe virtue of certain of our critics who annually at this season, in the press and otherwise, are much exercised about the usefulness of our scientific gatherings, and are especially impatient of the recreations and convivialities that are allowed to mix with the graver labours of those meetings. Austerity in science, like austerity in art and in religion, has a certain nobleness which often constrains the more ordinary mortals among us to do homage to it as from a lower place in the scale of being. But, at the same time, we confess to a movement of fellow-feeling towards our German *confrères* who assembled last year at Rostock, had their "Gaudeamus" song-book compiled for the occasion, and were duly admonished by printed advertisement, on the eve of their various excursions, not to forget to put that volume in their pockets. Be it a weakness; it deserves some praise if we avow our sympathy with this endeavour to put their every-day life for a time aside, and to live over again for a few days the buoyant and hopeful season of their studentship. If one of our austere censors were to obtrude himself on us at such a time, we might be pardoned if we echoed the curiosity of Wordsworth:—

> "..... the happiest mood
> Of that man's mind, what can it be?"

A writer in the *Lyon Médical*, who has an interesting suggestion to make *àpropos* of the Medical Congress that is to assemble at Lyons in September, avows that he has no sympathy with this class of detractors, and even goes so far as to suggest that they are actuated by a spirit of chagrin; be that as it may, it is comforting to us to find prevailing, both in Germany and in France, the practices for which we have been reproved. The writer in the *Lyon Médical* thinks, however, that the usefulness of annual meetings is not so great but that it might be increased. Many of the questions set down in the programme for debate are capable of a solution; but, he says, the controversy on them is in the easy and vague manner of the Academy, without aim and without result. Let it be proposed, however, to take a vote at the end of the discussion, to register the weighty opinion of a representative body of practitioners; and he takes, as one example, the question that stands first in the Lyons programme, that of compulsory vaccination. The committee of the Congress appears, indeed, to have decided that, if an opinion on matters of professional interest comes to be generally entertained by the members, it shall be put into the form of a resolution, with the view, in fitting cases, of communicating it to the legislative power. The example quoted will no doubt prove to be of this sort; and one might enumerate many other questions relating to the public health, the relief of sick and wounded in war, medical instruction, etc., which are capable of the same treatment. The Medical Association of this country has frequently exercised its representative power in the settlement of well-known questions belonging to this class, and we can confidently predict for the Medical Congress in France a career of usefulness in the same direction. Taking, however, the second typical case which the writer selects from the Lyons programme, the treatment of syphilis by mercury, we find ourselves introduced to matters of another kind; and it is here that his proposal is to a certain extent novel. The prospect, he says, of arriving at a conclusion on such matters would greatly stimulate the activity of the Congress, and would induce the speakers to be close in their reasoning, and to limit the scope of their argument; while the conclusion arrived at would, he believes, be welcomed by many practitioners who have not sufficient information or authority to determine their line of practice. It is due to the able writer who proposes it to give currency to this idea. But the experience of the past teaches us how easily the profession may commit itself to an injurious dogmatism on many questions of practice and even of science; and we have learned at some cost that a wise passiveness is the attitude that it most befits us collectively to assume towards them.

Dengue is, it appears, spreading in Madras, but, happily, not of so severe a type as that which has been raging in Calcutta.

A very complimentary address, signed by nearly fifty students, has been presented to Dr. Sidney Smith, late Professor of Hygiene in the Grant Medical College, Bombay, on his removal from his duties at that institution.

Apropos of the proposed visit of the Prince of Wales to Salisbury, in September, Dr. Corbin Finch, who is in partnership with Dr. Lush, M.P., has placed his residence, Kemerton Lodge, at the disposal of His Royal Highness, and the offer has been graciously accepted. The Prince will remain at Salisbury from the 3rd to the 10th.

CHARING CROSS HOSPITAL.

This hospital has been undergoing considerable alterations of late, much to the improvement of its external appearance, and no less to the increase of its internal convenience. It has now a good entrance hall with a periphery of columns. The Medical School has also a separate approach.

RED CROSS DECORATIONS.

Miss Pearson and Miss M'Laughlin have had conferred on them the decorations of the order of the "Sanitäts Kreuz Militär" of Hesse Darmstadt, in recognition of services rendered by them, with the Anglo-American Ambulance, during the late war. The order was founded by the Grand Duke in 1870, and the decoration consists of a twelve-pointed cross of bronze, gilded and suspended from a crimson ribbon with silver edges.

SMALL-POX IN LONDON.

THE deaths from small-pox in London declined last week to fifteen. They numbered thirty-three and twenty-eight the two previous weeks. So few deaths from small-pox have not been returned in London in any week since October, 1870.

THE GERMAN WAR LOSSES.

ACCORDING to a work to be laid before the statistical congress at St. Petersburg, the German armies lost during the war 40,881 men by death. Of these, 17,527 fell in battle, 10,710 succumbed to their wounds, 316 perished by accidents, and 30 by suicide. Dysentery carried off 2,000, typhus 6,595, gastric fever 159, small-pox, 261, inflammation of the lungs 500, other acute diseases 521, consumption 529, other chronic diseases 249, and sudden death 94. The nature of the disease is not indicated in the case of 556, and the cause of death is not stated in the case of 419. The missing number was 4,009.

OVERCROWDING IN LONDON.

DR. TRIPE and Mr. LIDDLE, the medical officers of Hackney and Whitechapel, in their annual reports describe a condition of overcrowding in these districts which is a scandal to the metropolis. In several rooms in Whitechapel, nine or ten persons, principally adults of both sexes, were sleeping together. In one room occupied by four persons, the allowance of air was only eighty-two cubic feet per head; another apartment occupied by six people afforded only fifty-four cubic feet to each person. Among the very poor a practice prevails of letting "furnished rooms", in which there are only a few dilapidated pieces of furniture. These let at rents varying from 2s. to 4s. per week. Mr Liddle reports that the sanitary inspectors of his district have, in visiting these dens, seized several filthy beds, straw mattresses, and pillows, which the owners of the houses were required to destroy and replace with new ones. The overcrowding in Whitechapel and Hackney is comparatively nothing, however, if we are to believe the statements of a woman who keeps a lodging-house at No. 1, George Street, Westminster; for at the Worship Street Police Court on Tuesday it was elicited from her that three rooms were shared by no fewer than ninety-two occupants. Here is a case for the medical officer of that district.

AUSTRALIAN MEAT.

ON Thursday last week, at the Cannon Street Hotel, a meeting, principally composed of members of Parliament and gentlemen interested in social questions, was held under the presidency of the Hon. Arthur Kinnaird, M.P., to inspect and test some of the latest importations from Australia in the way of addition to our food supply. Among those present were Mr. Grieve, M.P., Mr. Greene, M.P., Mr. Alderman Carter, M.P., Mr. C. Wren Hoskyns, M.P., Mr. H. B. Sheridan, M.P., Mr. Bevan, Mr. Bonar, Mr. L. A. Hart, Dr. Hardwicke, Mr. H. Hodson, the Rev. Mr. Fantrell, etc. A luncheon was served of meats, unembellished by the arts of cookery, imported from Australia by the Australian Meat Agency, under Mr. D. Tallerman. The dishes were beef in the round, mutton hams, spring lamb preserved in loin with the bone, boiled mutton, besides soups of different descriptions. The gentlemen present expressed their opinions respecting the quality of the different meats—and these were that the food would most favourably compare with any in quality, while vastly different in price to the meat in the English market. Not only had the British public been thus benefited, but the colonies had thus found a market for their produce in the land to which they were attached by other ties—ties which were thus strengthened by those of self-interest. Mr. Tallerman gave some interesting facts in the course of answering questions addressed to him. He stated that the importance of encouraging this trade was to be seen from the fact that the existing yearly deficiency in the supply of meat to London alone amounted to 102,000,000 lbs., and in the kingdom the deficiency was 3,544,000,000 lbs., or equal to 70,800,000 sheep. To show how a demand had been created for these meats, he stated that, in 1866, 91 cwt., value £321, only were imported; and this supply had gradually risen until, in 1870, it was 3,641 cwt., value £203,874; and in 1871, it was 11,853 cwt., value £513,186, an amount which he was convinced would be trebled at the end of the present year. Mr. Greene, M.P., added as his view as an agriculturist, that it was most important that we should add to our meat-supply, and he bore testimony to the excellence of the food, and the vast benefit its plentiful supply would be to the community. A resolution was unanimously passed, declaring that an organisation purposing to bring the produce of Australia within reach of the British public was highly deserving of public support. Mr. Tallerman has also, with much promise of success, brought the Australian meats before the notice of the public in Newcastle and Gateshead-on-Tyne.

THE SOCIAL SCIENCE CONGRESS.

DR. ACLAND will, we believe, be President of the Health Section of the forthcoming Social Science Congress at Plymouth. The following are the special questions to be discussed in that section. 1. What are the principles on which a comprehensive measure for the improvement of the sanitary laws should be based? 2. What steps should be taken to guard against sewage poisoning? 3. What means can be adopted to prevent the pollution of rivers?

GLYCOGEN.

M. CLAUDE BERNARD announces that he has recommenced his studies on the evolution of glycogen in the eggs of birds. He recalls to mind that in 1848 he discovered sugar *glycose* in the liver of animals; that in 1855 and 1857 he proved that this sugar is derived from a particular source—glycogen—fixed in the hepatic tissue. Finally, in 1859, he again found this glycogen in the placental organs of mammals and in the vitelline membrane of birds. It is at this point that he recommences the research.

CHOLERA IN INDIA.

BY the last *Overland Mail*, the north of India has, we regret to hear, been suffering severely from cholera. At Agra Roman Catholic College, there has been a fearful outbreak of the epidemic. The first case was on July 5th, and in five days eighty-two boys had been attacked, of whom thirty-five died. Cases are reported from Umballah, Kussoolah, and Subathoo. Cholera has also broken out in Wanowrie and Gorepoorie, Poona; and all communication between the military and the villagers has been forbidden. The Jubbulpore papers report cases of cholera as having occurred in the 21st Hussars, the 17th Foot, and the 13th Bengal Cavalry at Lucknow. Typhoid fever has made its appearance among the troops at Cherat in consequence of neglect of sanitary precautions.

THE ADULTERATION ACT.

THE following are the provisions of this measure, which, although imperfect in the shape in which it has passed the Legislature, is capable of being made to serve the public interests.

1. The penalties for poisonous adulterations are, for the first offence, a fine not exceeding £50; and for the second, six months' imprisonment with hard labour.

2. Any person who shall knowingly mix any substance with any article of food, drink, or drug, with intent fraudulently to increase its weight or bulk, unless he declares the mixture before delivering the same, will be liable to a fine not exceeding £20; and, on a second conviction, shall have his name published by the justices.

3. Compulsory power is given to local government boards to force local bodies to appoint analysts.

4. Inspectors of nuisances, weights and measures, and markets, "are forced to procure and submit articles suspected of being adulterated, and to prosecute on certificate of analysis being obtained."

Mr. T. Payne, the Secretary of the "Anti-Adulteration Association (Limited), Offices, 6, John Street, Adelphi, London, in calling attention to these provisions, observes that: "It now becomes the duty of all interested in the matter to see that the law is put in force; to which end this Association will devote its attention, as well as to any further legislation that may be found necessary. It is only justice to add, that we are indebted to Lord Eustace Cecil in the Commons, and to the Marquis of Salisbury in the Lords, for the many improvements on the Bill originally introduced."

THE AUTUMN MANŒUVRES.

THE Medical Staff at the Autumn Manœuvres will be constituted as follows :—

Head-Quarter Staff.—Principal Medical Officer, Inspector-General James Fraser, M.D., C.B.

Southern Army Corps.—Principal Medical Officer, Deputy Inspector-General J. M. S. Fogo ; Staff Assistant-Surgeon W. Alexander ; Staff Assistant-Surgeon P. W. Stafford, 4th Field Hospital.

Staff 1st Division.—Principal Medical Officer, Staff Surgeon-Major J. A. Thompson. 1st Field Hospital, Staff Surgeon M. J. A. Woolfreyes ; Assistant-Surgeon Owen Owen, 50th Regiment ; and Assistant-Surgeon R. C. Lever, M.D., 7th Hussars. 2nd Field Hospital, Surgeon M. W. Peake, M.D., 88th Regiment ; Assistant-Surgeon R. W. Forsayeth, 95th Regiment ; Assistant-Surgeon R. H. Bolton, 3rd Dragoon Guards. 3rd Field Hospital, Surgeon M. B. Tydd, 2nd Battalion 23rd Regiment ; Assistant-Surgeon C. A. Atkins, 1st Battalion 7th Foot ; and Assistant-Surgeon H. L. Malladen, M.D., 12th Lancers.

Staff 2nd Division.—Principal Medical Officer, Surgeon-Major R. Gilborne, 6th Dragoon Guards. 1st Field Hospital, Surgeon F. W. Moore, 2nd Dragoon Guards ; Assistant-Surgeon W. H. Harman, M.D., 4th Battalion, 60th Regiment ; Staff Assistant-Surgeon E. J. Clarke. 2nd Field Hospital, Surgeon A. Reed, 2nd Battalion, 16th Regiment ; Staff Assistant-Surgeon J. J. M'Carthey ; and Staff Assistant-Surgeon R. W. Lowe. 3rd Field Hospital, Staff Surgeon H. Titterton, M.D. ; Staff Assistant-Surgeon D. Murray ; Staff Assistant-Surgeon T. G. Bolster, M.D.

Northern Army Corps.—Principal Medical Officer, Inspector-General J. Fraser, M.D., C.B. ; Staff Assistant-Surgeon G. Duncan ; Staff Assistant-Surgeon J. White.

Staff 3rd Division.—Principal Medical Officer, Staff Surgeon-Major G. A. F. Shelton. 1st Field Hospital, Surgeon M. B. Lane, 2nd Battalion, 4th Regiment ; Assistant-Surgeon J. Paxton, M.D., 30th Regiment ; and Assistant-Surgeon J. Bourke, 2nd Battalion, 15th Regiment. 2nd Field Hospital, Surgeon F. S. G. Gunn, 99th Regiment ; Assistant-Surgeon H. Harrison, 46th Regiment ; and Assistant-Surgeon T. Steward, M.D., 90th Regiment. 3rd Field Hospital, Surgeon W. H. Polland, 2nd Battalion, 22d Regiment ; Assistant-Surgeon J. D. Milburne, 13th Hussars ; and Staff Assistant-Surgeon E. Chandler.

Staff 4th Division.—Principal Medical Officer, Surgeon-Major E. J. Franklyn, Royal Horse Artillery. 1st Field Hospital, Surgeon B. Burland, M.D., 13th Hussars ; Staff Assistant-Surgeon, J. G. Grant ; and Assistant-Surgeon J. V. T. Malcolm, M.D., 9th Lancers. 2nd Field Hospital, Surgeon O. L. Patterson, 1st Battalion, 22nd Regiment ; Assistant-Surgeon E. S. Lowe, M.B., 102nd Regiment ; Staff Assistant-Surgeon A. W. Sheddon, M.D. 3rd Field Hospital, Surgeon R. W. Jackson, 100th Regiment ; Assistant-Surgeon A. A. Macrobin, M.B., 2nd Battalion, Rifle Brigade ; and Staff Assistant-Surgeon J. H. Reynolds, M.B.

DEATH-CERTIFICATES.

WE have many times had occasion to refer to the urgent applications frequently made by parents to surgeons, to sign death-certificates of children attended by dispensary and hospital surgeons, but not seen by the surgeon at or since the decease ; and have had occasion to refer to the serious dangers which may result from placing any faith whatever on the representations so made. A charge brought against a surgeon at Stratford-on-Avon, at the County Petty Sessions on Friday, illustrates impressively these dangers. The report in a local paper states that Mr. Thomas H. W. Croft, who has been in practice at Snitterfield for about twenty years, was charged with having issued a false certificate of the death of Henry Need, a child about four years of age, belonging to a (now) married woman named Helen Bastock, of the same village. The inquiry sprang out of a judicial investigation into the cause of death of the said Henry Need, it having been alleged that certain circumstances attending the decease of the child were suspicious ; but, after the woman Bastock had been apprehended and remanded more than once, she was discharged, no criminating evidence having been adduced. The deceased was seized with, it is said, convulsions, shortly after eight o'clock on the morning of May 3rd. The defendant was sent for three times ; but he never went near until after the death of the boy, which took place at half-past nine o'clock the same morning. On being asked for a certificate, he gave the following : "I hereby certify that I attended Henry Need, three years of age last birthday ; that I last" (the words 'saw him on' were run through with a pen) ; "that he died on 3rd May 1872, at Snitterfield. The cause of death was a convulsive fit, from which he never rallied. (Signed) T. H. W. Croft, M.R.C.S." A coroner's inquest was also held, and a *post mortem* examination made. The contents of the child's stomach were analysed by the defendant ; but the jury, after a long investigation, gave an open verdict. Mr. Hesp, of Warwick, attended on behalf of Mr. Croft, and endeavoured to show that the practice of giving such certificates was quite customary in the profession. The defendant did not desire to conceal anything, inasmuch as he had nothing to hide. He accepted the words of the mother when he reached her house, only a very few minutes after death ; and, as he had known the family to be respectable, there was no reason for doubt on the part of Mr. Croft. A second charge was gone into, of having given a certificate to the Provincial Insurance Society, of which the mother was a member, in the following terms : "I hereby certify that I attended Henry Need" (the words 'during a period' were expunged). "He died suddenly, of a convulsive fit, on 3d May, 1872. He appeared to me about four years of age. Convulsive fit was the cause of death. Duration of disease one hour and a half." The magistrates, after some deliberation, committed the prisoner for trial, accepting bail in each case—the accused in £50, and two sureties of £50 each, making a total sum of £300.

THE RELATION OF SYPHILIS TO INSANITY.

DR. MILDNER, Director of the Lunatic Asylum at Klosternenburg, states that 5,529 patients were admitted into the male department from 1854 to 1869. Special investigations were made for the purpose of ascertaing whether, and how far, the occurrence of insanity could be traced to syphilis ; but such relation was ascertained in only seven cases, or 1.2 per cent. of the whole.

THE CONTAGIOUS DISEASES ACTS.

MR. BRUCE recently received a deputation of from fifty to sixty representative working men from the towns where the Contagious Diseases Act is in force, who presented a protest signed by several hundreds (it was said, thousands) of the working classes in favour of a repeal of the Act. The deputation was introduced by Mr. S. Morley, M.P., and was accompanied by Mr. A. J. Mundella, M.P., and Mr. D. M'Laren, M.P. Mr. Bruce reminded the deputation of the great differences of opinion upon this question, expressed his personal opinion in favour of the Acts, and pointed to the fact that a large number of members of the House of Commons were of the same way of thinking. The deputation on leaving the Home Secretary's office held a private conference, at which a resolution was unanimously passed, earnestly recommending the appointment of one or more electoral agents to devote themselves entirely to the promotion of the objects the deputation had in view. The Wesleyan Conference yesterday resolved unanimously to memorialise the Government against the Contagious Diseases Acts, and to appoint a standing committee to take action respecting these measures.

THE NEW LAW ON BABY-FARMING.

THE new Act for the better protection of infant life has been printed, and will come into operation on the 1st of November. The object of the new law is to guard against baby-farming. The houses of persons retaining or receiving for hire two or more infants, for the purpose of nursing, are to be registered. The age of an infant is under one year. The local authority of the place is to keep the register, and may refuse to register unless satisfied that the place is suitable, or the applicant of good character. A person so registered is to keep a register of all infants received, and to produce the same when required. A local authority, for serious neglect, or when a person is incapable of providing proper food and attention, or if the house is unfit, may strike the name and house off the register. An inquest is to be held on an infant dying in a registered house unless a medical certificate is produced to to the coroner. The punishment for an offence under the Act is not

to exceed six months, with or without hard labour, or a fine of £5. Fines and penalties recovered are to go to the local rates. The statute extends to the United Kingdom, and the local authorities are specified. In the metropolis the Metropolitan Board of Works is the local authority, and in the City of London the Common Council.

THE COMMITTEE OF COUNCIL.

MR. HUSBAND, whose term of office as President of Council of the British Medical Association expired last week, received a hearty vote of thanks at the annual meeting, and was elected a permanent Vice-President of the Association—a compliment which had also been paid to his predecessor in office, Dr. Sibson. Mr. Husband has held office during a period of the affairs of the Association in which it was apparent that its rapidly growing and now extensive business needed an improved supervision and organisation, such as the previously existing arrangements did not provide. To meet the difficulties which arose from that defect, and act with the necessary promptitude in arresting the current and preventing future losses, required considerable energy, and involved somewhat painful duties demanding moral courage. The Committee of Council and the Association had reason to feel assured that the President of Council had shewn a complete singleness of purpose and unwavering moral energy in his official course, and Mr. Husband earned their confidence and respect during his difficult period of office. The general voice had nominated Dr. Chadwick of Leeds, our recent president at the great meeting in that town, as Mr. Husband's successor; but Dr. Chadwick felt unable to accept the onerous duties, for the performance of which he has given repeated proofs of his fitness. The choice then fell as unanimously upon Mr. Southam, one of the earliest, steadiest, and most respected members of the Association, and long associated with its Councils. In the reconstitution of the Committee of Council, it is felt that the claims to representation of southern associates have not been adequately considered. The defect may be remedied on another occasion.

MEDICAL PROMOTION OF PUBLIC MEASURES.

THE Bastardy Laws Amendment Bill has received the royal assent. This Bill, like the Infant Life Protection Bill—of which it is a supplement—was promoted by the Infant Life Protection Society, and draughted by a subcommittee, consisting of Mr. Charley, M.P., Mr. Manning, the Queen's Coroner, Mr. Ernest Hart, and Mr. J. Brendon Curgenven. It was introduced by Mr. Charley into the House, and both pieces of legislation—the most important private Bills of the session—may be mainly ascribed to the initiative of the medical men concerned.

ACTION FOR BREACH OF AGREEMENT: PEARSE *v.* BRIDGE.

THIS action was tried at Wells on August 7th, before Mr. Justice Lush and a special jury. Both the parties were medical men at Wellington, and the action was brought for an alleged breach of agreement. There were also counts in slander. Mr. Cole, Q.C., and Mr. Pinder were for the plaintiff; Mr. Lopes, Q.C., and Mr. Bullen for the defendant. It appeared that in 1867 the plaintiff purchased the business of the defendant on certain terms, by which the defendant was to assist for a term of three years. The agreement contained a proviso by which, at the end of three years, if the defendant desired to continue in practice, he was only to do so as a consulting practitioner, and half the fees so obtained by him were to be paid to the plaintiff. This agreement was continued for a further time, subject to a proviso for its termination by six months' notice. It was so terminated by notice, and it was now alleged that since that time the defendant had practised otherwise than as a consulting practitioner, and had not paid over a moiety of the fees. For the plaintiff, witnesses were called to speak to the fees that should be received by a consulting practitioner, which, according to the plaintiff, should not have been less than one guinea in the town and two guineas outside, whereas the defendant had made smaller charges. For the defence, several medical men, among others, Mr. Gay, member of the Council of the College of Surgeons, and Dr. Shapter of Exeter, were called, who gave evidence generally that the defendant's mode of conducting his business was not inconsistent with the generally understood practice of a consulting practitioner. The defendant had paid into court a sum of £35 as the half of the fees earned by him, which was due under the agreement to the plaintiff. The case ended in a verdict for the defendant on all points.

THE PUBLIC HEALTH ACT.

THE following reference to this Act occurs in a paragraph of the Queen's speech on proroguing Parliament. "The Public Health Act, though it does not embrace all the enactments which have been desired, has, by the establishment of efficient and duly organised local authorities, done much both for the enforcement of the present sanitary laws, and for rendering more easy what yet remains to be accomplished in the way of legislative provision on the subject."

GRATUITOUS SERVICES.

IT is not without interest to notice the comments of public journalists on medical opinions and medical complaints. The Birmingham papers have taken a great deal of interest in the meeting of the Association last week, and have reported its proceedings very fully and very ably. In the course of its comments upon the discussion of "hospital abuses," the *Birmingham Post* says: "The existing condition of free medicine—to use a phrase in character with some of those employed by the Association—with all its 'abuses,' can be attributed simply to the fact that the dignity and publicity of officiating at a charitable institution pays a doctor better than money. Instead of desiring remuneration for such service, members of the profession will themselves pay large sums in order to obtain the privilege of rendering it; and, as long as this continues to be the case, it is absurd to suppose that the public will consider them to have any cause for grumbling at their position, or at the nature of the duties which they have to perform."

TÆNIA IN A NEW-BORN INFANT.

Dr. S. G. ARMOUR writes in the *Detroit Review of Medicine*: "We have just now an unique case in the Long Island College Hospital. An infant three days old was found to have *trismus*; and, in the fifth day after its birth, commenced passing well matured *Tænia solium*. Further on, he adds: "Neither Küchenmeister nor Cobbold make mention of the possibility of such a thing; and Vogel, in speaking of tæniæ, says, 'They rarely affect children under one year of age.' Now here is a scientific nut to crack. How did the tænia gain entrance to the intestinal canal of the fœtus *in utero*, for the child was fed on nothing but the mother's milk?" Our readers will probably be glad to receive, from authorities on the subject, some expression of opinion on this interesting case.

SISTERS IN DEED.

ON the occasion of the closure of the Small-pox Asylum at Hampstead, Mr. Wyatt moved, with a few prefatory remarks: "That, as the Hampstead Hospital is now closed for the reception of cases of small-pox, and the members of the East Grinstead Sisterhood will, in consequence, shortly retire from the nursing charge of the hospital, which they have held since its opening in December, 1870, the managers desire gratefully to acknowledge their deep obligation to Sister Frances and the other members of the sisterhood for the unwearied zeal, skill, and devotion with which they have discharged their onerous and painful duties during the long and severe epidemic of small-pox which has existed in the metropolis; and that while the managers part from the sisterhood for a time, they venture to hope that, should London be again visited by any epidemic for which it may be the duty of the managers to provide, the same devoted feelings which produced the aid of the sisterhood on the last occasion may enable the managers to rely with confidence on receiving their valuable help, should it be required. That a copy of this resolution be forwarded to the superior of the East Grinstead Sisterhood, with a request that she will be so good as to

communicate the grateful thanks of the managers to all the sisters who have been engaged in nursing at the Hampstead Hospital." The motion was seconded and carried unanimously.

THE INTRODUCTORY ADDRESSES AT THE LONDON MEDICAL SCHOOLS.

THE following is the list of Introductory Lectures at the Metropolitan Medical Schools. Charing Cross Hospital, Dr. J. Watt Black; Guy's Hospital, Dr. Pye-Smith; London Hospital, Mr. Jonathan Hutchinson; King's College, Dr. W. S. Playfair; St. George's Hospital, Mr. J. Rouse; St. Mary's Hospital, Mr. A. T. Norton; Middlesex Hospital, Dr. Thorowgood; St. Thomas's Hospital, Mr. John Croft; University College, Mr. Christopher Heath; Westminster Hospital, Mr. Pearse.

SANITATION IN ROAD-MAKING AND ROAD-WATERING.

AMONGST the many sanitary improvements of the present day, we think we may fairly class the ingenious and effective system of street-watering introduced by Mr. Cooper. We have previously noticed the method; and we recur to the subject, after the results have become perhaps even more evident and important as means of sanitation than was expected. The process is the use alone or in the water of the chlorides of sodium, calcium, and magnesium. The compound offers the qualities of being deliquescent, deodorising, and disinfecting. The salts are cheap, odourless, and colourless; and, according to Wanklyn, Paul, and Odling, are not destructive of wearing apparel, carriages, etc. In fact, the Westminster Board of Works, before allowing the use of the material, quite satisfied themselves on this point. By the new system, when the road has been properly impregnated with the salts, it requires scarcely any watering, and consequently very little scraping; indeed, the salts save from disintegration the material of which the road is made. It has been estimated that thirty per cent. of the cost of road-repairs may be saved by the use of the solution, and that one sprinkling will be equally effective in keeping a road damp with three sprinklings with plain water. An additional advantage of some moment, in London at least, is the solvent effect of the solution on the grease which forms a very disagreeable ingredient of London mud. The sanitary advantantages of Mr. Cooper's system are capable of wide application. The salt compound offers the immense advantage of disinfecting and deodorising the roads. The very offensive state of the atmosphere of Piccadilly, Regent Street, and other well known London thoroughfares, was this year, during the intense heat, the subject of strong and general comment, and the cause of still greater suffering. Such a condition of affairs, however, so far as we have observed, has not been the case in any of the thoroughfares under the system carried out by Mr. Cooper. It is to be hoped that the authorities of St. James's and St. George's will, by the application of the system which we now advocate, give the public a chance next summer of breathing a purer atmosphere than they have hitherto been in the habit of affording them. Not only are the salts serviceable in the way which we have indicated, but in rainy weather they are washed off the roads, and thus they come to disinfect the sewers. It is difficult to estimate the advantages and wide application of a system such as we have tried to explain. For example: during the late water-famine in Bermondsey and Rotherhithe in the south of London, the streets might with little difficulty and cost have been kept moist by sprinkling on them the deliquescent compound of salts used by Cooper. Mews, byres, slaughter-houses, and such places, might at little cost be rendered less mischievous than they are found to be at present. During the recent intense heat, we visited, on several occasions, the parish of Paddington, and can bear out the statements of those who have been persistently urging the claims of the system to general adoption in towns. The difficulties against which Mr. Cooper has had to contend, from the influence of interested parties, has been very great and uncompromising; but we cannot doubt that the pecuniary advantages will alone in time prove too great for opposition. We are more concerned, however, in the adoption of the system on account of the sanitary advantages.

CONFERENCE OF MILITIA SURGEONS.

A CONFERENCE of militia surgeons was held on August 7th, under the presidency of Mr. W. STOKES (Dublin). In opening the proceedings, the Chairman read the following statement of militia surgeons respecting the proposed abolition of the chief portion of their emoluments, contained in the New Army Regulation Act.

"1. Militia surgeons hold their commissions for life under various Acts of Parliament. 2. Their duties are to attend the members of the permanent staff of their respective regiments; to inspect recruits wherever and whenever called upon to do so, and give opinions in writing as to their fitness or unfitness to serve in the force; to inspect those members of the staff and volunteers whose period of service has expired, and who wish to rejoin; to inspect volunteers coming up for training or embodiment, and see that they are in good health, fit for service, and free from contagious disease of any kind; to be present with the regiment during the training or embodiment. 3. The pay of militia surgeons is derived principally from a capitation allowance for attendance on the members of the permanent staff and their families, and from the fees received for the medical examination of recruits, etc. In addition, the militia surgeon receives the same pay as surgeons of the line whenever his regiment happens to be called out for training; and, in Ireland at least, this is a most uncertain and unreliable source of income, as it occasionally happens that many years elapse without there being any training; previous to 1871, there was no training for five years. When training does take place, the surgeon's income from all sources may be roughly estimated at from £150 to £200 *per annum*. It should also be remembered that the surgeon has to provide himself with a very costly outfit, and has to share in all the mess expenses. 4. The militia surgeons submit that they have always done their duties efficiently, and given satisfaction to their commanding officers. 5. In many instances they relinquished their private practice, and went with their respective regiments on active service abroad, or on garrison duty in distant parts of Great Britain and Ireland. 6. It is now proposed to deprive the militia surgeons of the chief portion of their emoluments, for, under the new Army Regulation Act, their services will only be required during the training. Thus, the chief bulk of their pay, derived from the inspection of recruits, and from attendance on the permanent staff, is to be taken away from them, without any compensation whatever. 7. In January 1863, a circular memorandum was issued, directing that militia surgeons should in future reside at the head-quarters of their respective regiments. In compliance with this order many surgeons relinquished the private practice and appointments they had obtained in one locality, and removed to new homes at the head-quarters of their respective regiments. 8. Under the new system, the militia surgeons will be called upon again to leave their homes and give up their private practice, and be present at the training or embodiment, at the new depôt centres. By this arrangement the surgeon's private practice, if he have any, and its emoluments, cease altogether; and, should he hold some public appointment, such as a dispensary or hospital, he must, if allowed to do so by the authorities, provide and pay a substitute during his absence. For this increased expenditure and pecuniary loss, the pay during the training is quite inadequate. 9. Many militia surgeons, relying on the permanency of their appointments, have neglected to seek other professional posts, and will be cast adrift on the world should this contemplated measure be passed into law. 10. It is contrary to all precedent, and contrary to the spirit of the legislature, that any class of servants of the Crown, holding permanent appointments, should, without even any alleged dereliction of duty on their part, be deprived of the greater portion of their official income without compensation. 11. In case the Government persist in abolishing the chief portion of their emoluments, the militia surgeons submit that they are entitled in all equity and justice, to fair compensation."

He said it was too late to expect anything to be done in the way of remedy or compensation this session, but it behoved them all to use their utmost influence with members of Parliament before Parliament re-assembled.

After a short discussion, it was resolved, on the motion of Dr. ORTON, seconded by Dr. WILLIAMS, "That the statement drawn up by the Irish militia surgeons be adopted by this meeting of English militia surgeons."

It was next resolved, on the motion of Dr. TAYLOR, seconded by Dr. GOODCHILD, "That a meeting of English militia surgeons be held in London at as early a date as possible, to discuss the recommendations of the meeting of English militia surgeons held at Birmingham on August 8th."

On the motion of Dr. WILLIAMS, a vote of thanks was passed to Dr. Stokes, for the kind manner in which he had taken up the matter, and the proceedings terminated.

OBITUARY.

JAMES HEYGATE, M.D., F.R.S., DERBY.

Consulting Physician to the Derbyshire General Infirmary; Senior Vice-President of the British Medical Association.

IT is with feelings of sincere regret that we record the death of Dr. Heygate of Derby, which took place, suddenly, at Eaton Hill, at the residence of his son-in-law, Mr. B. S. Currey, on the 5th instant. At the time of his death he was seventy years of age, having been born in November, 1801. Dr. Heygate commenced his professional career in Northamptonshire; but the office of physician to the Derbyshire General Infirmary becoming vacant, he was a successful candidate for the appointment, and for more than thirty-five years he practised in Derby. In 1847, the annual meeting of the Provincial Medical and Surgical Association was held in Derby, and Dr. Heygate worthily filled the office of President. At the end of his year of office he was elected a permanent Vice-President; and he ever manifested the warmest interest in the progress and success of the Association. His energies were not limited to the duties of his calling. As a county and borough magistrate, a visiting justice of the county prison, and one of a committee of visitors to the county asylum, the subject of our notice greatly distinguished himself, and his lamented death has caused a void which will not be easily filled. On the Saturday immediately preceding his death, he paid his usual monthly visit, in company with other county magistrates, to the asylum at Mickleover. Dr. Heygate was greatly respected by his professional brethren, and his services in consultation were in frequent request. His unvarying courtesy towards all, and the evident pleasure he felt in promoting the best feelings amongst his brother medical men will always be remembered. With his patients he was a great favourite. There was a charm in his gentle and kindly manner which won their hearts. With a quick perception of disease, delicate tact, and mature judgment, he was often remarkably successful in conducting his patients safely through a dangerous crisis. He was a truly earnest Christian man, and everywhere inspired esteem and regard. He was interred in the churchyard of Little Eaton, near Derby.

BARNABAS BARRETT, M.D., LIVERPOOL.

DR. BARRETT was a native of Shrewsbury. He became a pupil of his brother, Mr. Thomas B. Barrett, of Welshpool, and afterwards studied at Trinity College, Dublin, where he gained in 1850 the junior anatomical prize, and in the following year the senior prize for Anatomy and Physiology. He afterwards studied at Guy's Hospital. He became, in 1852, a Member of the Royal College of Surgeons of England, and Licentiate of the Apothecaries' Company. He was elected House-Surgeon of the Liverpool Southern Hospital, which appointment he relinquished after a few months, to enter into private practice. Dr. Barrett was a member of the Liverpool Medical Institution, Liverpool Philomathic Society, and British Medical Association, Surgeon-Accoucheur to the Toxteth Park Lying-in Charity, Assistant-Surgeon to the 8th Lancashire Artillery Volunteers, etc. He was a man of cultivated tastes, cheerful, prepossessing manners, and thoroughly devoted to his profession. He had an extensive and increasing practice; and his kindness of heart not only endeared him to his patients, but to all who had the pleasure of his acquaintance, and who feel they have lost a sincere friend. Among the poor he will long be deplored, as was manifested by the large and sympathising numbers present at his interment. Some years since, Dr. Barrett had a severe attack of pleuropneumonia, and he has occasionally suffered from bronchitis, which at times confined him to the house for a few days; but his most intimate professional friends had no idea he was a victim to the disease that proved so suddenly fatal. On Saturday morning, the 13th instant, he came down stairs apparently in his usual health, gave directions for his breakfast, and commenced writing a note in his consulting-room. Soon, however, he called to his assistant, Mr. Richards, that "he felt very queer." He was assisted to a sofa, when he became unconscious, with his face livid, and stertorous breathing. Mr. Hodgson, who resides within a few doors was with him immediately, and was soon followed by Dr. Lyster; but he died within twenty minutes from the time when he was first seized. Dr. Barrett was forty-five years of age. He leaves a widow, but no family.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—First M.B. Examination, 1872. Pass List.

First Division.

Crocker, Henry Radcliffe, University College
Duncan, Peter Thomas, University College
Gould, Alfred Pearce, University College
Herman, George Ernest, London Hospital
Houghton, Walter Benoni, University College

Second Division.

Barrow, Albert Boyce, King's College
Batterbury, George Henry, King's College
Briggs, George Chapman, King's College
Garlick, George, University College
Harris, Vincent Dormer, St. Bartholomew's Hospital
Hetley, Henry, Guy's Hospital
Hullard, Jean Arthur, University College
Jameson, Hampden Gurney, University College
Maclean, Thomas Edwin, University College
Moore, George Edward, King's College
Morley, Thomas Simmons, Guy's Hospital
Palmer, Frederick John Morton, Guy's Hospital
Sawtell, Tom Henry, St. Bartholomew's Hospital
Verco, Joseph Cooke, St. Bartholomew's Hospital
Vines, Sydney Howard, Guy's Hospital
Whittle, Edward George, University College

Excluding Physiology.

Second Division.

Harrison, Charles Edward, St. Bartholomew's Hospital
Homan, George William, King's College
Keyworth, George Hawson, Guy's Hospital
Rigby, James Arthur, Guy's Hospital
Steil, George Robert, University College

Physiology only

Second Division.

Davison, William John, College of Medicine, Newcastle-upon-Tyne, and University College
Nicholson, Arthur, King's College

ARMY MEDICAL SERVICE.—The following is a list of candidates who competed successfully at the examinations held at London in February, and at Netley in August 1872, after having passed through a course at the Army Medical School, Netley.

	Marks.		Marks.
Magill, J., Cork and London	5304	Tincier, B. M., Dublin	3870
O'Donnell, R. W., Dublin	4411	Slaughter, W. B., London	3711
Donovan, W., Dublin	4388	Browne, A. L., Belfast	3700
Swayne, C. H., Dublin	4201	Keys, C. W. M., Cork & Dublin	3537
Brown, D. B., Edinburgh	3907	Bushe, C. J. L., Dublin	3385
Quill, R. H., Dublin	3885	Stokes, H. H., Dublin	3122

NAVAL MEDICAL SERVICE.—The following candidates were successful at the competitive examinations held at London in February, and at Netley in August 1872, after having passed through a course at the Army Medical School, Netley, and who will receive commissions in Her Majesty's Navy.

	Marks.		Marks.
Edwardes, L., London & Aberd.	5070	Patterson, W. H., Dublin	3002
Maclean, J. C, B., Aberdeen	4212	Corrie, A. T., London	2993
Volatti, W. J., Dublin	3623	Wall, J. G., Dublin	2916
Davis, J. W., Galway and Cork	3601	Mackie, J., Edinburgh	2887
Bernal, R. A., Dublin and Cork	3553	Scanlan, H., Glasgow	2788
Stiell, J., Edinburgh	3476	Freeman, D. J., Dublin	2635
Cox, H. J., Dublin	3300	Nash, H. M., Dublin	2629
Drake, C., London	3283	Stone, J., Dublin	2590
Wood, J., Dublin	3027		

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At special examination meetings of the College, held on the 3rd, 5th, 6th, and 8th of August, the following received the License to practise Medicine.

Boyd, Henry Walter Butler
Byrne, Joseph
Daly, Richard Augustus Shelton
Gamble, Baptist
Ryan, Charles Edward
Thomsett, Richard Gilham
Waddell, Alexander
Warren, William

The following obtained the Diploma in Midwifery.

Boyd, Henry Walter Butler
Daly, Richard A. S.
Gamble, Baptist
Ross, Richard Edmond
Ryan, Charles Edward
Thomsett, Richard G.
Waddell, Alexander
Warren, William

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 8th, 1872.

Elliott, Norman Bruce, Denmark Hill
Hedley, John George, York Street, Portman Square
Palmer, Montagu Henry Campbell, Newbury, Berkshire

The following gentleman also on the same day passed his primary professional examination.

Clare, John, Guy's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

AMPTHILL UNION, Bedfordshire—Medical Officer for the Tilsoe District: £50 per annum.

ANDERSON'S UNIVERSITY, Glasgow—Lecturer on Medical Jurisprudence.

BEVERLEY UNION, Yorkshire—Medical Officer for the Workhouse: £30 per annum.

BURTON-ON-TRENT INFIRMARY — House-Surgeon: £130 per annum, rooms, coal, and gas.

BRIDGWATER UNION, Somersetshire—Medical Officer for the North Petherton or No. 9 District: £84 per annum.

CASTLECONNELL and ANNACOTTY, co. Limerick—Medical Attendant to the Royal Irish Constabulary.

CLITHEROE UNION, Lancashire—Medical Officers and Public Vaccinators for the Gisburn and Slaidburn Districts: £20 per anuum and fees, and £15 per annum and fees, respectively.

DAVENTRY UNION, Northamptonshire—Medical Officer and Public Vaccinator for District No. 5: £30 per annum, and extra fees.

DOVER HOSPITAL AND DISPENSARY—House-Surgeon; £80 first year, coal, gas, etc., and attendance.

DUDLEY UNION, Worcestershire—Medical Officer for the Tipton East District: £60 per annum.

GREAT NORTHERN HOSPITAL, Caledonian Road—House-Surgeon.—Junior Resident Medical Officer.

LADIES' MEDICAL COLLEGE, Great Portland Street—Lecturer on Midwifery: guaranteed minimum amount of fees, £120 per annum.

LEEDS GENERAL INFIRMARY—Resident Medical Officer.

LIMERICK UNION, co. Limerick—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Annacotty Dispensary District: £100 per annum and fees.

LISKEARD UNION, Cornwall—Medical Officer and Public Vaccinator for the Callington District: £65 per annum, and extra fees.

LOCHCARRON, Ross-shire, and part of the parish of Applecross—Parochial Medical Officer: £145 per annum, and various perquisites.

MARTLEY UNION, Worcestershire--Medical Officer for the Leigh or No. 4 District: £85 per annum.

MATER MISERICORDIÆ HOSPITAL, Dublin—Physician.

MIDDLESEX HOSPITAL MEDICAL COLLEGE—Two Entrance Scholarships: £25 and £20 per annum, for two years.

NEWBURGH, Fifeshire—Parochial Medical Officer.

NEW ROSS UNION, co. Wexford—Medical Officer and Public Vaccinator for the Templeudigan Dispensary District: £50 per annum, and fees.

NORTH BIERLEY UNION, Yorkshire—Medical Officer for the Tong or No. 4 District: £20 per annum.

NORTH DUBLIN UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Blackhall Street Dispensary, North City Dispensary District: £125 per annum, and fees.

NORTHAMPTON GENERAL INFIRMARY—Dispenser: £100 per annum.

PORTSEA ISLAND UNION—Medical Officer for the Railway District: £90 per annum.—Medical Officer for the Landport District: £70 per annum.

PROVIDENT MEDICAL INSTITUTION AND LYING-IN CHARITY, Pimlico Road—Consulting Physician.—Attending Medical Officer.

ST. MARY'S HOSPITAL MEDICAL SCHOOL—Scholarship: £40 per annum for three years.—Exhibition: £20 for one year.

ST. PANCRAS and NORTHERN DISPENSARY, Euston Road—Resident Medical Officer: £100 per annum, residence, coal, gas, and allowance for a servant.

SCULCOATES UNION, Yorkshire—Medical Officer for the Sutton District: £60 per annum.

SUFFOLK GENERAL HOSPITAL, Bury St. Edmund's—Physician.

SURREY DISPENSARY—Physician.

SUSSEX COUNTY HOSPITAL—House-Surgeon: £80 a year, with £10 a year from each resident pupil, board, and residence.

TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.

WARNEFORD LUNATIC ASYLUM, Oxford—Resident Medical Superintendent: £260 per annum, with board, furnished apartments, etc.

WATERFORD DISTRICT LUNATIC ASYLUM—Resident Physician Superintendent.

WEST LONDON DISTRICT SCHOOL, Ashford, near Staines — Medical Officer: £120 per annum.

WESTMINSTER GENERAL DISPENSARY, Gerrard Street—Physician.—Resident Medical Officer: £100 per annum, furnished apartments, attendance, coal, and gas.

WESTMINSTER HOSPITAL—House-Surgeon.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*COOPER, Alfred, Esq., elected Surgeon to the West London Hospital, *vice* William Bird, Esq., resigned.

Ross, D. M., Esq., appointed Medical Officer to the County Fever Hospital at Monaghan.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

*HEYGATE, James, M.D., F.R.S., of Derby, Vice-President of the British Medical Association, on August 5th.

WARDELL.—On August 5th, at Calverley Park, Tunbridge Wells, aged 52, Jane, the beloved wife of *J. R. Wardell, M.D., F.R.C.P., and fifth daughter of the late Robert Piper, Esq., of The Hall, Pickering, Yorkshire.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY .....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. J. SMITH (St. Helier's.)—We have no means of answering the question.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, August 10th: The North British Advertiser, August 10th; Saunders's News-Letter and Daily Advertiser, August 6th; The Manchester Guardian, August 14th; The Tewkesbury Record, August 10th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

The Rev. Dr. Haughton, Dublin; Mr. Alfred Baker, Birmingham; Dr. Wilks, London; Mr. C. Steele, Clifton; Dr. A. G. Miller, Edinburgh; Dr. Evory Kennedy, Dublin; Dr. Sturges, London; Mr. A. H. Morrell, London; Mr. J. Woodman, Exeter; Dr. W. D. Moore, Dublin; Dr. James Johnston, Birmingham; Dr. Althaus, London; Dr. J. W. Ogle, London; Dr. Drysdale, London; Dr. Woakes, Luton; Messrs. Gilmour and Dean, Glasgow; Dr. Yellowlees, Bridgend; Dr. Wilson, Cheltenham; Mr. W. C. Cass, London; Dr. Sieveking, London; Mr. Pope, Tring; Dr. Wardell, Tunbridge Wells; Dr. Paterson Barry, Twickenham; Mr. Bartleet, Birmingham; Mr. W. J. Barkas, Newcastle-upon-Tyne; Dr. C. B. Taylor. Nottingham; Mr. W. Date, Crewkerne; Our Dublin Correspondent; Dr. Goode, Derby; M.D.Ed.; Mr. W. Acton, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. H. Arnott, London; Dr. Fuller, London; Mr. J. W. Langmore, London; Mr. H. R. Reeves, London; Mr. J. E. Beckingsale, Newport, Isle of Wight; Mr. J. W. Baker, Derby; Dr. Routh, London; Dr. Ransome, Manchester; Dr. Rumsey, Cheltenham; Mr. Boughton, Tewkesbury; Mr. W. H. Hewitt, Manchester; Dr. J. M. Maclagan, Mexborough; Mr. George Eastes, London; Dr. Tyndale Watson, Tottenham; Dr. Sutton, London; Mr. V. Jackson, Wolverhampton; Dr. Thompson Dickson, London; Dr. Tibbits, Warwick; Dr. Nason, Stratford on-Avon; M.D., Aberdeenshire; Mr. A. Davies, Swansea; Mr. F. Underhill, Tipton; Mr. S. Westropp, Lisdoonvarna; Mr. C. C. Walter, Dover; Mr. Bartleet, Birmingham; Mr. W. C. Davis, Mountain Ash, Aberdare; Dr. Wadham, London; Mr. James Adams, London; Messrs. J. and E. Whitworth, Manchester; etc.

BOOKS, ETC., RECEIVED.

The Graft-Theory of Disease. By James Ross, M.D. London: 1872.

A Treatise on the Causes of Heart-Disease, with Chapter on the Reason of its Prevalence in the Army. By Francis W. Moinet, M.D. Edinburgh: 1872.

A Manual for Hospital Nurses and others engaged in attending on the Sick. By Edward J. Domville, L.R.C.P. London: 1872.

CLINICAL LECTURE

ON

URINARY FISTULA OF THE PENIS, TREATED BY URETHROPLASTY.

Delivered in King's College Hospital, May 10th, 1872.

By JOHN WOOD, F.R.S.,
Surgeon to the Hospital, and Professor of Surgery in the College; etc.

GENTLEMEN,—The kind of urinary fistula of which I propose to treat to-day is one which, by the admission of all surgeons of experience, is very difficult to cure; viz., a fistulous opening in the wall of the urethra, through the under surface of the penis in front of the scrotum. The most common point of opening of this kind of fistula is placed just at the junction of the scrotum with the penis, where an acute angle is formed in the usual pendant position of the latter, and it is at this part that it is most difficult to close the fistula. Frequently, it is the result of a stricture forming after repeated attacks of gonorrhœa in the anterior part of the urethra, and succeeded by inflammatory abscess, ulceration of the urethral wall, and infiltration of urine into the scrotum, and under the loose skin of the penis. Sometimes it forms in consequence of neglect in wearing a catheter too long and too constantly in the urethra, when treating stricture by what is called "vital dilatation", by a hard and unyielding silver catheter. Sometimes, as in the case now in the hospital upon which I have to remark to-day, it is the result of an injury to the penis, producing both a tough traumatic stricture and urinary infiltration, abscess, and sloughing of a considerable extent of the lower urethral wall. The resulting loss of substance in a narrow channel like the urethra, complicated with a very resisting organic stricture placed immediately in front of it, is a very serious and difficult condition of things, and one which requires all the resources and all the care and foresight, as well as all the patience and perseverance of the surgeon to remedy. I do not say that, even when he has done all that is possible, he can succeed in *curing*, in the proper sense of the word, either a traumatic or any other kind of permanent organic stricture. On the contrary, I believe that it is impossible by any system of treatment whatever, entirely to eradicate the tendency to reproduction of the urethral narrowing which, in a severe organic stricture, remains at the diseased part. But it may be so far remedied that by a careful avoidance of exciting causes, and the continued occasional use of the catheter or bougie, the canal may be kept sufficiently free to allow the natural and proper flow of urine. It is one among the many conditions of disease in which the physician or surgeon can only, in the nature of things, palliate and relieve, but cannot entirely take away.

I have practised and witnessed very many plans to close up such an opening, which have resulted sometimes in entire failure, sometimes in partially bettering the patient's condition, and sometimes, it must be said, in leaving him worse than it found him. First, dilating the stricture by a combination of section with the bougie treatment, up to the size of a No. 11 or 12, and then paring the edges all round and drawing them together with hare-lip or other sutures, with a large catheter kept in the bladder, is a plan which I have seen over and over again to fail utterly; and it was not until I had recourse to the method which has been entirely successful in the following case, that I obtained results which encouraged me to perseverance in a line of treatment deduced from the practice I have pursued with an unusual amount of success for some years, of transplanting tissue from adjacent parts to fill up voids in the part affected.

C. C., aged 25, from Warminster, in Dorset, is now under my care in a convalescent condition in the Victoria ward of the hospital. He was admitted on the 10th of April, last month. Last September, he sustained a violent blow or crush of the penis in hurriedly getting over a gate with the organ in a condition of erection. The injury was succeeded by great shock and prostration, extensive ecchymosis, enormous swelling, sloughing, and extravasation of the urine into the penis and scrotum. My friend, and former house-surgeon at this hospital, Mr. Wilcox of Warminster, was called in, and succeeded, after much difficulty, in passing a No. 7 catheter and drawing off the retained urine. After bringing the patient safely through this dangerous crisis, and dilating carefully the stricture which followed upon it, Mr. Wilcox attempted, by the ordinary plan to which I have alluded, to close up the fistulous opening about one month before his admission into the hospital. Complete failure followed this attempt, and the patient was sent up to me with some valuable remarks from the surgeon in attendance, which guided me a good deal in the treatment which has proved successful.

The man was young, vigorous, and in excellent robust country health, with a very hard resisting stricture, about three inches from the meatus urinarius, admitting with difficulty a No. 7 bougie, and behind it an oval fistulous opening showing plainly the interior of the urethra, about seven-eighths of an inch in the long diameter, and three quarters of an inch wide, and leaving only less than a quarter of an inch of the upper urethral wall intact. Now, here was evidently a hiatus which, like the deficient vesical and urethral wall in epispadias and "ectopia vesicæ", could only be filled up by transplantation of skin, arranged in such a manner that no contraction should be possible in the deeper surface put in to complete the urethral wall. I, therefore, determined to perform an operation on the same principle as that which I have frequently performed for the deformity just alluded to.

As a necessary preliminary, on the 18th of April, I divided the stricture with a probe pointed tenotomy knife, upon a director inserted through the fistulous opening and directed forwards, making a free section in two places towards the side and dorsal aspect of the penis, and then introduced and tied in a No. 12 silver catheter. This excited little irritation or suppuration; and accordingly, not wishing the man's health to become deteriorated by too long a previous residence in a London hospital, on the 20th of April I performed the following operation under chloroform. On the left side of the fistulous opening I traced out with a small scalpel an oval piece of skin adapted to fit the opening exactly, leaving its long side next to the fistula attached and uninjured by the knife. I next raised the oval flap, taking care to leave it sufficiently thick and bulky, pared carefully the right edge and ends of the opening, and turned over the flap of skin like the lid of a box, to fit in and adhere to the sides of the fistulous aperture. This I carefully stitched in by five points of thin silver-wire suture, leaving the twisted ends very long, so as to reach to the outer surface of the whole of the extensive wound which I next proceeded to make. This I did by dissecting off the skin all round the fistulous opening to the extent of an inch and a quarter on every side, so as to leave a broad raw surface for adhesion, taking away entirely the skin so dissected off, so as to prevent retraction and subsequent narrowing of the surface destined for adhesion. Then, from the anterior surface of the scrotum, immediately behind the fistula, I dissected a triangular flap of skin, leaving a broad base attached at the lower side, and a blunt truncated angle at the upper part. This, after the somewhat free bleeding had ceased entirely, and all the surfaces were carefully dried and cleansed, I brought forward by traction upon the whole scrotum, and placed upon the raw surface of the deeper reversed oval flap and upon the prepared and dissected margin, and secured the whole in its place by numerous points of silver-wire suture, permitting the passage between them, on the right side, of the long ends of the deeper wire sutures. The scrotum was kept in its forward position by means of a suture of thick silver wire which would not easily ulcerate through the skin, and was then placed upon a pad or cushion. The No. 12 catheter was retained in the bladder in the usual way, filling entirely the urethra, and permitting no urine to escape by the side of it. On the 23rd, it was found that some urine had escaped through the left posterior angle of the L-shaped wound, together with about an ounce of pus, which had evidently accumulated in the front part of the scrotum from which the superficial flap had been taken. A India-rubber tube was then attached to the end of the catheter, long enough to reach over the side of the bed to a vessel placed under it, so as to act like a syphon to keep the bladder clear of urine. This acted admirably throughout the treatment. The external wound had by this time become entirely united by adhesion, except at the points where the deep sutures emerged, and at the lower or posterior angles, which still discharged a small amount of pus from the side of the scrotal abscess. All the superficial wire sutures were now removed.

From this time to the 30th April, the discharge of urine and pus by the wound became daily less. The long deep wire sutures were removed one by one as they became loosened; and on May 3rd the report is, that no more urine passed through the wound, and scarcely an appearance of pus, and that the extreme angles of the wound were gradually closing, one of them being in fact actually closed. On the 10th of May, the catheter was left out for a few hours, and used only when the bladder required emptying. In consequence of the rapid return of contraction in the stricture it was found somewhat difficult to reintroduce it for the first few times, but this operation gradually became easier, and, on the 20th May, he was discharged with the wound entirely and soundly healed, and the No. 10 catheter passed only once a-day. The urine

passed freely in the normal manner, and the neighbourhood of the scar felt pliable, soft, and healthy.

I may now speak of the difficulties with which the surgeon meets in producing such a favourable result as this, and of the causes of the frequent failure to obtain it. The most influential cause is the constant escape of urine, and its presence between the surfaces which we wish to adhere. Behind the stricture and the fistula the urethral canal is frequently somewhat dilated, and the urine will at this point pass by a catheter that completely fills and distends the strictured part. It then percolates into the wound, passing between and irritating the raw opposing surfaces, and preventing their union. This is to be prevented, first, by having a full-sized catheter in the urethra, and previously inuring the patient to its constant presence, and wearing out, as it were, the irritability of the bladder: secondly, by producing a primary and effective obstacle to the escape of the urine, by an accurately adapted and well-fitting under flap to fill up the fistulous opening completely: thirdly, by having very broad surfaces of adhesion, accurately adjusted, and which can be kept by pressure in close approximation, to the exclusion of any urine that may accidentally get into the neighbourhood of the wound: fourthly, by preventing any strain upon the stitches, supporting the weights of the scrotum and testes by the arrangement of a thick suture and a supporting cushion or pad such as I have described. In these cases I have found the use of a broad strap, placed across the upper part of the thighs and behind the scrotum after the manner of Ricord's yoke, very useful; and I employ it also after the operation for the radical cure of rupture, with a like intent. In conclusion, I should say that it is of the highest importance to have the patient's general health good, his urine normal, and his bladder and kidneys quiet and not irritable, before attempting such an operation as the foregoing. He must also be patient, and, if possible, hopeful enough to aid the efforts of the surgeon for his recovery; it is of no use attempting these operations in broken-down constitutions, with diseased kidneys, albuminous urine, and irritable nerves.

ABSTRACT OF LECTURES
ON THE
SURGICAL TREATMENT OF ANEURISM IN ITS VARIOUS FORMS.

Delivered before the Royal College of Surgeons of England.

By T. HOLMES, F.R.C.S.,
Professor of Pathology and Surgery.

Lecture V.—*June 12th*, 1872.

Subclavian Aneurism (*concluded*).—Abdominal Aneurism.

The following points were proved regarding subclavian aneurism in the last lecture; viz., that such aneurisms are usually of small size, of tubular form, and connected with extensive disease of the artery on the proximal side; that the Hunterian operation rarely succeeds even on the third part of the artery, and has never been successful on the first, and that some more profitable treatment must therefore be sought for; that, in some of the cases where the first part of the artery has been tied, the second part might possibly have been secured; and that compression, which has been occasionally used with success, deserves a more extensive trial. It remained now to consider the more dangerous plans of galvano-puncture and manipulation. The history of manipulation since its introduction by Sir William Fergusson was given; showing that in seven cases in which it has been used, five of them being cases of subclavian aneurism, a cure was effected in one of the subclavian and one popliteal, and in none was there proof of any serious mischief; from which the inference was drawn that the method was one which may be rationally used in the cases not amenable to the ordinary resources of surgery. The same may be said about galvano-puncture, which also has been used with success, although in the majority of cases the clot has proved unstable and has broken down again, and in one recent case death has occurred from embolism. Amputation at the shoulder-joint, it was considered, ought, in the present state of our experience, to be reserved for cases in which gangrene is either imminent or has set in.

Abdominal Aneurisms were divided into those which affect the abdominal aorta or its branches as high as the pancreas, those of the lower part of the abdominal aorta, and those of the iliac arteries. It was remarked that all these aneurisms are susceptible of spontaneous cure; and that in other cases such aneurisms progress very slowly, a remarkable instance of which was related in the person of a well known Irish surgeon. An instance was also related of the consolidation of an iliac aneurism during confinement to bed, published by Mr. Joliffe Tufnell. Such instances show that surgeons should not be too eager to resort to dangerous methods of treatment, but should try first to effect the cure of the aneurism by internal treatment. This having failed, we must consider the surgical treatment of the above three classes of tumours. First, aneurism situated as high as the pancreas involves either the trunk of the aorta or one of its branches, usually the superior mesenteric. Those situated on the trunk of the aorta are inaccessible to any surgical measure except distal pressure or ligature. Distal pressure was used lately by Mr. Bryant in a case of aneurism at the root of the cœliac axis. The pressure produced death by contusion of the small intestine, setting up enteritis and peritonitis. A considerable amount of coagulum was found in the aneurismal sac. Still the ultimate cure of the aneurism, if the patient had survived, seems very doubtful; and the propriety of using this method can hardly be said to be established. Theoretically, there seems little probability of cure, since the collateral circulation must go on through the portion of artery involved in the disease. Nor does distal ligature hold out any hopes of cure.

The subject of mesenteric aneurism was next discussed. This is less uncommon than is generally supposed; and some examples of it were brought forward—one in a patient still under observation at St. George's Hospital, and others from pathological collections, etc. In some of these cases, the aneurism during life appears limited, rounded, and movable; and the idea might occur of treating it by the old operation of laying the sac open, the circulation being commanded by a tourniquet on the abdominal aorta. The specimens, however, showed that very commonly the tumour runs up by a flask-like prolongation under the pancreas into the trunk of the aorta, rendering such an operation impracticable, and rendering the application of pressure also very dangerous, from the probability of contusing the upper portion of the thin sac. There are, however, a few cases of mesenteric aneurism in which the tumour is more limited, and which would probably be curable by pressure; which plan of treatment ought, therefore, to be cautiously applied in any appropriate case.

The second class of abdominal aneurisms are those affecting the lower part of the abdominal aorta, and it was an aneurism of this sort which was cured by Dr. Murray of Newcastle in his original trial of compression. This is the only case in which it has been proved by dissection that an aneurism seated above the bifurcation of the aorta has been cured. Mr. Durham has published a case in which he believes that he has effected the same thing; but the patient is still living. A preparation and diagram from Dr. Murray's case were exhibited.

These cases show the feasibility of curing abdominal aneurism by rapid pressure under chloroform; but the propriety of attempting its cure by gradual pressure without chloroform ought not to be lost sight of, as originally suggested by Mr. Holmes, before the occurrence of Dr. Murray's case. This plan is free from the dangers of rapid compression, and might be trusted to succeed, though not very frequently.

The third class of aneurisms are *iliac*. It was in reference to these that Mr. Syme proposed to revive the old operation in the abdomen. The history of this proposal was given; and it was shown that some older surgeons—viz., Velpeau, Scarpa, Desault, and Roux—had proposed or applied the old operation in the axilla and in the groin. And Mr. Skey and Sir James Paget had operated in this way in rupture of the axillary artery. Mr. Syme, however, was no doubt original in his proposal to treat an iliac aneurism in this way; and his partial success in the operation which he performed was rendered possible by his employing the aortic tourniquet. Sir Astley Cooper had, it is true, attempted to carry out the same operation, having the aorta compressed by two assistants; but he failed to find the artery. The reasoning on which Mr. Syme based his proposal assumes that in every aneurism there is a definite point at which the artery opens into the aneurism, that the sac travels along the arterial wall, and that the portion of the wall of the artery thus included in the aneurismal sac is healthy. On the other hand, Mr. Henry Lee asserts that in the majority of aneurisms there is no such definite point of communication, and that an attempt to operate in the manner prescribed by Mr. Syme would usually terminate in a failure such as occurred to Sir Astley Cooper from that very cause. This question has to be discussed in the next lecture.

ON THE TREATMENT OF ANTE-SCROTAL URINARY FISTULÆ.

By JAMES R. LANE, F.R.C.S.,
Surgeon to St. Mary's Hospital.

I HAVE read with much interest, and have derived much instruction from, the excellent Address on Surgery recently delivered by Mr. Pemberton to the British Medical Association. There is one point, however, referred to by him on which I would beg permission to say a few words.

Mr. Pemberton says: "In reference to the repair of penal and scrotal fistulæ, I would remark that they can alone be treated satisfactorily by the urine being drained through the rectum or (as in a case which he mentions) through the perinæum. Even their union by first intention is a myth; but union may be obtained by keeping the granulating edges together by some artificial means, at the same time that vivacity is maintained in them by the use of the acetum lyttæ."

I entirely concur with Mr. Pemberton that such fistulæ can only be treated satisfactorily by draining away the urine temporarily through the rectum or perinæum; this is, in fact, an essential condition of success; but I must demur to his statement that union by first intention is a myth, and I think it would be a matter for regret if this expression of opinion, coming from so trustworthy an authority, should discourage surgeons from attempting plastic operations in such cases, and lead them to rely, in preference, on the uncertain and tedious action of the acetum lyttæ. I believe that union by first intention is obtainable in them, by proper management, with nearly as great certainty as in vesico-vaginal or recto-vaginal fistula.

The following case, which was under my care ten years since, will illustrate this. A boy, eight years old, was admitted into St. Mary's Hospital with a fistulous opening about a third of an inch long, in the urethra just in front of the scrotum. It was the result of an incision which had been made a year previously for the extraction of an impacted calculus. I introduced a grooved staff into the bladder, and cut down upon the urethra in the perinæum. Through the opening thus made I passed an elastic catheter, and tied it in the bladder. I then denuded the edges of the fistula freely, and inserted a sufficient number of silver wire sutures. A splint of thin sheet-lead, with holes in it for the sutures to pass through was placed over the wound, and the ends of the sutures were fastened with perforated shot outside the splint after Bozeman's method. The leaden plate and the sutures were left in position till the ninth day; on their removal, it was found that complete union by adhesion had taken place throughout. The catheter in the perinæum was therefore discontinued, and the perinæal wound healed favourably by granulation, the urine gradually resuming its passage by the natural channel.

Bozeman's leaden plate, which has been discarded by most surgeons as an unnecessary complication in operations for vesico-vaginal fistula, has a very useful application in cases of this kind—in which, indeed, I believe it to be almost essential to success. It is of service partly by affording a steady and gentle support to the parts on each side of the line of union, but more especially by keeping the wound gently and uniformly on the stretch in the longitudinal direction throughout the treatment; the main cause of failure when sutures only are used being the shortening and doubling up of the wound, which results from the penis falling down upon the scrotum, and the consequent gaping of the edges in the intervals between the sutures. A full-sized bougie should be placed in the urethra while the sutures are being inserted, to guard against the risk of causing a narrowing of the canal, but it need not, of course, be retained after the operation is completed. Two or three grains of camphor with opium should be given night and morning to prevent erections, and cold lotions should be freely applied for the same purpose. The risk of disturbance of the wound when erection takes place is greatly diminished by the use of the leaden plate.

I am not sure whether the temporary drainage of the urine through the perinæum had been adopted in the treatment of this very troublesome form of fistula, before I practised it ten years ago; but certainly it has not received the notice which I think it deserves, and I am glad to find it advocated by so experienced and practical an authority as Mr. Pemberton. I infer from his paper that he would generally prefer puncture of the bladder by the rectum for this purpose to incision of the urethra in the perinæum. This may be an open question; I think, however, I should in a future case again adopt the perinæal incision.

TWO CASES OF POISONING BY LEAVES OF THE PRIVET.*

By J. DANIEL MOORE, M.D., F.L.S., Lancaster.

THE common privet of our gardens (*Ligustrum vulgare*) has long been considered as a vegetable poison, and a few instances are upon record in which children have died from eating the berries of the plant; but the occurrence of poisoning by the leaves or young shoots of the plant has never as yet been recorded. During the last few weeks, in the month of April, two cases of this character have been under my care, of which the following are the principal symptoms.

The father of a child aged about nine years, requested me to see his little boy, whom he described as being feverish and drowsy. The child seemed to lose himself; did not answer questions put to him without much persuasion, and then evidently with great difficulty. On going to bed, the child tried to say his prayers, but after the first sentence or two, stopped short, as if he were drowsy or had forgotten them, and on being roused commenced again, but with the same result. The father then noticed some twitching of the hands and arms, and deemed it necessary to have immediate medical advice.

When I saw the patient first, he was in bed; he had been much purged, the evacuations being of a greenish colour; he was semicomatose, seemed to be quite unable to speak, and was with difficulty made to understand that he was required to put out his tongue. The temperature of the head and body was above the normal, and in a short time there was a cold perspiration. There were convulsive movements, at first noticed particularly on the right side; the hands were clenched and the feet drawn up; the pulse quick and small, and respiration somewhat hurried. There was some tenderness of the abdomen upon pressure. These symptoms increased in severity during several hours, and the purging continued, accompanied with severe vomiting; the vomited matter evidently containing small particles of green leaves, the fragments being too small to afford any idea of the plant from which they had been taken. The convulsions became more general and severe; the head was frequently thrown back during the convulsions, in a condition somewhat resembling slight opisthotonos.

A second child about six years of age was seized with purging in the course of a few hours, and presented similar symptoms in every respect. Both of them recovered slowly from the effects of the toxic agent. There was for some time much loss of power, especially of the lower extremities; one of the children, on attempting to walk, making use of the expression, "that his legs would not do as he wanted them". On their complete recovery, the elder child went with me into the garden, and pointed out the plant from which he said they had plucked and eaten the leaves and young shoots, thus clearly identifying the poison as being that of the common privet.

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

CLINICAL MEMORANDA.

INGROWING TOE-NAIL.

NEITHER of the cutting operations is at all necessary for the complete and rapid cure of ingrowing toe-nail. If a small, thin, flat piece of silver plate be bent at one edge into a slight deep groove, and, after the toe has been poulticed twenty-four hours, slipped beneath the edge of the nail, so as to protect the flesh from its pressure, and the rest of the thin plate bent round the side and front of the toe, being kept in position with a small portion of resin plaster passed round the toe, a speedy and almost painless cure will take place; and the patient, after the first day, has the additional advantage of being able to walk. I have followed this method in numerous cases with uniform success.

HENRY FINCH, M.D., Colchester.

INJURY OF BRAIN IN A CHILD FROM A FALL.

A. E. H., aged 6 months, was precipitated, whilst being carried down stairs, from the nurse's arms, and died six weeks after the accident. The *post mortem* examination was performed on March 25th, 1872, the day after death. The brain presented an anæmic appearance; there was laceration of the left anterior lobe, which extended into the lateral ventricle on that side, which was filled with serosity; and upon its posterior border was an abscess, containing about a tablespoonful of purulent matter. The right lateral ventricle also contained serous

fluid, but not to so great an extent as that of the left ventricle. The immediate cause of death was exhaustion, arising from the continued irritation to which the child had been subjected during the last six weeks of her existence. There were during life paralysis of the right upper extremity, with occasional attacks of vomiting and convulsions, which tended in a great degree to lower the vital powers in one so young and so prostrated by serious brain-mischief. The left lateral ventricle was so distended with fluid that this travelled along the lacerated portion of the brain (as if along a sinus in connexion with a wound), and formed an elastic swelling upon the left temporal region, immediately above the ear, which, during illness, was frequently tapped, in order to give exit to the accumulated fluid. This in general afforded much relief. The child was sensible throughout, and partook of nourishment. No doubt it was owing to these repeated small operations that life was prolonged. SPENCER T. SMYTH, M.D., F.R.C.S.

Great Yarmouth, August 2nd, 1872.

REVIEWS AND NOTICES.

THE ORIGIN OF CANCER: CONSIDERED WITH REFERENCE TO THE TREATMENT OF THE DISEASE. By CAMPBELL DE MORGAN, F.R.S., Surgeon to the Middlesex Hospital. London: 1872.

THIS little work is from the pen of a surgeon of experience and judgment, and belongs to that class of publications which combine mature thought with extensive practice. The results of Mr. DE MORGAN'S practice have led him to the conclusion that cancer is local in its origin. This view, although not new, is rapidly gaining ground; and if it turn out, as appears probable, that it is the correct one, our practice must be based on it, and our success will be commensurate with the energy and firmness with which we urge and carry out the removal of any tumour as soon as noticed. After discussing the connection of cachexia with cancer, and its recurrence, the author quotes some very interesting cases of auto-inoculation which occurred in his own practice, and in that of Mr. Shaw, and also two cases related by Dr. Reinecke in Virchow's *Archiv* (volume 51), in which abdominal cancers were tapped in error, and cancerous growths occurred along the track of the punctures. These cases, and many others that might be mentioned, and the fact that organisms of "low vitality and great tenacity of life" take root and flourish, as evidenced in skin-grafting and by the experiments of M. Ollier, in which he proved that scrapings from the inner layer of the periosteum will form bone-nodules wherever transplanted, certainly tend strongly to confirm the view of which Mr. De Morgan is so able an advocate. Granted that a cancer once formed may, and most frequently does, extend from and along the vessels and tissues of the original growth, yet in its *origin* the formation *may* have been due to constitutional causes. Will "local irritation" alone, in a healthy person, who has no predisposition to cancer, as far as is ascertainable by family history, suffice to produce the disease? Or is "local irritation" the accident, so to speak, which brings into play the latent diathetic proclivity? Herein is the difficulty, the Gordian knot, which in our opinion can only be untied by comparative experiments, combined with careful histological investigations into new formations generally.

Apropos of histology, we wish that Mr. De Morgan had favoured us with representations of some of the many varieties of malignant growths which it must have been his lot to examine, and of the situation and variety of their recurrence. It would have added much to the value of a very able and lucid production, and have enhanced the pleasure which one naturally takes in not merely reading, but studying, a work which combines the knowledge of an advanced pathologist with the experience of a practical surgeon.

CANCER: ITS VARIETIES, THEIR HISTOLOGY, AND DIAGNOSIS. By HENRY ARNOTT, F.R.C.S., Assistant-Surgeon to St. Thomas's Hospital, and Joint Lecturer on Morbid Anatomy in the Medical College. London: 1872.

MR. ARNOTT'S *brochure* will be welcomed not only by students, but by those practitioners whose time is too much occupied to study the larger works on pathological histology. It is an excellent *résumé* of our present knowledge of the minute anatomy of cancer, and is enriched by original drawings in the author's best manner. The book contains many observations worthy of careful perusal; and we feel sure its readers will join in the hope of Mr. Arnott, that we shall at no distant period be able "to deduce from the large number of rapidly accumulating observations, certain general laws as to the relation of anatomical structure to clinical history and symptoms." Mr. Arnott's researches in practical histology, if judged by the directions in the chapter on examinations of growths, are somewhat scanty, but this deficiency is now-a-days easily supplemented by work in the laboratories. There is an excellent practical summary, which concludes the little volume. We recommend students to procure and master the book.

NOTES ON BOOKS.

On the Principal Varieties of Pulmonary Consumption, with Practical Comments on Diagnosis, Prognosis, and Treatment. By R. DOUGLAS POWELL, M.D. (London).—It is a difficult task to make the pathology of pulmonary consumption in its various forms intelligible, so numerous are the conflicting opinions regarding the disease. The diagnosis, prognosis, and treatment, are rendered accordingly more or less uncertain, and too often most unsatisfactory. The consideration of the whole of these questions has been undertaken by Dr. Douglas Powell, with the view of presenting in a very condensed form a "sketch of the chief varieties of phthisis pulmonalis, in which the connection between the morbid anatomy and the clinical symptoms is attempted to be delineated." This work he has fulfilled with much care and success. We can heartily recommend Dr. Powell's small work to practitioners and students.

Model Houses for the Industrial Classes By BANISTER FLETCHER (Longmans).—It is not necessary that we should say one word in favour of the general principles which this book advocates. Every practitioner knows that there are no more powerful auxiliaries in combating disease than good ventilation, free access of sunlight, convenient water-supply, separate sleeping accommodation, and the other necessaries of domestic comfort which good houses possess, and which philanthropists aim at providing for the very poorest. It remains for us to point out what is special to the particular scheme of Mr. Fletcher, and of the Model Houses Association with which he is identified. It can only be, he says, by the adaptation of existing houses that the great mass of workmen in London are to be accommodated; and he presents a number of simple and inexpensive plans for providing each flat of the ordinary private house with all the accessories of an independent house. So far as the building of new houses is concerned, he would discard the system of huge tenements, and construct model houses of the same extent as the existing houses, and with the internal arrangements suitable for the special purpose of being let in sets of apartments. Whether, then, it be from choice or from necessity, he would continue the system of small houses which is so striking a characteristic of London, and is in so marked contrast with what one sees in Berlin, Vienna, Edinburgh, and other cities. There is, no doubt, good reason to believe that the exceptionally good health of London is in a great measure dependent on this arrangement; and any scheme to preserve and extend the system, and which is otherwise workable, deserves to be supported.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MILDREN'S CARBOLIC SAWDUST.

THIS excellent disinfecting powder is saturated with carbolic acid, of which it is described as containing 20 per cent. It is intended for sprinkling sick-rooms, hospital wards, cabinets, wardrobes, etc.; and the peculiar odour of the carbolic acid is masked in some of the preparations by a perfume. The uses of carbolic acid as a disinfectant are now too well known to need more than a passing reference. From its dryness, portability, and freedom from the chance of accidents, this preparation is likely to be found very convenient in sick-rooms and in private houses; and we shall expect to find it well received and generally used. It is very suitable for tropical climates, and travellers might use the packets to keep off vermin.

FORTIETH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in BIRMINGHAM, August 6th, 7th, 8th, and 9th, 1872.

PROCEEDINGS OF SECTIONS.

SUBJOINED are abstracts of most of the papers presented to the several Sections of the Association at the Annual Meeting. The papers themselves will, as opportunities occur, be published in full in the JOURNAL.

SECTION A.—MEDICINE.

Wednesday, August 7th.

The Section met at 2 P.M., when the President, T. BELL E. FLETCHER, M.D., F.R.C.P., delivered an address, which was published at page 186 of last week's JOURNAL. The following papers were read.

A Case of Convulsions resembling Tetanus, occurring periodically. By S. SPRATLY, M.D. — The patient was a young lady 23 or 24 years of age, who came under Dr. Spratly's care suffering from cough and general debility, from which, under treatment, she recovered. About five months afterwards, she felt soreness in the stomach and loathing for food; this was followed some hours afterwards by two painful muscular spasms, recurring with an interval of a quarter of an hour. Four weeks afterwards the spasms recurred, being preceded by the same premonitory symptoms; the muscles of the hands and arms, trunk, and face, were affected—the body being in a state of opisthotonos. The paroxysms lasted two or three minutes, and recurred at intervals of a quarter of an hour ten or twelve times in succession. During the paroxysms, the breathing, pulse, and temperature were little, if at all, affected. Lately, the spasms had come on once a week; and symptoms indicating spinal disease had recently been detected.

On the Treatment of Rheumatic Gout by the aid of the Constant Galvanic Battery. By JULIUS ALTHAUS, M.D., M.R.C.P.—The author of the paper commenced with some remarks on the nature and pathology of rheumatic gout, which he likened to the atheromatous process in the internal tunic of the arteries occurring in old people, and which, he said, was one of those highly insidious and chronic inflammatory conditions characteristic of the period of involution and senile decay. After glancing at some results of recent microscopical research in the morbid anatomy of rheumatic gout, the usual treatment of this disease was criticised, and found to be open to improvement. The author had, for the last six years, sought and found opportunities to use the constant current in such cases, and had been well satisfied with the results. It could not cure rheumatic gout; it could not prevent the patients from advancing in age, nor check altogether the process of involution and senile decay to which the system must in the end succumb; but it did good in the following ways. 1. It acted as a general tonic to the system, and improved all the most important functions of the body, if applied in a peculiar manner which was described in the paper. 2. It procured sleep, even in cases where opiates or chloral did not answer. 3. It relieved the pain. 4. If perseveringly applied, it reduced deformities. The author did not wish to imply that the use of internal remedies should be altogether eschewed in the treatment of this disease, as by thus acting we should only deprive ourselves of many chances to do good to our patients; but in the cases treated by him, he had given the first place to the constant current, and given medicines internally only for removing complications. He laid stress upon the necessity of persevering with the galvanic treatment for a considerable time, in order to do permanent good; and gave directions as to the way in which the treatment should be carried out.

Tricœlian Human Heart. By S. M. BRADLEY, F.R.C.S.—The child, from whom the heart was taken, was born at the full period, of healthy parents. For the first thirty-six hours after birth, the child appeared perfectly well, both circulation and respiration being efficiently carried on. At the expiration of this time it became cyanotic, was convulsed, and died at the end of forty-eight hours. The heart was situated naturally and was of normal size. There was but a single emergent artery issuing from the heart; it gave origin to both the pulmonary arteries, and to the usual aortic branches. This arterial trunk sprang from a single ventricle, into which both auricles poured their blood. The auricles were of unequal size, the right being larger than usual, the left extremely small: a freely patent foramen ovale permitted the passage of the blood from one to the other. The caval veins terminated as usual in the right, the pulmonary veins in the left auricle. The auriculo-ventricular valve approximated the mitral in character: the large single artery was furnished with well formed semilunar valves, behind which the sinuses of Valsalva were easily seen. The pulmonary arteries were large and close together, one, the left, being at a higher level than the other. The course which the blood would take in this case would be as follows. From the single ventricle blood would be poured into the arterial trunk; thence it would first of all pass into the pulmonary arteries, and partially traverse the lungs, the returning blood being poured by the pulmonary veins into the small left auricle, whence the greater part would flow through the foramen ovale into the right auricle, and thence into the single ventricle. The greater part of the blood, however, would never reach the lungs at all, but would be propelled along the continuing trunk (aorta) into the aortic branches: this systemic blood reentering the heart in the usual way by the caval veins. The condition of heart which was found to exist in this child is the normal state in an embryo of eight weeks. At this time the aorta and pulmonary arteries are one; the auricular septum is imperfect, and the ventricular septum only commencing to be formed: a condition which is persistent in the batrachia. Five cases of a somewhat similar kind have been recorded.

On the Bending of the Ribs in forced Respiration. By A. RANSOME, M.D.—This paper called attention to the large extent of forward motion of the ends of the upper ribs. This fact had not hitherto been noticed in relation to the extent of motion in the upward and outward directions, and hence it had been supposed that it could be explained by the angular movement of the ribs as they rise from a more to a less oblique position. Measurements of the angles made by the ribs with the spine, proved the impossibility of this explanation; and the want of mathematical relation between the upward and forward dimensions of the motion, showed the same thing. Actual experiment showed that a portion of the forward motion was due to a distinct inbending of the rib during the forced expiration which precedes inspiration. This observation explained the large extent of motion in children and women; the gradual diminution of the forward motion as age advances; the great extent of this motion in the upper ribs; and also several curious pathological facts relating to the motions of the chest.

A Case of Skin-Disease of Uncertain Type. By MARTIN G. B. OXLEY, L.K.C.C.P.—Dr. Oxley brought forward a very interesting case of cutaneous disease of doubtful nature. It bore the outward signs of psoriasis guttata syphilitica; but the parents were both in sound health, and four other children were perfectly healthy. The child had never suffered from nasal or anal eruptions; the teeth were sound and normal. The child had been vaccinated two years before this eruption came out. After some discussion, Dr. Oxley was advised to treat the case with iodide of potassium, with a few doses of hydrargyrum cum cretâ, and to report the effects of treatment, as the child had not been placed under the influence of these medicines.

The Lactic Acid Treatment of Diabetes. By BALTHAZAR FOSTER, M.D.—Dr. Foster began by calling attention to the low temperature which he had observed in diabetes, and the bearing which this had on the respiratory theory of the disease. By means of diagrams, the daily excretion of sugar and water, the specific gravity of the urine and the body-weight, of each patient were represented graphically, under ordinary diet, animal diet, and under treatment by lactic acid. An analysis of the diagrams showed that under the acid treatment the quantity of urinary water was notably diminished, and in a less degree the daily amount of sugar excreted. The specific gravity of the urine was less affected. The bodily temperature rose under the use of lactic acid, and the functions of the skin were restored. Dr. Foster also observed that the acid exercised a favourable influence on the lung-complications in some cases.

Cases of Diabetes Mellitus treated with Lactic Acid. By JOHN W. OGLE, M.D.—Dr. Ogle described several cases of saccharine diabetes, in which he had, in addition to the use of a non-amylaceous diet, used lactic acid in considerable quantities. The details and results of some of these had been already mentioned in some of the weekly periodicals; and Dr. Ogle now brought before the Section the particulars of two cases which had recently been under his care at St. George's Hospital, and of which daily notes, with registration of amount of urine and its specific gravity, of the weight, and sometimes temperature, of the body, had been carefully noted. The two cases were admitted into hospital on the same day—one being a male aged 20; the other a female aged 28. In both cases meat, and non-amylaceous vegetables, with gluten bread, etc., were given for several days, without the administration of any remedies. In the case of the woman, who was treated for eleven weeks before the lactic acid was given, the urine ranged in quantity between 112 and 178 ounces per diem; after the use of the acid the quantity quickly sank, and throughout its use fluctuated between 40 and 70 ounces daily, one day being as low as 30 ounces. During the

whole of this time the specific gravity remained much the same as when the patient came to the hospital. In the case of the man, who was treated for seven weeks, under the lactic acid treatment, no marked diminution of urine and no change in the specific gravity was observed; but, after its long continued use, whether owing to it or not was doubtful, great constipation came on, requiring active aperients. As regarded the weight of the body, in both cases during treatment it fell ; in the man from 8st. 5lbs. to 7st. 7lbs., in the woman from 7st. 3lbs. to 6st. 8lbs. In the case of the man the temperature was chiefly *above* the normal, on one occasion only being below, and then it was 97.4—on one occasion reaching 102.8. In the woman it was almost always *below* the normal, mostly being below 98. In both cases the morning and evening temperatures were often taken, but neither one nor the other was uniformly below or above the other. In both cases the lactic acid was increased until four drachms were taken in the day, and this was persisted in for several weeks. In neither case were any sting-like pains, rheumatic or other, complained of during the entire treatment, and in neither was any noticeable perspiration produced. In both cases the sweet and hay-like smell of the breath existed. In neither case was there any indication of interference with or affection of the nervous system ; power of movement of the entire muscular system, and sensibility, both general and of particular organs, were entire throughout. The uvula, palate, and pupils were natural. In neither case was there albumen or uric acid in the urine ; and in neither was there any decided lung-mischief manifest, though a degree of harshness of respiration was perceptible in the woman. Although in one case a decided diminution of the amount of urine without increase of specific gravity followed the use of the lactic acid, yet in both cases flesh and strength were lost, and Dr. Ogle did not think that these cases showed that any benefit arose from treatment.

Thursday, August 8th.

Scarlet Fever and Syphilis : a Suggestion. By E. WOAKES, M.D.—This paper advanced the suggestion that cases of malignant scarlet fever occurring when the type of the prevailing epidemic is mild in character, may be accounted for on the principle of *inherited syphilis*. In support of this view, the writer adduced five instances—the only fatal ones occurring to him during an epidemic of scarlet fever of nine months' duration, in each of which the hereditary taint was distinctly traced. It was also hinted that this circumstance, inherited syphilis, may explain the well recognised fact that, in certain families, scarlet fever is almost invariably a fatal disease.

On Syphilis. By C. R. DRYSDALE, M.D.—The author related a case of syphilitic infection from smoking a pipe ; and one of syphilitic roseola with hemiplegia and aphasia.

Case of Cyanosis with Deficiency of the Interventricular Septum. By J. JOHNSTON, M.B.—The subject was a boy, aged 9. There was a deficiency in the intraventricular septum, and constriction of the orifice of the pulmonary artery. The cyanosis and other symptoms did not appear until the seventh year. A loud harsh systolic *bruit* was heard over the sternum, at the sternal end of the fourth left costal cartilage, most distinct when the boy was lying down, and sometimes entirely disappearing when he was upright, which posture frequently caused epileptic convulsions. As the cyanosis came on from a fixed time two years since, and as the lungs were well dilated without cough or any bronchitic congestion, and as there was no regurgitation into the veins, or other signs of over-distension of the right auricle, it was thought probable (during life) that there was reopening of the foramen ovale.

Remarks on the Leamington Mineral Waters. By JAMES THOMPSON, M.B.—The object of this paper was to point out that there is reason to believe that the composition of the waters in the mineral springs in Leamington is changed since the last analysis was published in 1866. There is a much more saline taste in the spa water ; there is present now a quantity of sulphate of lime, before reported as a trace ; there is also apparently more iron present. Some statistics were given to show the number of persons now daily drinking ; and some observations were made on the class of persons now residing in Leamington. The paper was illustrated by specimens of the residual salts from the waters of all the springs now in use, which had been prepared by Messrs. Cutting of Leamington, at Dr. James Thompson's suggestion. A specimen of the Leamington salts of commerce was also shown, which had no resemblance to the real salt.

Case of Pyæmia mistaken for Mania. By T. L. ROGERS, M.D.—The patient was a man, aged 40, who was admitted into the Rainhill Asylum from the Toxteth Park Workhouse, with a certificate of being in a state of violent delirium. He died some days after admission ; and, after death, the brain and its membranes were congested. The lungs were much congested and studded with small abscesses. The pericardium was inflamed, and the endocardium and valves reddened and tumefied. The liver, kidneys, and small intestines, were healthy. The large intestine contained patches of ulceration throughout, and the lower part of the colon and the rectum were much thickened and indurated. Dr. Rogers remarked that, though the occurrence of some red spots on the abdomen on the seventh day after admission led him at first to think that the case was one of enteric fever, the appearances found at the *post mortem* examination induced him to believe that it was an instance of idiopathic pyæmia.

Friday, August 9th.

The Graft-Theory of Disease. By JAMES ROSS, M.D.—The object of the paper was to shew that the particles which Dr. Burdon Sanderson has proved to be the active part of virulent fluids are not independent beings, like bacteria, but modified units of the individual from which they have become detached. The evidence adduced in favour of this proposition was—(1) that contagium-particles are very similar, in several particulars, to the detached and semi-detached particles which are operative in the genesis of new individuals ; (2) that the effect produced by contagium upon a healthy individual is similar to that produced by a variegated scion upon an ordinary stock in vegetable grafting ; and (3) that the main phenomena of small-pox, taken as a good example of the zymotic diseases, can be readily explained by this assumption.

The Difficulty of Diagnosing Effusions into the Pleura. By H. G. SUTTON, M.B.

SECTION B.—SURGERY.

Wednesday, August 7th.

The President, Sir WILLIAM FERGUSSON, opened the session with an Address, which was published at page 158 of the JOURNAL for August 10th.

On the motion of Dr. ELLIOT (Carlisle), seconded by Mr. MASH (Northampton), a vote of thanks was given to Sir W. Fergusson for his Address. The following papers were then read.

Three Additional Cases of Subcutaneous Division of the Neck of the Thigh-Bone : with Remarks. By W. ADAMS, F.R.C.S.—The cases occurred in the author's practice at the Great Northern Hospital. The first was that of a young man, aged 18, from Albania, who had been the subject of rheumatic fever five years previously. The right hip-joint was ankylosed in a flexed position, with extreme deformity. The case proceeded favourably, without suppuration, and the limb was brought nearly into a straight position, but the obliquity of the pelvis and lordosis of the spine could not be completely overcome.—The second case was that of a young woman aged 20, who had been the subject of strumous disease of the left thigh when six years of age. The thigh was ankylosed in the flexed position, with extreme deformity. The wound healed by the first intention, and the case progressed favourably ; but more pain was complained of than in the other cases, and extension could not well be borne. Between five and six weeks afterwards deep suppuration occurred, and matter was discharged through the wound made at the operation, and also through one of the old cicatrices, which reopened. This continued for more than two months, and, in consequence of loss of health, she was sent into the country. It was intended after her return to continue the treatment by forcible extension of weights.—The third case was that of a young man aged 17, who had been the subject of strumous disease of the hip nine years previously, and the right hip-joint was ankylosed with the thigh in a flexed position, with extreme deformity. The wound healed without any suppuration, and the case proceeded in an extremely favourable way. Extension by weights was well borne, and at the present time the leg was in a nearly straight position, and he was able to walk about, but had not yet left the Hospital.

Spinal Curvature, Club-Feet, and other Deformities, and the Instruments used in their Treatment at the Birmingham Orthopædic Hospital. By CHARLES WARDEN, M.D.—In treating of this branch of special surgery, Dr. Warden did not attempt any description of each particular deformity. His practice was to divide all offending or contracting tendons, wherever they might exist. He was anxious to submit to inspection and criticism his modifications of mechanical appliances in the treatment of spinal curvature, talipes equino-varus, talipes valgus, genu valgum, contractions of the knees, etc., which changes had been gradually developed in his practice to meet the requirements of each particular case of deformity brought under his observation. Dr. Warden adopted the plan of immediate treatment in the case of either talipes varus or valgus as soon as patients were brought under his notice. He allowed no delay under any circumstances ; and he commenced his treatment, even in earliest infancy, by the application of curved splints

made of a malleable material; but did not operate, as a rule, until he had reduced the talipes varus into talipes equinus.

Polypus of the Ear and Perforation of the Membrana Tympani, and the Instruments used in the Diagnosis and Treatment of Diseases of the Ear and Throat at the Ear and Throat Infirmary, Birmingham. By CHARLES WARDEN, M.D.—Dr. Warden, in describing the different varities of polypus, exhibited a modification of Toynbee's ring-forceps for their extraction, designed by himself. In enumerating the various causes of laceration of the membrana tympani, he gave a description of an artificial drum for the treatment of perforation, whereby the hearing power was greatly increased in many instances of almost total deafness, enabling the sufferer to hear ordinary conversation at moderate distances. The little apparatus consisted of a hollow cone of India-rubber cut into the shape of a well known flower (the *Cyclamen Hederæfolium*), one of the Primulaceæ, from which Dr. Warden took the idea. It was made of various sizes, to fit the meatus auditorius of old and young. It had no sharp border to injure or irritate the mucous membrane on the sides of the ear-passage; and the base of the cone was slit up towards the apex at intervals of about the thirty-second or sixty-fourth part of an inch from the apex. Each flap or division acted as a valve, and thereby exactly adapted itself to the interior of the meatus, and rendered the tympanum a perfectly closed cavity from without, at the same time restoring the structures concerned in the sense of hearing as nearly as practicable to their original condition.

The Relative Value of Certain Methods of Treating Stricture of the Urethra. By REGINALD HARRISON, F.R.C.S.

Reduction of Dislocation by a Modification of Jarvis's Adjuster. By W. STOKES, M.D., F.R.C.S.I.

Removal of both Astragali in a Case of Severe Double Talipes. By E. LUND, F.R.C.S.

Thursday, August 8th.

In the general meeting of Thursday, the PRESIDENT announced, amid loud cheers, that MM. Ricord and Demarquay of Paris had arrived, and would be present at the reading of Mr. Acton's paper on Syphilis. In order that the whole of the members at the meeting should have an opportunity of hearing M. Ricord, the President suggested that the Public Medicine Section should be adjourned, and that the meeting should be held in the room intended to be occupied by that Section—viz., the large room in which the general meetings were held. This was agreed to.

Sir WILLIAM FERGUSSON, on taking the Chair, expressed regret that a great Section of the Association had been "temporarily dislocated", and offered an apology to the Public Medicine Section for having taken up their room. The occasion was one of interest and importance; and the excuse that the Association had to offer was, that it was thought a compliment should be paid to foreign medical men of eminence who had come so far to address the meeting. [*Cheers.*] The Surgical Section, indeed, might be considered a Public Health one; he would hold that it was the Public Medicine Section for the time conjoined with that of Surgery.

Treatment of the Advanced Stages of Constitutional Syphilis. By WILLIAM ACTON, F.R.C.S.—Mr. Acton's paper was published at page 186 of last week's JOURNAL. At its conclusion, the President said he should only be complying with what he knew was the general wish of the meeting if he called upon M. Ricord to give his views on this important subject. [*Cheers.*]

M. RICORD, who was received with loud and long-continued cheers, addressed the meeting. His remarks were published at page 187 of last week's JOURNAL. (See also his letter at page 228.)

M. DEMARQUAY also addressed the meeting in French.

Sir WILLIAM FERGUSSON said he was glad to find that salivation held no place in M. Ricord's mind. He proposed a vote of thanks to M. Ricord and his distinguished colleague.

Dr. GROSS seconded the motion, which was carried amid cheers.

A MEMBER asked M. Ricord if the soft chancre was capable of damaging the constitution.

M. RICORD, in acknowledging the vote of thanks, said that the soft chancre never gave rise to constitutional symptoms; but then it was not always easy to distinguish between the hard and the soft one. After a hard one, six weeks or two months, or, at all events, six months, would not pass away before secondary symptoms would appear. The hardness of the chancre was not always well characterised; it might be very superficial, something like parchment; and cases which had been sent to him as soft, were really hard chancres. But there was one thing which would distinguish the hard from the soft more than the relative degree of hardness of the base, and that consisted in the swelling of the glands which accompanied a hard chancre; here was never inflammation. The two groins were frequently affected after a hard chancre, but they did not suppurate; and there was this value attached to this distinguishing symptom of a hard from a soft chancre, that the swelled groin enlarged within the first fortnight. In the soft chancre there was no such chronic swelling of the glands in this time, and it did not come on without suppuration. Many had tried and failed to induce swelling arising from a hard chancre to suppurate. An inflammatory bubo, with a soft chancre, followed sometimes six months afterwards; but in this case there would be no secondary symptoms. He could say to his patients who came to him with a well-developed hard chancre, "Within six months, you will, if treatment be not commenced, have something more." There was this peculiarity about a soft chancre, that a man with one had no immunity from catching a hard chancre; and, from different sources, he might have both hard and soft at the same time, and he might see which he liked best. This was, however, a rare case; and the medical man could then foretell the patient that in one groin he would have a non-suppurating bubo, and in the other a suppurating one.—Mr. LORD asked M. Ricord to give his views with regard to the restrictions placed on the action of women in respect to stopping the disease from extending its ravages.—M. RICORD considered that the action of Government in this particular was without doubt a good thing, and would be better if other Governments concurred in the work; but as it was, English sailors brought the disease to the French ports, and so prevented the action of the French Government from being so effective as it would otherwise be.

Colotomy for Intestinal Obstruction. By CHAS. STEELE, F.R.C.S., Clifton.—Mr. Steele observed that many cases of intestinal obstruction terminated fatally without surgical interference, which, were timely operative measures adopted, would very probably end in recovery. He related the case of a man aged 52, who, usually enjoying good health, had lately suffered from diarrhœa. On June 2nd, he was unable to relieve his bowels; he took castor-oil, but without effect. Mr. Steele saw him early next day, and found tympanitis, colicky pains, and fæcal accumulation in the rectum with strong desire for defæcation. Various aperients and enemata were unavailing; the rectum was cleared out, and galvanism was applied, but without result. Bad symptoms soon set in, succeeded by failing power of the heart. This was relieved by æther and laudanum. Liquid food was well taken, and retained. On the sixth day, the patient, who had somewhat rallied, suddenly becoming worse, colotomy was performed. Flatus immediately escaped, and fæces some few hours afterwards. Localised peritonitis, inflammation of the skin, diarrhœa, gastric and intestinal irritation, etc., gave anxiety for about four weeks. By this time the wound was well healed round the intestine, and the patient improved and became restored to fair health, but remained weak. No passage *per rectum* had since occurred; but free discharge of thick mucus had proved troublesome. A swelling high up in the pelvis, which before operation seemed like fæces accumulated in the intestinal coils, afterwards descended and proved to be a tumour, and the cause of obstruction. The patient was doing well. Mr. Steele concluded with observing that, where the cause of obstruction is obscure, and appears to be fæcal accumulation, all legitimate endeavours should be made to dislodge the same; that when the cause of obstruction is clearly mechanical, opiate treatment should be immediately commenced, and operative interference promptly adopted; that in such a case as the one narrated, surgical aid is the only means of saving life; that a person with a tumour compressing the lower bowel is in a much better condition with an artificial anus than with a constantly forced passage by the natural orifice; that the growth of the tumour will not be nearly so rapid as if it were subject to compression by the fæces and strained defæcation; and that operation is most likely to be successful when the obstruction is caused by tumour; there not being sloughing to fear, as in twisting, internal hernia, or intussusception.

Dislocation of the Patella on its Edge. By GEO. SOUTHAM, F.R.C.S., Manchester.—This accident occurred in a gentleman aged 22, in good health and with well developed muscles, whilst wrestling with some companions in a first-class railway carriage. The patella was in a vertical position, the outer edge resting on the outer side of the external condyle of the femur, the inner forming a sharp projection at the front of the knee. The skin over it was so tense that the bone seemed as if it would force itself through the integuments if pressure were applied to it. The pain was most excruciating. Chloroform was administered, and the leg raised to relax the extensor muscles. Pressure on each side of the bone was then made, but its position could not be altered. The knee was now bent; and when the leg was at a right angle with the thigh, the bone suddenly slipped into its place. Mr. Southam believed the difficulty hitherto experienced in reducing this rare form of dislocation may be obviated by placing the patient well under the influence of chloroform before any manipulation is attempted; the pain which usually attends the injury forming a serious obstacle to reduction.

Friday, August 9th.

Specimen of Necrosed Bone from the Clavicle of a Child. By JAMES

THOMPSON, M.B., Leamington.—The specimen was removed by operation from a child four years old. There was no history of previous injury. After some weeks of suffering, the bone was removed by cutting down on it. It was the sternal end, and two-thirds of the shaft of the bone. The case ended favourably, as far as the local mischief was concerned, and new bone had been deposited, the narrowing of the shoulders being not more than half an inch. A similar process seemed likely to take place in the femur of the same side.

The Art of Tinting Opacities of the Cornea. By C. BELL TAYLOR, M.D., Nottingham.—The author pointed out that, by means of fine needles or a grooved instrument manufactured for the purpose, unsightly opacities of the cornea may be so tattooed or tinted over with Indian ink and various other substances as to be indistinguishable from the neighbouring black pupil. Not only is the deformity thus removed, but the sight is also improved, owing to the suppression of the diffusion of light. The method is almost painless, free from danger, and easy of execution. When nearly the whole of the cornea is opaque, it is easy to restore a natural appearance by tattooing a central black pupil; and after iridectomy, extraction of cataract, etc., the dazzling, if excessive, may be limited by tinting a portion of cornea, so as to constitute a permanent shade. It is not necessary to confine the patients or close the eye. When a solution of lamp-black and nitrate of silver is employed, one sitting suffices. The opacities should be tattooed obliquely, beginning from below. An interesting case was shown, in which, after the formation of an artificial pupil, and subsequent abcession of a staphylomatous cornea (which operation restored tolerable sight and the normal contour of the globe), a natural appearance had been restored to the eye by tattooing a central pupil.

Wound of the Abdomen: Protrusion of Intestine. By HENRY HORTON, M.R.C.S., Eardisley.—The wound was produced by a fragment of a broken bottle: it was partly incised and partly jagged, about three and a half inches in extent, and situated towards the left, about two inches below the umbilicus. The large omentum was divided. The man walked a mile into the town, holding his intestines, which protruded to the extent of twelve or fourteen inches. When he was seen, the omentum was darker than natural, and the intestine cold. The mass was returned; and full doses of opium were given every two hours with a little calomel. Much distension of the abdomen from effusion subsequently took place; and, on loosening one of the sutures and turning the patient into the prone position, a large quantity of bloody grumous liquid escaped. He ultimately recovered, and was seen in good health several times during the next three or four years.

Two Cases in which the Femoral Artery was tied for unusual Pathological Conditions. By T. H. BARTLEET, M.B., F.R.C.S.

Removal of the Tongue. By F. JORDAN, F.R.C.S.

Lithotomy in the Female. By F. JORDAN, F.R.C.S.

Sloughing of large Phosphatic Calculi through the Scrotum. By E. B. ADAMS, M.R.C.S.

A New Kind of Truss-Pad. By C. HOLTHOUSE, F.R.C.S.

Cure of Fractured Patella without Confinement. By W. P. BAIN, M.D.

SECTION C.—MIDWIFERY.

Wednesday, August 7th.

Dr. EVORY KENNEDY presided in this Section. The following papers were read.

On the Removal of Portions of Morbid Tissue in Cases of Carcinoma Uteri. By A. R. SIMPSON, M.D., Edinburgh.—Dr. Simpson, in his communication, advocated the removal of portions of the diseased tissue in cases of carcinoma uteri, even where there was no possibility of complete extirpation. The risks were but slight, and the advantages accruing were arrest of the hæmorrhage and other exhausting and noxious discharges, and relief of pain, more especially in cases of intrauterine disease, of which some illustrative instances were adduced. Where the part to be removed could be surrounded by the loop of a wire or chain, the amputation was best effected by means of the galvano-cautery or the *écraseur;* where the cancerous growth was flat or excavated, it needed to be dug out with a scoop or *curette.* It was usually advisable to apply perchloride of iron to the raw surface, which remained healthy for some time afterwards; and the chlorate of potash had been found an useful application to cancerous surfaces.

On the Plan of Treatment of Malignant Disease of the Uterus proposed by Professor Simon of Heidelberg. By A. WILTSHIRE, M.D., London.—Simon's plan, which consists in scraping the fungating surfaces of the invaded tissues, was commented on, and two cases in which the method was adopted were given in illustration. In the first case no very decided results followed, but of the two the patient was rather better. In the second, however, the treatment (which, as in the previous case, had been put into practice by Dr. Munde, who introduced it to Dr. Wiltshire) was followed by severe peritonitis, and the subsequent expulsion of the whole of the body of the womb shorn of its appendages. The specimen was shown. The patient was recovering. Remarks were made on other modes of treatment—galvanic cautery, *écrascur,* hot iron, chromic acid, etc. The remarkable deodorant properties of chromic acid were alluded to. Simon's method was not new. Recamier and others had used it. Scanzoni, Rokitansky, Virchow, and others acknowledge the possibility of the uterus sloughing away in cases of cancer of that organ and recovery following. Instances were mentioned. Remarks on the etiology and general as well as local treatment of cancer closed the paper.

Further Remarks on the Treatment of Uterine Cancer, more especially by Gastric Juice. By C. H. F. ROUTH, M.D., London.—After referring to former papers which he had read on cancer of the uterus, and the success which had attended some of these cases when treated by bromine, and referring also to some successful cases published by Dr. Wynn Williams, Dr. Routh proceeded to speak of the employment by Drs. Broadbent and Barclay of acetic, citric, and carbolic acid, which were supposed to act by causing a solution of cancerous cells. Dr. Routh then proceeded to speak of gastric juice as a substance far more active than any of these acids. Instancing the two very remarkable cases cured by this agent by Messrs. Lusana and Pagello in Italy, the author proceeded to consider the mode in which remedies should act in cancer, as founded on physiological as well as pathological experience: 1. Selection by certain remedies of particular tissues; 2. Diminished vitality of diseased, as compared to healthy tissue; 3. Cessation of a new growth to increase, and its rapid disappearance, when circumstances favourable to its development were removed; 4. The absence of a central attractive growth, by its removal, prevented its reproduction. Dr. Routh detailed his mode of procedure in obtaining the gastric juice, which was a great difficulty. He expressed his preference to Morson's pepsine, as being that which he had more frequently used formerly, and that prepared by Messrs. Young and Postans, which he had chiefly used latterly. He then detailed the effects which he had observed produced by gastric juice on cancerous sores, specially those produced on a cancrous growth by the application of bromine previously: 1. Solution of sloughs; 2. Solution of the granular projections of the growths themselves; 3. The rapidity of its action; 4. Absorption and disappearance of glandular enlargements beyond the seat of growth. He then detailed the effects of gastric juice on the digestion of ordinary albuminous bodies even when diseased, and their conversion into nutritive peptones for the nutriment of the body—a process which justified the hope that, in some cases at least, the poisonous cancerous tissue might be so modified as even to become nutritive, and so arrest the cancerous cachexia. Dr. Routh spoke of Mr. Long's preparations of gastric juice in glycerine, and the preparation of Messrs. Young and Postans, without glycerine—instancing the remarkable influence which both preparations had in healing sores which had resisted often nearly every other remedy employed, as peculiarly encouraging. Two typical cases were given in illustration.

Mr. SPENCER WELLS (London), in opening a discussion on the papers of Dr. Simpson, Dr. Wiltshire, and Dr. Routh, was of opinion that little or no good could follow the process of partial scraping away. He thought it better practice to apply the caustic when practicable. —Dr. HENRY BENNET (London) said that thirty years' experience convinced him that the less was done the better. Many cases were treated as cancer where cancer never existed. It was very doubtful whether the cases recorded were really cases of cancer. He found cancer of the body of the uterus very uncommon.—Dr. HICKINBOTHAM (Birmingham) asked Dr. Routh, if gastric juice were a cure for cancer, how was it that cancer of the stomach occurred?—Dr. STEELE (Liverpool) very much doubted whether Dr. Routh's grounds were well founded.—Mr. G. YATES (Birmingham) thought that, if cancer was so easily cured as suggested by Dr. Routh, it was a much more simple matter than it had hitherto been supposed to be.—Dr. RINGLAND (Dublin) was of opinion that the thanks of the meeting were due to the authors of the papers. His experience went to show that cancer was incurable altogether. He found fuming nitric acid of the greatest possible value, but it did not cure. Removal of diseased parts was of great value.—Dr. SIMPSON (Edinburgh) had heard nothing adduced that he could regard as a valid objection to operative interference in cases of malignant disease of the uterus. Fully recognising the existence of a diathesis, and knowing that, in all probability, the disease would return and prove fatal, he yet thought that it was an end worth seeking to obtain to lessen in some degree the patient's suffering, or lengthen for a time her lease of life.—The PRESIDENT was of opinion that, if the growth were removed at an early date, much good might result; but that, if too long neglected, no good would follow.

On the Treatment of Puerperal Eclampsia. By A. B. STEELE,

L.K.Q.C.P., Liverpool.—Dr. Steele reviewed the various methods of treatment recommended, and expressed the opinion that this formidable affection was not to be managed according to any fixed or undeviating formula. He believed that, in an overloaded state of the vascular system, blood-letting acted as a direct sedative on the spinal cord; while, in the anæmic state, it only added to the mischief by increasing the irritability of the spinal centres. In plethoric states of the system, also, it lessened the turgidity of the vessels of the head caused by recurring paroxysms of eclampsia. He spoke in favour of bloodletting in uræmic convulsions, and pointed out that in the parturient female a greater amount of blood could be lost than in most other conditions. Chloroform was a valuable remedy, but not a specific; nor could it supersede the necessity for bleeding in plethoric conditions. Early and speedy delivery was the best treatment when there was reason to believe that the distension of the uterus or the presence of the ovum was the exciting cause of the fits; but it was not to be considered an universal remedy, for sometimes convulsions did not occur until after delivery, and often they persisted and even increased after delivery. There were strong objections to indiscriminate and hasty interference with the natural course of labour.

Dr. ROUTH did not think that bleeding was of value in puerperal convulsions.—Mr. G. YATES (Birmingham) thought chloroform of value. He used to bleed, but now used turpentine injections and fomentations. He had not met with cases relieved by delivery.—Dr. RINGLAND (Dublin) believed that there was not as yet a specific for the affection. Purgation was a most valuable form of treatment. He did not think chloroform of any value; indeed, he believed it worse than the disease. He used ice with success.—Mr. BLAKE (Birmingham) thought early delivery the most successful treatment.—Dr. HARDY referred to a case in which turpentine and the cold douche were used; the patient died.—The PRESIDENT had a strong opinion in favour of bleeding.

Thursday, August 8th.

The Administration of Ergot in Diseased States of the Heart. By JAMES THOMPSON, M.B.—The details of two cases were given, in which it was deemed expedient, after consultation, to administer ergot freely. In both, the pressing symptoms, which pointed to ergot, were relieved; but, immediately after delivery in one, the heart seemed to lose power, the pulse faded away, and, notwithstanding powerful restoratives, the patient died in three hours. No *post mortem* examination was permitted; but there was a history of previous syncope at repeated intervals. The other case was one of miscarriage at an early date, and ergot was given to check the flooding; but after a few doses the cardiac action became so much impeded that the ergot was withdrawn. Dr. Thompson expressed his opinion that in these cases the ergot acted with paralysing force on the maternal circulation, already weakened. The cases seemed to be warnings to administer ergot with great care in persons of feeble cardiac power.

Dr. HENRY BENNET thought that a *post mortem* examination alone could determine that there was no heart-disease. He recommended plugging in cases of hæmorrhage from abortion.—Dr. BARNES (London) drew attention to the fact that ergot had a specific action on the arteries. He believed that it was a much abused drug.—Dr. SIMPSON (Edinburgh) agreed with Dr. Bennet that the evidence was incomplete that the ergot induced the collapse.—Mr. LAWSON TAIT (Birmingham) thought the sphygmograph would help towards the solution of the difficulty.—Dr. RINGLAND (Dublin) was engaged in the investigation of the action of ergotin administered by hypodermic injection. He did not advise plugging.—Mr. MALIN (Rochdale) would banish ergot at once and for ever from midwifery practice. He recommended its use in Hildebrandt's method, by subcutaneous injection.—Dr. MARTIN (Manchester) thought ergot free from danger, and strongly recommended its use.—Dr. EVORY KENNEDY had given up the use of ergot for twenty-five years, because it was uncertain in its action and far from being free from danger. In abortion, ergot was generally inadvisable. He recommended plugging, combined with opiates or even chloroform.

Retroflexion of the Uterus: Progressive Hemiplegia: Depressed Temperature: Epileptic Fits and Menorrhagia: Recovery. By THOMAS CHAMBERS, M.R.C.P., London.—Mrs. L. J., aged 49, widow, was admitted into the Chelsea Hospital for Women, on May 2nd, 1872. Her health had been good up to July 6th, 1865, on which day, while coming quickly down stairs, having on high-heeled boots, her foot slipped, and she fell suddenly on the buttock. This was followed by sickness and great pain at the lower part of the spine, which pain continued for seven years. In about a week, the left foot and leg became cold and numb; and gradually the whole of the left side became cold and more or less paralysed. Menstruation became more and more disturbed until the beginning of 1871, when the menorrhagia became continuous. In 1869, she had a severe epileptic fit, and others in eighteen months. When admitted, she was very thin, withered, and "pain-worn"; pulse 120, small; the urine scanty, high coloured, with acid reaction; it contained no albumen. She had excruciating pains at the lower part of the back, shooting up the spine and through the head whenever she moved about. The grasping power of the left hand was impaired. She had but limited control over the movements of the left leg. The coccyx was severed from the sacrum. The slightest movement gave her intense pain: defæcation was very painful. The uterus was acutely retroflexed, low down in the pelvis, and very painful. The os uteri readily admitted the end of the index finger; its mucous membrane was much congested and swollen, bleeding freely on touch. An attempt was made to introduce the sound, but had to be abandoned in consequence of the pain produced. The coccyx was replaced and sustained by a vaginal plug. She was kept quiet in bed; had milk diet, beef-tea, two eggs, and three ounces of brandy daily; also a grain of opium in pill, and ten grains of bromide of potassium in cinchona mixture three times daily. This treatment was quietly pursued for three weeks. On May 24th, her general health had improved. She was put under chloroform; the uterus was replaced; and, after a little careful manœuvring, an intrauterine stem was introduced. Within twenty minutes after the introduction of the stem, the whole of the left side, which had been as cold as marble for seven years, had become perfectly warm; there was a good deal of hot tingling for a time, but in twenty-four hours it had passed off, and the whole side was warm and comfortable as the other. The hemiplegia became less from day to day, and in three weeks it had passed away altogether. The stem was removed on the ninth day, after which all discharge soon passed away, and menstruation assumed its natural periods. She was discharged cured on July 31st, 1872.

Dr. BARNES had seen Dr. Chambers's case, and could confirm his statement that the symptoms were subjective, and not objective; certainly they were not hysterical.—Mr. YATES doubted that the retroflexion had much to do with the symptoms.—Mr. LAWSON TAIT thought that the fact that the restoration of the displaced uterus was immediately followed by relief of the symptoms, showed that the paralysis and loss of temperature were due to the retroflexion. Cases of this kind, but of a modified degree, were seen by every one engaged in obstetric practice.—Dr. SIMPSON agreed with Dr. Barnes and Mr. Tait.—Dr. WILTSHIRE had no doubt of the sequence of the cure.—Dr. KENNEDY had listened to the report of Dr. Chambers's interesting case with great attention. So far from his doubting the symptoms referred to being due to the reflex irritation resulting from the retroversion of the uterus, he fully believed in it; and that from having frequently witnessed symptoms so strange and unaccountable from retroversion, as well as from anteflexion and anteversion, that he was absolutely puzzled to explain them or their causes, had he not seen recovery occur again and again upon their correction and cure. It was the fashion to talk of specialties, and to question the value of studying these diseases carefully. Condemnation of this kind was virtually an endeavour to check individual exertion in the study of disease; and, in consequence of observations which he had heard even at this meeting on the subject, he deemed it necessary to give this marked expression of his opinion on this case and this subject.

The External and Internal Orifices of the Uterus; their Anatomy and Physiology. By HENRY BENNET, M.D.—In the course of this paper, Dr. Bennet referred to portions of the muscular fibres of the cervix uteri as performing the function of sphincters, and spoke of the division of the cervix as a practice of which he did not approve.

Dr. BARNES thought Dr. Bennet's arguments fallacious; for he seemed to judge from the failures only, and had not seen the successes. He often divided the cervix, and generally with marked success. He thought, however, that the operation was often carelessly done.—Dr. TILT thought that the operations referred to were far too often done.

Friday, August 9th.

Dr. EVORY KENNEDY, President of the Section, delivered an address, which was published at pages 160 and 183 of the JOURNAL for August 10th and 17th.

On the proposal of Mr. BERRY, seconded by Dr. TILT, a vote of thanks was given to Dr. Kennedy for his address.

On Uterine Inflammation and Defective Involution of the Sexual Organs after the Change of Life. By E. J. TILT, M.D., London.—The author reminded the Section how frequently medical men promised those suffering from protracted uterine inflammation that the change of life would effectually cure it and bar its recurrence, whereas he was not afraid of asserting that this was a great mistake, and that one variety of uterine inflammation frequently occurred after the menopause and

remained undetected, because the patients, believing they could no longer suffer from uterine inflammation, generally bore their sufferings without seeking medical advice. The only kind of uterine inflammation that Dr. Tilt had frequently observed, after the menopause, was a more or or less acute inflammation of the cervical mucous membrane, which generally brought on vaginitis ; and he represented the symptoms as those well known. Although of a mitigated severity, the author had found such cases less amenable to treatment than at an earlier period of life, particularly when marked ulceration round the os uteri gave evidence of a similar state of the rest of the cervical mucous membrane. Dr. Tilt explained that when, at the menopause, the sexual organs were healthy, they gradually shrank by a process of physiological involution, and were ever after free from congestive and inflammatory liabilities ; whereas, on the contrary, this physiological atrophy of the sexual organs might not occur from ten or fifteen years after the change if the sexual organs were diseased, during which time women remained liable to uterine inflammation. The author stated—1. That the occasional recurrence of that form of uterine inflammation which he had described might be safely predicted to all those who had been for years martyrs to chronic inflammation of the entire womb, whenever such patients presumed too much on their partly recovered strength after the change ; 2. That inflammation of the cervical mucous membrane might be expected whenever the uterine tissues were being constantly teased by a small fibroid or polypus ; when the cervix was hypertrophied or of a fibroid consistency ; also in cachectic women, in whom one or more mucous membranes were always diseased. The author advised medical men to warn all such patients that they would not escape a mitigated form of uterine inflammation, if they did not take proper care of themselves after the menopause.

Secondary Uterine Hæmorrhage. By JOHN BASSETT, Esq., Birmingham.—Mr. Bassett described thirteen cases of secondary uterine hæmorrhage which had fallen under his observation in private and consultation practice. In all the cases the hæmorrhage was severe, and in two it proved fatal. It varied in the time of its coming on from the third to the thirty-second day after delivery. The cases were placed in three groups : in the first were five cases, in which the cause of the hæmorrhage was irregular and inefficient contraction of the womb, with clots in the interior ; in the second group were four cases where the hæmorrhage arose from the presence of a piece of placenta ; the third group also contained four cases, in which the cause of the hæmorrhage was a portion of retained membrane, a fibrous polypus, or inversion of the uterus ; and in the last instance, as far as could be ascertained, the hæmorrhage, which came on in the twenty-seventh day after delivery, was produced by imperfect involution.

Removal of Inverted Uterus by Ligature. By HENRY HORTON, M.R.C.S.—The case was of at least two years' standing. It had been thought to be and treated as polypus, but the ligature had not been applied. At each menstrual period the patient was almost drained to death, and for a very considerable time before removal there had been continual menorrhagia. To remove any doubt of the uterus being inverted, a most careful examination was made, both digital and by speculum. The abdominal parietes were so flaccid that the finger was easily pressed into the os in its inverted position, whilst two fingers of the left hand retained the fundus in a fixed position. There was not a single bad symptom after the application of the ligature ; not even the slightest hernia, from which Mr. Horton concluded that there was (if one might use the term) union by the first intention, and that of sufficient strength to enable the obliterated os to bear the weight of intestine in a short time after the operation. The patient was able to walk, perform her household duties, and, in fact, to enjoy her existence in a way which she had given up all hope of ever doing again.

Fibroid Degeneration of the Uterus, and the best way of Treating it. By PROTHEROE SMITH, M.D., London.—Dr. P. Smith drew a distinction between the polypi formed in the contractile tissue of the uterus and those of the soft lining tissue. The former alone are fibroid. When protruding internally they become polypoid, and are easily removed ; when, however, occurring externally, either projected through the contractile tissue or formed in the connective tissue separating it from the peritoneum, and so becoming subperitoneal fibroids, they can only be removed, if pedunculated, by abdominal section, or by the almost unjustifiable operation of the entire extirpation of the uterus and its appendages, when extensively implicating the organ. In intramural fibroids, he advocated their cure by enucleation, after division and dilatation of the cervix. He was led first to adopt this measure of the gradual separation of the fibroid from the uterine tissue, and its removal piecemeal, by a case cited from his practice at the Hospital for Women in 1865, which first suggested the idea of getting rid of these morbid growths through the natural passages, by the help of the natural powers of expulsion, augmented by the use of ergot and borax. He preferred the use of the ligature, by means of Gooch's cannula, to the *écraseur ;* and pointed out the danger of extensively separating the disease before its removal, from disintegration of tissue and pyæmia. Distinctions were drawn between the disease when infesting the cervix, and simple hypertrophy or cervical areolar hyperplasia and *elongement ;* and to illustrate the mode of treatment he had successfully pursued, a recent case was quoted, diagnosed microscopically as fibroid, and cured by the repeated use of caustic potassa, by the *modus medendi* which was described.

SECTION D.—PUBLIC MEDICINE.

Wednesday, August 7th.

The Rev. SAMUEL HAUGHTON, M.D., F.R.S., presided, and delivered an address, which was published at page 181 of last week's JOURNAL. On the proposal of Mr. HECKSTALL SMITH, a vote of thanks was given to Dr. Haughton for his address.

The following papers were read.

Disinfection of Air. By A. ERNEST SANSOM, M.D., London.—In many of the infectious diseases (notably variola, scarlatina, rubeola, pertussis, pyæmia, erysipelas, and diphtheria), the patient is a centre from which the *materies morbi* is diffused, and the vehicle of transmission is frequently the atmosphere. The object of disinfection is the rendering inert of the *materies morbi.* We cannot rationally apply means intended to influence such *materies morbi* without having a strong conviction as to its nature. Modern analytical research, especially the investigations of Chauveau and Sanderson, has shown that in certain infectious diseases the poison is a solid which can operate in no way as mere dead organic matter. Unless one assume it possessed of a hypothetic power of catalysis, one cannot explain its properties, and this term is gradually becoming improved off the face of science. In fact, it can be stated that no kind of catalytic change of organic bodies ever takes place without the intervention of living things or their active secretions. This paper assumed that the "poison" of infectious diseases which may be carried by the air consists of particles of living matter. Reviewing the agents for air-disinfection now employed, and the *rationale* of their action, the author considered that no non-volatile agent, such as permanganates and chlorides, can have any appreciable effect whatever ; that oxidisers, *purs et simples*, are also inefficacious, chlorine having little if any action as a disinfectant. Iodine, however, is a valuable agent, and sulphurous acid and carbolic acid are very energetic air-disinfectants. The author detailed a series of experiments, showing, 1, that bacteria and monads are killed by air which contains carbolic acid ; 2, that the germs in the air which develop into fungi are also killed by an atmosphere containing carbolic acid ; 3, that, whilst the presence of sulphurous acid, or of carbolic acid in the air prevents putrefaction, and the concurrent development of living forms, the so-called oxidising disinfectants fail to prevent either. It is demonstrated that antiseptics existing even in small proportions only in the air kill the low forms of life, and the probability is strong that, in like manner, they destroy the germs of disease. The author exhibited an apparatus made for him by Messrs. Savory and Moore, for the continuous supply of carbolic acid to the air of a sick chamber.

After some remarks by Dr. ALEXANDER (Halifax) and Mr. EYTON JONES (Wrexham), Dr. HESLOP (Birmingham) said he thought that inquiry must be directed to the power of hot water in destroying the germs of infectious diseases. About two years ago he recorded an inquiry as to the results of clothing from a scarlatina ward being mixed with the clothing of other wards in the hospital, the clothing of the former ward having first been subjected to hot water and chloride of lime. He was unable to say whether the clothes were submitted to boiling water, but they were placed in hot water, and chloride of lime was carefully employed. What was the result ? They were so alarmed at the frequency with which scarlatina broke out in the other wards of the Children's Hospital, notwithstanding the most minute precautions were taken, that it was determined to make a thorough investigation. The first thing that occurred to them was that, instead of the whole of the clothes being washed together, the clothes from the scarlatina ward should be sent away to a woman who took in no other washing. After being so disturbed that it became a question with some whether the Children's Hospital should be kept open, that single circumstance completely prevented the diffusion of scarlatina to the other wards of the hospital. This was two years ago, and if a case of scarlatina had since occurred it had been engendered in the institution. The question was whether it was safe for laundresses to take in clothes, without a certificate that they had been submitted to such a process as would render them non-infectious. The laundry was the real source of an amazing number of

infectious diseases breaking out in the families of higher classes, of the cause of which they had not the remotest conception.—Dr. A. HILL (Birmingham) had been consulted as to the use of disinfectants in that town in following up the treatment of small-pox cases, and he always recommended the closing of the room and the burning of sulphur in it. On one occasion this was done whilst the patient was in bed, but, though such a course was undesirable, no harm followed. As a rule, however, the room had been closed, and in no case had the disease reappeared, so far as he was aware, in an apartment so treated. Sulphurous acid was easily available; any one could use it; and it was cheap, effective, and admirably manageable.—Dr. FERGUS (Glasgow) said that, finding it impossible to prevent the spread of small-pox to the other patients in the hospital, the conclusion was therefore arrived at that a separate hospital must be provided for such cases. He also believed that the reason why Glasgow suffered so little from small-pox was owing to the fact that vaccination and revaccination were generally carried out in the town.—The PRESIDENT observed that in the Dublin Hospital it was found that, in spite of all the precautions taken, and the use of every variety of disinfectant, small-pox spread to the surgical wards. It was thought that the washerwoman was to blame, and the clothes were accordingly put into cold water, boiled, and then washed with the other linen. After the adoption of that system, small-pox ceased to be transferred from one ward to the other. There remained, however, another cause of the spread of the disease—the communication with convalescent patients.—Dr. SANSOM replied.

The Use of Alcohol in Health and Disease. By J. W. EASTWOOD, M.D.—In this paper the author took a review of the subject medically, similar to that which he had taken in a former paper on "Intemperance in its Medical and Social Aspects". He contended that the value of alcohol in ordinary health is not definitely known; that experiments hitherto made are conflicting in their results; that the isolated experience of individuals is not of scientific value; and that there is great need of more accurate and more extended experiments. Whilst believing in the proper use of alcohol in many cases of disease, he thought that its good effects had been over-estimated, and that great care and precision are necessary for its administration. On the whole question he advocated a careful and scientific inquiry, and considered the recent medical declaration capable of improvement.

Sanitary Statistics of Cheltenham, 1865-1871 (*inclusive*). By EDWARD T. WILSON, M.B.—The paper, which dealt with Cheltenham proper, the subdistrict, was based not upon the figures of the Registrar-General, but upon a minute analysis of the registers of the town. It was illustrated by a map, showing roughly the distribution of clay and sand; the position and extent of sewerage, both new and old, and the distribution of the water-company's mains, all marked in distinctive colours; as also the locality of each death from small-pox, scarlatina, diphtheria, fever, and diarrhœa, during the seven years under investigation. An inspection of the map showed that the new sewerage was distributed mainly through the densest and poorest parts of the town; still, cesspools and old sewers were in use, and the difficulties of arriving at precise results in this as in other sanitary questions, such as water-supply, were very great. The changes of a poor population rendered even a house-to-house inquiry defective. In treating of the various sources of water in Cheltenham, it was shown that the hill supply, a really good water, was monopolised by a company, and retailed at a price beyond the reach of the very poor. The wells in a porous soil were shown to be generally bad, and always suspicious, though valued by those who used them; and it was explained that a want of united action on the part of those who dwelt on the clay and those who lived on the sand-bed had led to divided counsels, and, as a result, the maintenance, up to this present time, of a water monopoly which was detrimental to the town. Passing to statistics, it was found that Cheltenham had more than once headed the sanitary list of English towns. Last year, the death-rate was but 17.57, reckoned upon the actual census, that for the whole kingdom being 22.6; and at a time when all England was suffering severely from small-pox and other epidemics, the mortality from these causes in Cheltenham was but 1.40 per 1,000 living. Measles killed 10 yearly, diphtheria 3.7. Small-pox had once only been epidemic in the seven years; it then claimed 28 victims, nearly all children, and presumably unvaccinated. Scarlatina was fitful, and sometimes severe; the deaths in 1869 were 81; in 1867, there were but two from this cause. It was hoped that a fever hospital about to be erected would materially contribute to the preservation of the town from the two last diseases. Fever showed an average of 17 *per annum;* and some reasons were given for the great discrepancies which existed between these figures and those of the Registrar-General in his Quarterly Reports. Cholera was unknown in Cheltenham. Small as the mortality was, it was important to search for its cause, especially if, as appeared from the map, the deaths were unevenly distributed even over the poorer parts of the town. Whole districts and special centres were seen thickly studded with deaths from scarlatina, fever, and diarrhœa; and it was shown to be more than probable that this was due to circumstances arising out of a well-water supply in a porous soil traversed by old brick sewers. Should further and more minute investigation confirm these views, it would be clear that by abolishing the older sewers (a matter, of course, requiring time), by giving a plentiful supply of wholesome water to the whole town, especially to the poorer districts on the sand-bed, and by isolating the first cases of infectious disease, the sanitary authorities of the town had it in their power to secure for Cheltenham, not once in a decenniad only, but permanently and in reality, the position of being the healthiest among English watering-places.

Thursday, August 8th.

The chair was occupied by Dr. T. P. HESLOP, Vice-President.

The Downward Intermittent Filtration of Sewage, as carried on in the Filtering Areas at Merthyr Tydfil. By T. J. DYKE, F.R.C.S.—In summarising his remarks, Mr. Dyke laid before the meeting the following propositions as conveying his notions of a perfect system for the disposal and utilisation of excreta. 1. In order to diminish and limit to the smallest possible degree the chemical action which results when human or animal excretions are dissolved in water, the transmission and delivery of the sewage-water on the land prepared for its reception should be effected in the shortest possible time. By means of the system of sewers and drains planned and formed by the town surveyor of Merthyr, the time occupied by the water in passing from the furthest point (five miles) of the system to the filtering areas does not exceed two hours. 2. The sewage-water should be delivered on the land in such a state that the rootlets of plants can at once absorb and assimilate it. In works on botany, it is taught that each rootlet of a plant formed of cellular tissue is closed at its extremity—that is, it is covered, as the papillæ of the tongue are by mucous membrane, or as the end of the finger is covered by the skin; and that the fluid on which plants live is absorbed through the substance of that covering tissue, hence that it is only that which is dissolved in water that the rootlet can take up. 3. No attempt should be made to precipitate from the sewage-water any of the fertilising materials which it holds in solution; for, as sewage-water does not hold in solution more of these fertilising matters than the earth can store, or the rootlets of the plant absorb, so to precipitate therefrom any of the dissolved matter is a waste of the fertilising material. 4. All insoluble matters floating in the stream should be removed by mechanical means. The extractor invented by Mr. Baldwin Latham seems well fitted for the purpose. 5. All fertilising matters, as yet undissolved and suspended in the stream, should be removed by proper filters, and then treated by such chemical and mechanical means as may tend to render them soluble. The filters formed by Mr. Harpur, and in use at the filtering areas, with the addition of the layer of sand which comes down with the stream, fulfils the first of these requirements well. The second is a desideratum. 6. The sewage-water thus freed from insoluble matters, and from soluble matters as yet undissolved, being passed on to lands prepared according to the principle suggested by Dr. Edward Frankland, and carried out according to the scheme of Mr. J. Bailey Denton, should so pass on to, through, and out of the soil, as to leave no scum on the surface of the soil, nor any polluting substance in the effluent water. Mr. Dyke held that the addition of lime, alumina, or any other chemical to the sewage, with the view of causing precipitation, is wrong in principle. First, to precipitate from solution in the sewage-water that which is needed for fertilisation is a waste, and therefore an error. Next, the precipitation of these soluble matters increases the sewage slush, and renders necessary the formation, at a great cost, of tanks for the reception of the deposit. Lastly, in order to diminish the nuisance they would otherwise occasion, it is necessary to add deodorants to the precipitating matters. Most of these deodorants virtually destroy the fertilising property of the deposit. By carefully straining all extraneous insoluble matters from the sewage stream, by filtering all undissolved but yet soluble matters therefrom, by treating these undissolved fertilising matters separately by means calculated to promote their solubility—by these processes a sewage-water should be obtained which may safely be passed on to land properly prepared.

Mr. DE RENZY mentioned that at Delhi all the liquid sewage was deposited upon the land on which the city was built, and that it found its way into the wells, the water of which, though bad, was deemed by the people very good. It was a striking illustration of the purifying effect of the soil.—Dr. A. HILL quoted statistics showiug that the results in purification obtained by intermittent filtration at the Birmingham sewage-farm were much the same as those at Merthyr Tydfil.—Alderman AVERY, who was invited to speak, disagreed with Mr. Dyke as to the advisability of using precipitants before placing the

sewage upon the land to be filtered. He regarded it as necessary, in order to render the sewage more fluid and prevent the land from being choked; and he knew of no works where lime or some precipitant was not used.—Mr. DYKE maintained that it was wrong to take from the fluid sewage that which it had dissolved, and stated that it was intended to discontinue the use of lime at Merthyr.

Sanitary Improvements in India. By A. C. C. DE RENZY, Esq.—The author said that the sanitary arrangements in India were so deficient that they were the cause of severe visitations of cholera and other serious epidemics. The death-rate was very alarming. In Delhi, for the four years ending 1869, the death-rate was 43 per 1,000; in 1865, 50 per 1,000. Sickness to an equally dreadful extent prevailed. The majority of the people lived in huts, and in the Punjaub the number of people covering each acre was 158; but in more densely-populated places the number was 520 to the acre. The streets were narrow and tortuous; and the arrangement for the disposal of sewage was by digging huge holes, resulting in terrible impurity to the air. In Delhi there were a few underground sewers, but as there was no regular water-service, the sewage stagnated, and naturally gave rise to epidemic disease. The water of Delhi was undrinkable, and the people had to use canal water. One of the wells, to his personal knowledge, contained 173 grains of solid matter. Great efforts had been made to improve this state of things; but the inhabitants looked with something like horror on any movement that was made for their sanitary improvement. The sanitary condition of the European troops in the Empire, he was glad to say, had been vastly improved during the last twenty-five years, as was obvious by the death-rate, which at that period averaged about 69 per 1,000, as compared with 27 per 1,000 for the ten years ending 1870; but it must be noted that the ratio of invalids had more than doubled during the last ten years. The paper concluded by condemning the erection of new barracks by the Government at a cost of £10,000,000 sterling, as being an unnecessary piece of work; and stated that the great obstacle to the sanitary improvement of India was the profound indifference on the matter evinced by the inhabitants themselves.

Decayed Soil-Pipes as a Cause of Disease. By A. FERGUS, M.D., Glasgow.—Dr. Fergus shewed specimens of perforated soil-pipes removed from houses where they had most probably caused disease. He said that, when there were diseases which usually originated from excremental pollution, if the water-supply were pure, the whole soil-pipe should be uncovered and examined, especially on the upper surface, as plumbers often failed to detect this state of pipe, as they looked for liquid leakage. This was illustrated by specimens removed from houses where the soil-pipes had been pronounced perfect by plumbers. Dr. Fergus dwelt at some length on the causes of this decay, and stated that various facts, and the results of chemical analysis of the inside of the pipes, caused him to infer that the pipes must have been destroyed by a gas arising from the decomposition of excreta. The destruction took place in non-ventilated pipes in from eight to twenty-one years; in ventilated, in from twenty to thirty years. The sanitary lesson to be learned was this, that the best and most carefully built houses might become unhealthy by the decay of the lead soil-pipes, even when they had been well trapped.

Dr. STEWART (London) mentioned the circumstance of typhoid fever breaking out in a convent in Hampshire, several of the cases terminating fatally. It was then found that the sewers had become choked up, and cart-loads of matter were removed. The water-supply had nothing whatever to do with it. It was a great advantage to have ventilating pipes connected with the ordinary sewage-pipes.—Dr. HILL (Birmingham) read a letter from Dr. Haughton, President of the Section, expressing a strong opinion of the superiority of glazed earthenware pipes (Staffordshire) over leaden pipes. Dr. Hill said that in his opinion the cause of the corrosion of the leaden pipes was purely carbonic gas.—The CHAIRMAN said that Dr. Fergus had rendered considerable service to this town by his able paper. He blamed medical men for attending families year by year for typhoid and other similar disorders without inquiring into the cause. Many persons only satisfied themselves as to the state of the pipes leading from the water-closets, which, considering their relationship to other discharge pipes connecting the baths, washing places, sinks, and soft water tanks, which ought always to be kept several inches apart from the sewer-pipes.—Dr. BODINGTON, sen. (Sutton Coldfield), spoke of water-closets and their disadvantages, and reflected upon the Government and local authorities for not putting them down. No provisions were made for preventing the return into dwellings of gases which were more foul than carbonic acid.—Dr. FERGUS said that, notwithstanding the constant and almost universal use of lead pipes, he did not know of a single case of lead-poisoning. Their destruction was caused by the decomposition of excreta, which was the principal sanitary point to be attended to. He did not know of a single case of typhoid fever or diphtheria which could not be distinctly traced to excremental pollution of the air, caused by those modern luxuries, water-closets.

Provident Dispensaries from a Practical Point of View. By D. TOLER T. MAUNSELL, M.B., Dublin.—Dr. Maunsell pointed out that in England and Wales there was an average of 1,700 persons to one medical man. If each of those were to pay four shillings a year, or less than one penny per week, they would be able to form 1,400 medical clubs, with an income of £350 a year each. But medical clubs were not formed, and why? He considered that it was the fault of the profession in squandering their skilled advice, and forcing it upon the people, that a vast section had come to demand gratuitous medical advice almost as a right.

Dr. STEWART (London), in opening the discussion on Dr. Maunsell's paper, said that in large towns there were great numbers of people who, while in receipt of good wages, spent their wages in drinking or in search of amusement, and who would afterwards seek medical and other relief at the expense of the parish. In order to check the gradual growth of this great evil, the provident dispensaries were established. The principle upon which these were founded was the necessity that all who participated in the benefits should subscribe so much per week, so that when the time of sickness came, they would have some place to which they had a right to go. The scheme, in effect, was one of mutual assurance. Great success had attended these places where they had been established and properly conducted. The one great risk lay in admitting persons to the benefit of the institutions who were in receipt of such wages that they were able to support themselves during illness, and to pay the doctor's fees. There was nothing which would prevent this but a strict system of inquiry. Against this, it might be urged that the difficulties of such a system in a large town would be almost insuperable; but the speaker pointed out a case in London where, in a dense population, the plan was tried with great success. There was one great principle which ought to be striven for—viz., that of the suppression of indiscriminate relief. It should be the duty of every hospital to employ a person to make inquiries as to the means of the people applying for relief.—Dr. LIDDLE (London) thought that, looking on the good they did on the one side, and the evil they did on the other, the hospitals were almost useless. The Committees always gave persons the utmost encouragement to go to the hospitals, in order that they might increase their own funds.—Dr. ARLIDGE (Newcastle-under-Lyme) said it was argued that, if too many dispensaries were established, they would ruin the hospitals as places in which a knowledge of the profession might be acquired by students. Dr. Maunsell, however, had proposed that these places should be so arranged as to feed the other hospitals.—The CHAIRMAN said the real point of this question was that insisted on by Dr. Stewart, that the relief should be attended with due inquiry. The argument that the dispensary would be taken advantage of by people who had no real claims to it, appeared to him to be a little wide of the mark. The question was, which was the less of two evils? In the case of the ordinary hospital, this fault was certainly to be found. Was it, then, better to allow the people to get relief for nothing, or to get a little sum from them in payment for it? In considering the question, it was necessary to be careful before pronouncing a judgment on the question, and to see that all the facts were known. It appeared to him that in all places where the plan had been tried, and had not been eminently successful, it was owing to some laxity or mismanagement. It was in Birmingham that the scheme had birth, it was in its immediate neighbourhood that it had been most extensively practised, and he could not help expressing a feeling of regret that so little had been done towards assisting their deliberations by the medical men of the district.—Mr. WILDERS had some knowledge of the working of provident dispensaries, and he knew that at Northampton the medical men received £1,200 or £1,400 *per annum*, which they would never have received under the hospital plan.

The late Epidemic of Small-pox in Taunton. By G. CORDWENT, M.D.—At the end of the paper Dr. Cordwent spoke of vaccination as being only a migratory power, and of revaccination as being far too frequently undertaken without being a certain preventive. He asked whether there ought not to be some relaxation of the law which forbade the postponement of the vaccination of an unhealthy child beyond a month. He had seen tubercular disease follow vaccination, and, without doubt, caused by it.

Notes on English Army Medical History. By W. R. E. SMART, M.D., C.B., Inspector-General Royal Navy.—The Saxons warring only in England, their wounded were cared for in the monasteries by the "leeches", who were also priests. William the Conqueror brought over, in medical capacity, Gilbert Maminot, an ecclesiastic, whom he afterwards made Bishop of Lisieux in Normandy; Nigellus Medicus,

who was most probably the chief surgeon of the army, as ecclesiastics like Maminot were prohibited from doing surgical operations (and the Conqueror rewarded him with many estates in England); *Tonsor* or *Barber* (name unknown), who may have done the minor surgery, according to the custom of the time on the Continent; he also was rewarded with an estate in England. There is no evidence that either father-confessors or physicians took part, as such, in the first three Crusades. Robert, eldest son of William the Conqueror, was wounded in Palestine in the first Crusade, and stayed at Salerno, in Italy, to be cured; on which occasion (A.D. 1100) the medical fraternity there dedicated to him their famous *Regimen Sanitatis*. Richard I was in the third Crusade, which was the first by sea. His fleet was detained at Rhodes, owing to his illness; and, soon after landing in Palestine (1191), both he and King Philip of France were very ill of a disease called "Arnaldia", which left them bald. In 1192, he was severely ill, after great exertions in a broiling sun on the plains of Jaffa. On that occasion, Saladin sent snow and acid fruits to relieve his fever; and he may also have offered the aid of his Arabian physicians. Edward I, when Prince Edward, joined the eighth Crusade, under St. Louis (1270). He was dangerously wounded by an assassin. The wound was incised freely by an English surgeon of untold name, and his life was thereby saved. The romance of Eleanor sucking the poison from the wound was unknown among contemporary chroniclers. This king formed the first army medical staff when he invaded Scotland in 1299-1300 A.D. It consisted of John de Kenle, "medicus," and two "vallette," or gentlemen students; and Philip de Belvaco or Beauvais, "cirurgicus", and two "socii" or assistants. Of these, the chiefs ranked as knights, and the juniors as esquires. Edward III claimed the crown of France. His great barons furnished large contingents, to be paid by the king, but through their hands. As there is no special allusion to the "cirurgici", it may be inferred that they were mustered under the baronial banners. At Cressy, 1340 A.D., the Black Prince commanded the first regiments of Englishmen out of England. They were styled Welsh, and these had their own medical attendant. Henry V, preparing to invade France in 1414, raised an army by covenanting with his military chiefs. He covenanted in a similar manner with his physician and surgeon to go with him to France for one year, and to provide a surgical staff to follow the army. The physician, Nicol Colnet, was to provide himself with three mounted archers as his body-guard. The surgeon, Thomas Morestede, was to have a similar guard; and he was bound to engage twelve men of his own calling to follow him in the field. This was the medical staff at Agincourt, 1415. Morestede was surgeon to three Kings Henry, and most likely to Edward IV; for it was through his influence, in concert with the Court physicians, that Edward granted to the Company of Barber-Surgeons, of which he was the chosen Master, their first charter of incorporation, from which there has been a regular descent to that of our Royal College of Surgeons. History is barren of details on this subject subsequently to Agincourt, until the Tudors reigned.

Friday, August 9th.

Drinking Water and its Analyses. By ALFRED HILL, M.D.—Dr. Hill said the importance of the question of which he had to treat was now very universally admitted, and everywhere a connection was traced between the impurity of water and the spread of disease. The old system of analysis was by no means to be relied upon; and indeed chemistry could now do no more than indicate whether the water contained any animal matters; and the result of these matters upon health was not to be ascertained by it, except in a proximate degree. If they took the waters of Loch Katrine, far removed from centres of population, and analysed that water they would find some little organic nitrogen it, and if they looked for ammonia they would not find it, or only in infinitesimal quantities. Organic nitrogen could only exist from animal sources. The effect of animal matter in water was not to be determined by analysis, which could do no more than detect its presence, and there were instances in which men for years drank water which was, according to all rule, most unwholesome, who were yet hale and well. Dr. Hill then described the various processes by which water was analysed, and discussed their various merits.

The Use of Arsenical Colours. By A. HILL, M.D.—Dr. Hill had had his attention called to this question during the last few months by a number of articles being submitted to him for analysis. Mineral green was an arsenite of copper, and was in great request on account of its brilliancy. It was this colour of which ladies were fond for the artificial flowers which they wore. It was this colour which was used for wall papers, and which, in connection with gypsum, produced a large number of light and pleasing colours. It was made in enormous quantities: in England alone 700 tons were made in 1860. The men who made it were liable to be attacked by all the symptoms of arsenical poisoning, but this was rarely fatal. The speaker instanced the case of one man who suffered from arsenical poisoning from sleeping in a room hung with a paper of this colour. It was warranted not to contain arsenic, but was brought to Dr. Hill for analysis, and proved to do so. The patient was put under treatment, and for many months the symptoms remained. At length he had almost recovered, when he met with an accident which proved fatal. The colour was used by cooks and confectioners in ignorance of its deleterious properties, and by toymakers for the purpose of colouring toys—a very dangerous practice, since the first place into which a child put a toy was generally its mouth. He had known of one case in which this dangerous material was employed to colour the walls of the children's room in a hospital. The material was submitted to an analysis, and on its nature being discovered, it was of course at once removed.

On the Relative Contagiousness of the Different Forms of Small-pox. By W. S. BRITTON, Esq.—The author expressed his conviction that that form of small-pox known as modified, in which the pustules were conical, without any depression in the centre, was not of the same contagious character as the true form, with the depression. During the recent epidemic of small-pox, the writer held the appointment of surgeon to a large district in Marylebone, and had every opportunity of testing the correctness of his opinion, with the following results. 1. Every case of true small-pox was removed to the hospital generally on the second day of the eruption, where all the usual precautions were taken; but, in spite of this, within three weeks of the attack the disease, in 40 per cent. of the cases, appeared in some person who had previously been associated with the patient. 2. On the other hand, about fifty cases of modified small-pox (that characterised by conical pustules, without any depression) came under his notice. They were not taken into hospital, but were allowed, without restriction, to mix with the other members of their family, and in no one case did the disease appear in any person so exposed to its influence. He concluded, therefore, that modified small-pox was not contagious.

Dr. BURKE (Dublin) said he based his observations on this subject on his experience in the recent epidemic in Dublin. The disease, when the small-pox was not epidemic, was called chicken-pock or swine-pock. He believed in neither of those complaints. They were both modifications of small-pox, and the modification was caused by vaccination, and people died in both cases of the second attack. He thought he was justified in saying that those diseases were as communicable as any other form of the disease.—Dr. ARLIDGE said he did not think that medical science was advanced by bringing forward crude hypotheses, especially in cases where the observations were insufficient to base important theories.

SECTION E.—PSYCHOLOGY.

Dr. MAUDSLEY, President of the Section, delivered an address, which was published at page 163 of the JOURNAL for August 10th.

Microscopic Specimens.—Dr. J. BATTY TUKE exhibited microscopic sections illustrating Miliary Sclerosis of the Brain, Colloid Degeneration, Fuscous Degeneration of Brain-Cells, etc.

Dr. HERBERT C. MAYOR exhibited microscopical sections of Brain-Structure in Health and Disease.

Dr. J. THOMPSON DICKSON exhibited some sections illustrating General Paralysis, explaining that the case was one in which no mental symptoms had occurred; and he urged that general paralysis was a disease often associated with insanity, yet insanity was not a necessary accompaniment.

Dr. MURRAY LINDSAY (Derby) agreed with Dr. Haynes, and observed that the reaction with regard to the restraint of patients had already set in. Men were beginning to consider what was right and best for the patient, and did not hesitate to use it. At the same time, there was a tendency to use restraint recklessly and indiscriminately.

Morbid Anatomy of General Paralysis.—Dr. J. LOCKHART CLARKE exhibited microscopical sections of Brain-Tissue illustrating General Paralysis; and he explained that he had found the conditions of brain-tissue to be in the first place that of wasting, then a widening of the perivascular canals, and a separation of the sheath of the same. This sheath (apparently hyaloid) becomes corrugated, and contracts round the vessel, which is seen to run within it in a tortuous course, the tortuosity often being so great that the vessel becomes twisted into knots or kinks. Dr. Clarke further explained how he found the white tissue disintegrated, and the grey matter wasted; the grey cells lost their sharp contour; and their granular contents, as a little heap, ready to fall asunder.

Restraint in Insanity. By STANLEY HAYNES, M.D.—The author spoke of the necessity for excluding all sentimentality with regard to the imposition of restraint on patients, deeming it essential to be guided by a belief of what was best for the patient's good. He defined the terms restraint and seclusion, and mentioned the various forms of both. After assuming that all practitioners agree in the justifiability—nay, propriety—of restraining patients with suicidal and destructive tendencies, and in the advisability of corporeal restriction on some fever patients, Dr. Haynes proceeded to the question whether we ought or ought not to restrain the insane, when suicidal or destructive, after all other means have been tried and failed. He held that there is now too little restraint, and suggested whether it is not adopted under less disagreeable terms. He expressed his belief that restraint can never again be abused, because the supervision of the authorities is so strict, and the treatment in asylums is so open to observation, that all privacy has ceased; and thought the uprightness of British physicians a sufficient guarantee against any abuse of restraint. Dr. Haynes considered restraint, when really necessary, a preferable mode of treating patients, with regard to curability, to the giving of medicines with the view of quieting them.

The Local Distribution of Insanity.—By T. S. CLOUSTON, M.D.—After pointing out that a comparison of the last report of the Commissioners in Lunacy and the preliminary Report of the Census of 1871 showed that the rural agricultural districts had far more lunatics in proportion to the population, Dr. Clouston said that the increase for the whole of England and Wales, between 1861 and 1871, was 13·15 per cent. An examination of the counties that were decreasing or most markedly stationary, and the counties whose decimal rate of increase was far above the average, led to the conclusion either that the causes of a decreasing or a stationary population were also the causes of increased lunacy, or that the process of movement of the able-bodied, healthy population, from one county to another, left a great excess of lunatics in the districts from which such emigration took place, But a further comparison of the Commissioners' and Registrar's reports showed that this would not be an entirely correct inference. With regard to the classifications of insanity he had selected the reports of fifteen asylums—five of counties chiefly agricultural, viz., Cumberland and Westmoreland, Wilts, Worcester, Somerset, and Salop; five urban, viz., Newcastle, Liverpool, Birmingham, Bristol, and Surrey; and five with a considerable mixture of each element, viz., Glamorgan, Stafford, Durham, Sussex and Hants; and of the patients admitted for the five years beginning with 1866, he found that those suffering from congenital insanity were 5·6 per cent. in the rural, 3·2 per cent. in the urban, and 4.8 per cent. in the mixed and urban. The insanity dating from birth was, therefore, far more frequent in the country than in towns. The epileptic insanity was in proportion to the whole 9·4 per cent. in the rural, 8·2 in the urban, and 5·6 in the mixed rural and urban. Thus the rural still predominated in the production of this kind of insanity; but on turning to general paralytic insanity its proportion was only 3·6 per cent. of the whole, while the urban stood at 9·4 and the rural-urban at 9·7. Puerperal insanity stood in the rural asylums at 3·6 per cent., 2·6 in the urban, and 3·9 in the rural-urban. Of the causes of insanity, hereditary tendency stood first on the list. It acted both as a predisposing and an exciting cause of the malady. Next in order of importance stood intemperance, which acted as a direct exciting cause. The abuse of alcoholic stimulants might be the cause of almost all the varieties of insanity, but general paralysis was more frequently caused by it and by sexual excesses than by anything else. This quite explained the great preponderance of this disease in the asylums of the urban, mining, and manufacturing counties. It depended least on hereditary predisposition, too, of all the varieties of insanity arising *de novo* as the result of its exciting causes. The causes of insanity, when carefully looked into, were by no means most commonly mental shocks, disappointments in love, and distresses, as was generally supposed. Mental and moral causes that distinctly affected the mind were only one-third of the physical causes in the fifteen asylums he had mentioned. Is insanity increasing? was a question often asked now-a-days, and there was a decided popular belief that it was increasing very rapidly amongst us. However, taking all the facts which appeared to bear out an affirmative answer to this question, and contrasting them with the facts on the other side, he thought the conclusion might be arrived at on very definite grounds, that insanity was really not increasing amongst us.

FATAL FIGHT BEWEEN LUNATICS.—A man thirty-two years of age, an inmate of Hanwell Asylum, was killed on Thursday of last week by another patient. They were in a ward by themselves. On Thursday, the deceased was attacked; a desperate struggle ensued; and, before a warder could get up to them, they both fell heavily to the floor. The deceased was taken up insensible, and died the same evening from concussion of the brain.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 24TH, 1872.

THE PSYCHOLOGICAL SECTION.

WE have said something of the brilliant achievements of Public Medicine among the junior Sections of the Annual Meeting. A few words must be said also for the Psychological. Its success this year has been greater than its most earnest well-wishers anticipated; and much praise is due to those into whose charge its affairs were committed for the energy they displayed and the assiduity with which they devoted themselves to their task.

There was a time when the study of lunacy was looked upon as a distant relative only of scientific medicine; and mad doctors are still regarded by some with almost the same suspicion as their unfortunate patients. There has always been a sprinkling of ardent psychological observers striving to unravel the mysteries of lunacy; but the mass of practitioners who, until lately, have had charge of the insane, have been charged—with some exaggeration, perhaps, but not without reason—as men of business capacity and tastes, rather than of scientific attainments or pursuits. In the earlier days of the Psychological Section, some difficulty was felt, and more was feared, in maintaining its vitality; but any such apprehension need, we think, be entertained no longer. As time revolves, new exigencies are developed; and one of the greatest exigencies felt in the present time by medical men is a competent knowledge of lunacy. Hence, perhaps, the growing attendance at, and interest taken in, this Section, of which a crowded room afforded ample testimony. Nor was the inquirer brought face to face with the arrogant assertions of ignorance with which he was formerly met. The nebulous mist of metaphysical entities and the cloud of mystery, with which lunacy was heretofore enshrouded, are fast passing away. The students of lunacy are greatly increasing in number; they are seeking to make good their ground upon a firm and solid basis of substantial scientific facts, and are seeking to render their science definite and exact. The work now being done by many observers employed in lunacy practice, in nervous pathology, may be regarded by the profession generally with satisfaction.

The business of the Section was opened with a brilliant address by Dr. Maudsley, the President of the Section. Those who heard it, and the outside thousands who were absent, but who will have read it in our columns, will agree that this address was marked by clear and ample thought, by well marshalled facts and cogent reasoning, expressed in eloquent and tasteful words. In contrasting the former and the present condition and social status of the lunatic, in exemplifying the material in the place of the metaphysical basis upon which the study of mind is now essentially based, in delineating the moral sense and its necessary influence upon the conduct of the indi-

vidual, Dr. Maudsley emphasised the exigency for a more diffused and wider spread study of the conditions which render one being an idiot, another a criminal, and another a person of sound mind. This is a line of study in which science, humanity, and law are almost equally interested. Some interesting microscopical sections, showing the conditions of both the grey and white matter of the brain in progressive paralysis, were exhibited by Dr. J. Thompson Dickson; and a paper from Dr. T. S. Clouston, of the Cumberland Asylum, completed the first day's sittings.

The second day was marked by an exhibition of specimens illustrative of Nervous Pathology, and the interest taken in them was not less keen than the skill and labours of the exhibitors deserved. Dr. J. Lockhart Clarke brought forward some of his world-famous microscopical sections. They were illustrative of General Paralysis. These sections, too, were of special interest and value; for, though they were the specimens which set the lesson to the many workers on the subject, yet numbers of the members present had not before had the opportunity of seeing them; nor had they ever seen others by the same physician, which demonstrated the condition of the vessels and the deposit of hæmatoglobin with equal precision and beauty.

Dr. J. Batty Tuke, a Vice-President of the Section (whose presence was especially welcome, from the earnest interest he has shown in the general progress of the Association in Scotland), exhibited various instructive sections in demonstration of certain forms of Cerebral Disease; and some beautifully prepared sections of Brain-Structure in Health and Disease, the work of Dr. Herbert C. Major, of the West Riding Asylum, were shown by Dr. J. Crichton Browne, a Vice-President, who also exhibited an ingenious glass instrument, of his own device, for measuring the depth of the grey matter of the brain. Dr. Browne read an interesting paper on Erysipelatous Encephalitis; Dr. Stanley Haynes contributed a paper on the Use of Restraint in the Treatment of Mental Disease; and Dr. W. Wood made a communication on the Use of Concrete in Asylum Buildings.

Dr. G. F. Bodington of Sutton Coldfield, who undertook, with Dr. Thompson Dickson, the office of Secretary to the Section, arranged for a sufficient supply of microscopes to allow the exhibitors a separate instrument for each specimen; and their excellent management of the general business, and the satisfactory carrying out of the details, were warmly acknowledged.

During the course of the meeting, many members of the Medico-Psychological Association, who were present, expressed an opinion in favour of an annual meeting between that and the British Medical Association. We should welcome such a meeting. According to the procedure which obtained this year, the Psychological Association held its annual meeting a week before our own; and the psychological energy was thereby divided, whereas it might have gained in strength by unity, could the suggestion of the two Associations meeting in the same place at the same time have been in some way carried out. There are some practical difficulties in the immediate realisation of the proposal, but we would gladly aid it in any way in our power. In the meantime, we congratulate our Psychological Section on its increasing popularity and success; and, in urging its members to continue their efforts, we would suggest to them the usefulness of encouraging any proposals for meeting annually with their *confrères* in the Medico-Psychological Association, with whom and with whose work they seek to make common cause, without attempting to rival one another.

SANITARY IMPROVEMENT IN DUBLIN.

THE discussion excited by comments and communications in our columns on this subject have done much—we hope that they will yet do more—to impel sanitary reform in Dublin. To this end Dr. Maunsell, Dr. Gramshaw, and Mr. Benson Baker, have been chief contributors. We are happy to be able to record the appeal recently made by Chief Justice Whiteside in favour of this object. Addressing the Grand Jury, he said:

I cannot conclude my observations without congratulating you upon the pleasing report which has reached our ears, that the pollution of the Liffey is about to cease; that is, that the good work of intercepting the mass of filth which is discharged into that once bright and sparkling stream will soon commence. This will not be an hour too soon, as I can testify; for, having returned from the pure air of Kildare, I was, in passing along the quays at ten o'clock at night, affected by a smell more odious than (although not wholly unaccustomed to the odours of the Liffey) I had ever before experienced. It would be matter for the curious inquirer into the causes of epidemics hereafter to discover how it was that civilised men so long endured a pestilential cesspool in the midst of a beautiful city; and the effect will be traced to real causes which produced them. It will redound to the honour and glory of those who have given us an abundant supply of fresh and pure water from the Vartry, if they, by their exertions, shall enable industrious men to live upon the banks, and fish to exist in the waters of the Liffey. Gentlemen, sitting in the Court of Queen's Bench, I have had opportunities of forming an opinion on the sanitary laws under which this city is governed. The authorities have, I believe, been fairly active, and it has happened that persons convicted have applied to the Court of Queen's Bench to quash the convictions on points of law. We have sometimes been obliged, reluctantly, to do so. Gentlemen, these sanitary enactments are too technical, too involved and complicated, for easy and practical use; and, from a statement lately made in the Queen's Bench, I should say there was no city in the world in which sanitary laws and sanitary improvements were more required than in Dublin. That statement was that in dwelling-houses, against the proprietor of which a conviction was sought to be enforced, forty persons were at one time suffering from fever and infectious diseases. I take leave to say that while such a state of things can exist, the clergy may preach, the doctor may prescribe, and the hospitals may be full, but the epidemic, whatever be its form, will rage amongst us. Preventatives are the true measures to pursue. The hospital is a secondary source, and may, perhaps, cause other evils in curing the prevailing malady; but until the dwellings of the working-classes and the poor in the city are looked after in a widely different manner from that in which they are now regarded, I repeat, the epidemic must decimate the people. Nor does this practical subject concern only the working-classes. Death is very impartial, as we have seen during the—I am happy to say—late epidemic. It has been said, pale death knocks at the door of the peasant, but with no louder summons than at the palace-gate of the prince. I have just read that we must expect another epidemic, worse than the one now dying out amongst us. Gentlemen, if it is to be arrested we must be "up and doing." Our sanitary laws must be amended and sharpened, our city cleansed, our river purified, and, above all and beyond all, the dwellings of the poor ameliorated and improved. Gentlemen, great fortunes have been realised in the liberties of your city, and zealous men lived there; but if you, as a jury of benevolent inspectors, were to explore the lanes and alleys of these liberties, where our poor fellow-creatures herd together, you would start back affrighted at the dismal spectacle. Yet the poverty-stricken inhabitants bear their privations patiently. There are numbers of artisans receiving good wages, and able to pay for suitable accommodation if they could but get it. A mason lately swore on trial in the Court of Queen's Bench that his wages were 5s. 4d. per day. Such a workman could well spare four or five shillings a week for a suitable dwelling for his family; but what return will he get for his money? But, gentlemen, you need not penetrate into the liberties of your city for an example of our sanitary condition. Within five minutes' walk from where you sit, are to be seen sights almost as bad; whoever has walked through Pill Lane on a wet and wintry day, and beheld human beings indifferently clad, and sitting in a market in wet, slush, filth, and every form of discomfort, with slaughter-houses contiguous in narrow lanes, may find out by the evi-

dence of your senses the sanitary measures required for the preservation of health and life in this populous and important city. I notice that at this moment a working-class association, headed by that eminent philanthropist and zealous friend of the artisan, Lord Shaftesbury, have resolved to erect 1,200 houses in the suburbs of London for the accommodation of men, not as beggars, but as those who can and will pay for what they get; namely, the working-classes of a crowded community. Gentlemen, I perceive some humane gentlemen in your city have resolved to form a sanitary association here. They may be certain that the most indefatigable attorney-general will never prosecute for a conspiracy against dirt. [*Laughter.*] An association to improve the health, habits, dwellings, and sanitary laws affecting the bulk of the people will be honoured, and, I hope, supported in their Christian efforts. Cleanliness is a Christian duty, and, further, one which touches us sitting here. If the decencies of life can be secured for the working people, health promoted, and intoxication diminished, there will be at each successive Commission fewer criminals to be tried, thus realising the great and noble truth that prevention is better than cure or punishment.

ARMY MEDICAL REPORT.

THE Annual Report for 1870, now published, affords as usual very complete information on the sickness and mortality statistics of the forces at home and abroad, and includes an appendix of special reports of interest.

The total admissions to hospital for sickness were slightly higher than in 1869, but less than the average of the last ten years in the proportion of 1,095 to 1,129 per 1,000 of mean strength. The increase was chiefly in China, Japan, and India. The ratio of mortality, it is satisfactory to find, was much lower than in 1869, and was, indeed, 2.47 per 1,000 below the average of the last ten years; an improvement being observable in regard to India, Bermuda, Ceylon, and the Straits Settlements. The invaliding has increased of late. The mean daily sickness shows a decrease of 5 per 1,000 in comparison with the average of the last decennium. Among the colonial corps there has been a marked increase in the sickness and mortality in Ceylon and Labuan, due to the unhealthy state of the detachment in the latter island. In Western Africa, the ratio of mortality was less than half that of the preceding year. In China, the admissions to hospital have been on the increase of late.

At the home stations a great improvement was observed in the health of the men as a consequence of the operation of the Contagious Diseases Acts, where these were enforced. At Devonport, Portsmouth, Chatham, Sheerness, Woolwich, Aldershot, Windsor, Shorncliffe, Colchester, Winchester, Dover, Canterbury, Maidstone, Cork, and Curragh, the Act was in operation during the year, and the disease against which it was directed decreased in ten out of fourteen places. At fourteen other stations where the Act was not in operation there was, it is true, an increase in six and a decrease in eight; the increase being greater in Limerick and greatest in London. But, comparing the fourteen stations where the Act was operating with the fourteen in which it was not, the admissions for enthetic disease per 1,000 of mean strength was 54.5 at the former against 113.3 at the latter.

The recruiting returns for the twelvemonth refer to a total of 38,408 men examined for admission to the army. Of these, 11,827 were rejected on primary, and 1,108 on secondary, inspection—12,935 in all, and giving a ratio of 336.7 per 1,000 rejections. Including both primary and secondary inspections, there was a reduction of 30 per 1,000 in the rejection of recruits examined by army medical officers in the first instance, and 65 per 1,000 in those inspected by civilian medical men, making a reduction in the rejections upon the total inspected of 38 per 1,000 on a comparison with the results of the previous year. But there was still a disproportion between the rejection of recruits at secondary inspections by army medical officers and civilians, in the proportion of 16 to 116 per 1,000.

As regards India, a certain number of satisfactory results, and many that are unsatisfactory, are stated. The average strength of the European troops was 55,380; the admissions to hospital were no fewer than 89,898; the deaths 1,266; or in the ratios of 1,623 admissions and 22.86 deaths per 1,000 of mean strength, the former slightly above, but the latter 14 per 1,000 under the ratio of the former year. The 1st battalion of the 21st Regiment, which was simply decimated by fever and being sent to Bangalore, is not taken into account in the above calculation, as one would think it ought to have been, since the regiment was decimated when on service in the country. At Peshawur, that now famous "valley of death", fever prevailed in terrible form. The admissions there were 1,898 per 1,000 of mean strength amongst the horse artillery, 1,705 the foot artillery, and 2,369 in the infantry. Inspector-General Muir, C.B., states in his report that the Government "refused to sanction the issue of an extra blanket to the troops at Peshawur", though this step was "strongly recommended from the conviction that the repeated attacks of fever, to which the men were in the great majority of cases subject, arose from the sudden reduction of temperature after sunset, against which their regulated allowance of bedding (the same as in the plains of Bengal) did not furnish adequate protection". This was a piece of atrocious false economy really as expensive as it was cruel, because of the liability to disease to which it consigned the soldier. About 7,000 men and families were located in the hills; and the numbers, it is satisfactory to learn, will be increased year by year. Dr. Muir recommends the still further reduction of the garrison of Peshawur, and he adds: "It is still much to be regretted that military necessity should demand such a sacrifice of health and life as service in that deadly valley year after year almost certainly entails." The history of the 1st battalion 21st Regiment affords a striking illustration of the necessity of locating our European troops in the hills away from the pestiferous plains as much as possible. Its average strength was 797; the admissions to hospital were 3,173, or 3,981 per 1,000 of mean strength, nearly in the proportion of four to every man serving. Besides, 171 men, or 214 per 1,000 strength, were sent home invalided, and 18 died. On the whole, however, the reports concerning India are to be regarded as satisfactory.

PROFESSOR VIRCHOW has been chosen Dean of the Medical Faculty in the University of Berlin. Professor Gneist is the new *Rector Magnificus*.

THE next meeting of the British Association is to be held at Bradford, in September 1873. Dr. James Prescott Joule is the President-elect. The Association is to meet in Belfast in 1874.

DR. J. B. BERKHART, Dr. P. J. Hensley, and Dr. E. Payne, have been approved by the Committee of the Royal Hospital for Diseases of the Chest as candidates for the office of Physician, vacant by the resignation of Dr. Fish.

AT the meeting of the Melbourne Hospital Committee on April 9th, it was resolved that a subcommittee be appointed to confer with other institutions, as to the propriety of procuring some legal enactment for the prosecution of persons detected in impositions on the several charities of the colony.

COTTAGE HOSPITALS.

WE have before us a letter addressed by Mr. Boughton of Tewkesbury to a local paper, in reply to observations on the alleged coolness of the majority of the medical men of the place. The profession generally will concur with Mr. Boughton that it is essential to the fair working and success of cottage hospitals, that the surrounding medical men should all alike be able to afford to those of their patients who are admitted the continuance of their services; and it is not possible that any such institution should prosper, or should be productive of all the good of which it is capable, unless all the medical men of the neighbourhood be placed on a fair and equal footing in respect to it. This principle is now well established, and not to act upon it is alike unjust and unwise.

OPEN SPACES IN LONDON.

By the Act of Parliament recently passed, twenty-four acres of Crown land have been saved to the East-end of London, and will be added to Victoria Park. The advantages to the population of the neighbourhood will be very great; but these may be further increased by securing a small piece of ground situated between Victoria Park and Hackney Common, which breaks the free communication between the two. We hope the effort now being made to attain this object may prove successful.

THE MORTALITY OF PRISONS.

Dr. David Nicolson, one of the medical officers at Woking Convict Prison, contributes to the July number of the *Medico-Chirurgical Review*, an article on the mortality of the convict establishments of England. His paper, which contains many points of general and pathological interest, is based on the reports of the directors of convict prisons for the last fifteen years; and the following are the conclusions at which he has arrived. The average population was 7,551, the ratio of females to males being as 3 to 17; the total deaths were 1,528, the ratio of females to males being as 3 to 16; the annual rate of death averaged 13.5 per 1,000 prisoners; more than one-half (52.6 per cent.) of the mortality is due to diseases of the respiratory organs, and pulmonary consumption is by far the most fatal disease among prisoners, 5 out of every 12 deaths (41.3 per cent.) arising immediately from it; diseases of the brain and nervous system follow next in point of frequency, and then diseases of the heart; 5 per cent. of the deaths are due to accident and suicide; there has been no fatal epidemic in the convict prisons for the last fifteen years, and their mortality from zymotic diseases has been reduced to a minimum (.5 per 1,000 prisoners *per annum*); and while the mortality, as due to imprisonment, may be said to have diminished, upon the examination of the whole question the tendency has been towards an increase in the rate of death, which increase appears mainly attributable to a higher ratio of disease existing among the convicts on reception.

MANCHESTER BUTTER.

Those who eat butter ought, in justice to themselves and their families, to read a letter which appears in the *Manchester Guardian* from "One experienced in Butter", giving some interesting details with regard to that article. The writer says that he has been a confectioner from eighteen to twenty years, both as an employed and an employer.

I have (he continues) used from the highest to the lowest quality of butter, and fully proved that some of the low, yet not the lowest, priced butter was nothing more or less than grease from horse's bones out of a knacker's yard, coloured and tasted by drugs and waste butter mixed in. This is the way I found this out. Using a deal of cheap butter, I thought I would buy this first hand, and by inquiries traced its manufacturer; and, after a carouse of glasses, offering to find capital to join in the manufacture of this article, we had partly drawn up articles of terms. I wished to have some idea of profit returns, when I was informed it was stewed out of horses' and other bones, the cost of which was 2d. per pound, and sold at 8d. or 9d. per pound. Confectioners are obliged to taste butter before using it, to ascertain which article the quality of butter is fitted to be made up into; and, upon tasting some butter, I have heaved at the stomach and spit about the place for hours after. I have tested the adulteration of butters in various ways, also lards, and have found them heavily adulterated with farina, flour, also what is called shodda, white India meal boiled, and with white mineral substances; and have found lard most impudently laden with ground rice. Time forbids, or I could further disclose upon this dirty butter traffic.

CANVASSING CHARITIES.

Mr. Peto, who has been setting forth the evils of canvassing in charities, on which we have laid stress in regard to the administration of the Medical Benevolent College, proposes various remedies. He considers that the one which has been the most generally approved is to rest the selection of the candidates in responsible committees. Against this change is urged the falling-off which will result in the funds of the societies. The objection is urged by those well acquainted with the working of these institutions. "We should all be glad to do without the annual dinner, and receive the children without canvassing or even voting", writes Mr. Soul, the acting and active secretary of the Orphan Working School—"but what of the funds?" He can hardly think that such a number of the subscribers of this or any other of these well-managed societies are actuated by no more disinterested motive than the possession of the voting power given by their subscriptions. Certain it is that several similar societies are maintained where no canvassing is permitted—*e. g.*, Mr. Müller's and Mr. Spurgeon's Orphanages, the Medical Benevolent Fund, and the National Hospital for the Paralysed and Epileptic. The number of subscribers who avoid the favours of canvassers is very large; in the list of subscribers to the Earlswood Asylum, the number of initials only before the subscriptions shows this; the name and addresses are kept in an unpublished book. But to select the most deserving cases without further knowledge than that given by the voting paper is a very difficult work; and these subscribers at any rate would, he supposes, be not unwilling to leave this task to others with more ample means of investigation at their disposal. That committees would not exercise fairness, is an unfair objection until the plan has had a trial. It is not necessary that the committees should be canvassed; it ought to be a rule that applications should be received only from the proposed candidate, whose case should receive an investigation as searching as the cases which are brought before the different committees of the Charity Organisation Society. That persons will not be found to undertake the work, Mr. Soul cannot believe. Men go abroad on causes more arduous, involving a sacrifice of time and even health; and he thinks some will be found to undertake this work at home, although it will involve no small sacrifice of time, and bring no slight responsibility. The result would be that these charitable institutions would stand on a firmer, because on a purer, basis. Charity elections and charity dinners will pass away, and without regret; and the amount of time and money saved will be, we may hope, expended elsewhere and with more benefit to the interests of charity, and of those who seek the undoubted benefit to be derived from these institutions.

A GRATIFYING TESTIMONIAL.

Dr. Patrick Smith, who has been appointed resident medical officer of the Ararat Lunatic Asylum, was presented, on leaving the Benevolent Asylum, Melbourne, with an address signed by five hundred of the inmates. The address expressed, in emphatic terms, the gratitude of the subscribers for the kindness and attention that had been shown them by him, and the regret felt at his having relinquished his connection with the institution.

UNSANITARY BERLIN.

A somewhat sensationally expressed, but none the less true, account of the wretched sanitary state of Berlin has appeared in the *Times*. To any one who has had occasion to reside in the capital of Prussia, the statements made will not be surprising; and, although at the present time, the overcrowding which has since the war become a serious difficulty and cause of anxiety to the authorities, may have rendered the bad sanitary state of the city more apparent, yet the conditions described have been more or less prevalent for years. The situation of Berlin (built on a huge sandy plain) and its rapid growth, may account partially for its backwardness in sanitary work; but to the travelling Englishman, accustomed to his "cold tub", and more or less presentable *cabinet*, there appears a national, indeed a continental, absence of regard of cleanliness, which will at once account for the apparent *laissez faire* of the Berlin authorities as described by our contemporary's correspondent. It is not, we believe, owing, as he would have it, to "the darker side" of compulsory military service. If such were the case, how happens it that Prussia occupies her present proud position in most sciences other than that of sanitary? Until medical men abroad pay more attention to that department of science devoted to sanitation than has been hitherto customary, we shall not expect the authorities to move in the matter.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

THE members of this Society gave a grand banquet on Saturday last, in honour of the meeting of the British Association. The President of the British Association, the President of the Royal College of Surgeons, Sir H. Thompson, Mr. Erichsen, Mr. Prestwich, Dr. Burdon Sanderson, Dr. Gamgee, Mr. Flower, Mr. Stanley, the Vicar and Mayor of Brighton, etc., were present. The Presidents of the Colleges of Dublin and Edinburgh were invited, but could not attend. The dinner was served in the magnificent banqueting room of the Pavilion; music and singing enlivening the proceedings.

CONTINENTAL ASSOCIATIONS.

THE annual session of the Society of German Naturalists and Physicians has just been held at Leipzig. In that town, fifty years ago, the Association was formed—eleven members being present on the occasion, who had responded to the invitation of the celebrated naturalist Oken. This year, at the commencement of the meeting on the 11th instant, twelve hundred—including English, Dutch, Italians, and Americans—had entered their names. The next meeting of the Society is to be held at Wiesbaden.—The Society of Hungarian Naturalists and Physicians will meet at Mehadia in September, the meetings commencing on the 15th, and ending on the 21st.—A Society for the Advancement of Science, on the plan of the British Association, has been formed in France, and will meet in Bordeaux next month.

NORTH SURREY SCHOOL INFIRMARY.

AT the usual meeting of the guardians of the North Surrey School at Penge, Mr. Hansom, one of the committee appointed to visit the infirmary connected with that establishment, stated that unless a radical change were made some great calamity would arise which would astonish the whole country. The children appeared to be neglected, those suffering with ophthalmia being placed side by side with those afflicted with skin-disease. He (Mr. Hansom) remarked that it was murder; upon which the doctor replied that it was worse than murder. There was a want of proper management in the whole establishment. The nurses complained that there was not a sufficient supply of hot water, and he learnt that it was usual to bathe two children together, and that children suffering from two distinct diseases were bathed at the same time. Mr. Poupart said he had been a visitor for a great many years, but he was never so dissatisfied as on this visit. There was more dirt and illness than he had ever seen before; the children were underfed, and appeared like starving cattle. Eventually the report of the committee, complaining of the general air of discomfort and the bad arrangements which were prevalent in the infirmary, was adopted, and a copy ordered to be sent to the Local Government Board.

SCIENCE TEACHING.

THE Lords of the Committee of Council on Education having decided to transfer the instruction in Physics, Chemistry, and Natural History from the Royal School of Mines in Jermyn Street, and the College of Chemistry in Oxford Street, to the new buildings in Exhibition Road, South Kensington, notice is publicly given that in future the following courses of lectures and practical laboratory instruction will be given at South Kensington, at the dates specified. Chemistry, by Professor Frankland, D.C.L., F.R.S., a course of forty lectures on Inorganic Chemistry, commencing 21st October, 1872. A course of thirty lectures on Organic Chemistry, commencing 13th January, 1873. Laboratory instruction, consisting of an elementary and an advanced course, commencing on 1st October. Fees:—Lectures on Inorganic Chemistry, £4. Lectures on Organic Chemistry, £3; together, £6. Laboratory instruction, £12 for three months, £9 for two months, and £5 for one month. Biology, by Professor Huxley, LL.D., F.R.S., a Course of Eighty Lectures on Biology (or Natural History, including Palæontology), with laboratory instruction, commencing the 7th of October, 1872. Fee for the full course, £10; for the lectures only, £4; for the Laboratory Instruction, £6. Physics, by Professor Frederick Guthrie. The course will consist of lectures, with laboratory work on the subject of the lectures, divided as follows:—Twelve lectures on Molecular Physics, Sound, etc., commencing 24th February, 1873; fifteen lectures on Heat, commencing on 24th March; fifteen lectures on Light, commencing on 12th April; twenty lectures on Electricity and Magnetism, commencing on 19th May. Each course will be complete in itself, and may be taken separately. Fee, £5 per course, including laboratory work; or £15 for all the courses. For the lectures alone, £1 per course.

RETALIATION.

HAMILTON of Oxford Street, who was recently prosecuted under the Medical Act, has retaliated in the fashion described in the following Marlborough Street police report. "Dr." Hamilton, medical practitioner, Oxford Street, applied to Mr. Knox for a summons against Mr. Chandler of Berners Street, for using the title of Doctor without being a member of the College of Physicians. The magistrate was reminded that some months ago Mr. Chandler took proceedings against "Dr." Hamilton for using the title of Doctor, thereby implying that he was registered under the Medical Act; and that a conviction was the result. The applicant now considered he was equally entitled to proceed against Mr. Chandler for using the title of Doctor without being legally authorised to do so. The conviction against "Dr." Hamilton was now in course of appeal. Mr. Knox intimated that, until a superior court decided the question, he should be disinclined to grant further summonses. Shortly afterwards, Mr. Chandler entered the court, and applied for a summons against Mr. Hamilton for libel. The alleged libel was contained in a letter written by Mr. Hamilton to the Secretary of the Lock Hospital. Mr. Knox, having read the letter, said he was of opinion that the letter contained a libel; but he thought it would be better to decline to grant the summons until the appeal was decided. When that occurred, he should be prepared to take the application into consideration. Mr. Chandler has throughout been placed in a difficult and invidious position. The prosecution should have been undertaken by a public corporation or by a committee.

INHABITED HOUSE DUTY.

A MOVEMENT has been commenced for the purpose of reducing the duty on houses and institutions occupied or partly occupied for professional or business pursuits. This question is of considerable importance to, and greatly interests, the medical profession; and the attainment of the objects sought will confer a boon upon it as well as other professions. The object, as set forth in the circular, is as follows. The duty on inhabited houses (private) is ninepence in the pound; and on business houses, farm-houses, etc., sixpence. In 1871, a movement was made in favour of hotels, coffee-houses, inns, etc., which was a perfect success; and the Act 34 and 35 Vict., cap. 103, was passed, removing them from the high to the low duty of sixpence in the pound. It is now proposed to apply to Parliament to extend the Act to all houses, institutions, and schools, used or partly used for professional or other purposes, in the pursuit of any vocation or calling in which goods are not exposed for sale. A meeting in furtherance of the undertaking was held lately at the City Bank Chambers, Threadneedle Street, when the following, with other resolutions, was passed: "That this meeting, having heard a full and satisfactory statement of the object for which it has been convened, and entirely agreeing with the justness and equity thereof, considers the movement worthy of public confidence and support, and pledges itself to aid, by every legitimate means in its power, in carrying it to a successful issue." Resolutions were then passed appointing the committee and officers, and conferring power to carry out the undertaking and the receiving of voluntary contributions in aid of the expenses, etc. It was resolved, "That a vote of thanks be presented to the patrons for their sympathy and aid in the movement, and that the Secretary be authorised to communicate the same to each of them at his earliest convenience." A

vote of thanks to the Chairman, Mr. Tollemache Bull, closed the proceedings. A number of gentlemen of the medical and other professions have expressed their desire to assist in carrying out the resolution. Communications on the subject may may be addressed to Mr. Tollemache Bull, 8, Hinde Street, Manchester Square, London.

THE VOLUNTEER MEDICAL ARRANGEMENTS FOR THE AUTUMN MANŒUVRES.

By the official orders and instructions issued for the autumn manœuvres, medical officers of volunteers will find that they will have to take with them their own professional instruments. They will be supplied with a "Field Companion" (a small portable medicine-chest to be carried by an orderly) on the officer commanding each battalion making requisition for the same on the principal medical officer at Aldershot. There will, as last year, be no regimental hospitals attached to battalions of volunteers, the surgeons and assistant-surgeons acting under the principal medical officer of the forces. It is a pity that some better regimental or government arrangements should not be made, which would enable a larger number of volunteer medical officers to attend these yearly manœuvres than was the case last year. The attendance of volunteer surgeons will probably this year show no increase. The camp and numerous other expenses are considerable, and are such as to oblige many men, otherwise willing to devote their time to the work, to forego the pleasure and advantages of attending the manœuvres. It is a most anomalous state of things that men should be required to disburse considerable sums of money in order to avail themselves of opportunities of learning how to defend their country. This is however not limited to volunteers, for it appears that the War Office has experienced considerable difficulty in filling up the chief commands on the combatant staff in consequence of the expenditure above income which these entail. There is something wrong here.

CAUSES OF BLINDNESS.

Of five hundred cases at the Perkins Institution, South Boston, the causes of blindness were as follows: Congenital, 37.75 per cent.; disease, 47.09 per cent.; accidents, 15.16 per cent. The mortality among the blind in that institution was 8.9 per cent. greater than that of the general population of Massachusetts.

THE HEALTH OF THE LATE VOLUNTEER ARTILLERY CAMP AT SHOEBURYNESS.

The health of the men in the Shoeburyness Camp, like that of their comrades on Wimbledon Common, appears to have been good to the end, although the weather was very wet and the ground round the tents almost a swamp. We have received details of the number of men under treatment. During the entire period, from 29th July to 10th August, there were only 22 cases admitted to the field-hospital, and none of them of a serious nature. The average of daily sick in hospital was three. Besides those admitted to hospital, there were a few applicants at the surgery daily for medicine—chiefly men with slight attacks of diarrhœa and indigestion, from eating unwholesome food, such as shellfish picked up on the beach. There were no accidents beyond that of the gunner of the 4th Cinque Ports Artillery, who has since progressed favourably, and a few contusions.

THE UNSANITARY CONDITION OF ANDOVER.

It appears from a report by Dr. Thorne Thorne, on an outbreak of diphtheria in the town of Andover in Hampshire, that the inhabitants, numbering nearly six thousand, are dependent for their water-supply on wells, many of which are sunk into the chalk in dangerous proximity to sources of excremental pollution. Both the chemical and the microscopical examination of some of these waters show undoubted pollution. The report of Dr. Burdon Sanderson cannot, one would think, be a pleasant morsel to the inhabitants. The water, he says, contains monads and amœbæ; it also swarms with bacteria. The fact that it contains bacteria in such numbers proves that it contains organic matter in a state of active putrefactive decomposition, and that it is wholly unfit for human consumption. An efficient system of drainage is also greatly required. According to the *Andover Chronicle*, this state of matters appears to have afforded a good deal of amusement at the meeting of the Town Council held to consider Dr. Thorne's report; and the matter was dropped, with the reassuring proposition that it should be taken up again after the Public Health Bill had become law.

THE PHARMACEUTICAL CONFERENCE.

The ninth annual meeting of the British Pharmaceutical Conference, held in Brighton last week, passed off very successfully. The town of Bradford has been fixed upon as the place of meeting next year.

DIARRHŒA IN LONDON.

Under the influence of the continued comparatively low temperature, the fatality in London from diarrhœa showed a considerable further decrease last week. The deaths referred to this cause, which had been 484 and 441 in the two previous weeks, further declined to 270 last week; which, however, exceeded the corrected average by 23.

DEATH FROM THE ADMINISTRATION OF CHLOROFORM.

We regret to record another death from the administration of chloroform, which took place at the Great Northern Hospital on Wednesday. The patient was a man fifty-three years of age, on whom Mr. Carr Jackson was about to perform the operation of lithotomy. The vapour was administered by Mr. George Eastes, the chloroformist of the hospital, who has had extensive experience in anæsthetics. Mr. Osman Vincent, Mr. Vernon, and Mr. Bloxam, all experienced chloroformists, were present; but the efforts of all were unavailing in restoring the unfortunate man to consciousness.

HABITUAL DRUNKARDS.

The Report of the New York State Inebriate Asylum at Binghampton for 1871 has just been issued. The number of patients admitted since the hospital was first opened, five years ago, is 1,017. The number admitted during 1871 was 244; the number under treatment on January 1st, 1871, was 71. The total number treated was 315; discharged, 230. There were in hospital on January 1st, 1872, 85 patients. Of the 230 discharged, 184 were discharged with great hopes of permanent cure; discharged unimproved, 46.

ENTERIC FEVER AT WHITCHURCH.

The occurrence of seventy cases of enteric fever during the past year in a population of less than fifteen hundred, points to absence of sanitary measures at Whitchurch of a most glaring character. The report of Dr. Thorne Thorne amply shows that there has been water-pollution from privies going on extensively in the town; that the means adopted for the disposal of excrement are essentially bad, while a considerable portion of Whitchurch has no artificial drainage whatever. The town in many other ways presents unsanitary features requiring immediate attention, such as the presence of numerous piggeries and farmyards, and extremely bad house-accommodation. The district medical officer, Mr. H. Hemsted, has done much to mitigate the evils of such a state of things; and through his aid, and acting on the suggestions of Dr. Thorne, the Board of Guardians and the sewer authorities are, we hope, prepared to carry out such measures as will save Whitchurch from a continuance of the epidemic which has been going on for twelve months.

THE PUBLIC HEALTH OF MANCHESTER.

Our Manchester correspondent writes:—The Manchester and Salford Sanitary Association have issued their Annual Report. After explaining the *raison d'être* of the Society, they proceed to show how zymotic diseases have dealt with Manchester. From their report, it appears that small-pox killed 456 persons during the past year—a mortality which shows, according to Dr. Haughton's calculation, a very large percentage of unvaccinated. This is a fact, indeed, to which the report alludes; and it consequently deprecates the action of the Government in giving an exemption from prosecution to the parent who is fined for non-compliance with the Act for the second time. Small-pox was the

most destructive of all the epidemics, but measles had an exceptionally high mortality; the latter disease destroyed 76 lives out of 1,995, or 1 in 26. Scarlet fever was less prevalent than it has been for some years, only 39 cases proving fatal. Whooping-cough was very common, and carried off no less than 54 out of a total of 1,366 attacked. The continued fevers, typhus and typhoid, claim 380 deaths; and diarrhœa 221. "On the whole," says the report, "the state of public health during 1871 was far from satisfactory; 98,390 cases of sickness were reported in public practice, of which 3,508, or 1 in 27, died. In 1870, 1 in 29.9 died. The deaths exceeded those of 1870 by 2,327. One-fourth of the increase in mortality is due to the excessive prevalence of zymotic diseases and diarrhœa."

INSANITY IN CALIFORNIA.

Dr. Henry Gibbons of San Francisco asserts that the prevalence of insanity in that State is a subject of frequent notice. In the State Asylum at Stockton are upwards of 1,100 patients. Every day adds to the number, which increases in a much greater ratio than the general population. It is remarkable, also, how large a proportion of the victims come from the muscular stratum of society—men and women of coarse nerve, uncultivated and unrefined.

HARVEY TERCENTENARY (1878) MEMORIAL.

The following noblemen and gentlemen have already joined the London General Committee. Chairman of the Committee—The Right Hon. the Earl of Derby; the Archbishop of Canterbury, the Duke of Devonshire, K.G., the Marquis of Ripon, K.G., Earl Granville, K.G., Earl Russell, K.G., the Bishop of Winchester, F.R.S., the Bishop of Exeter, the Bishop of Ripon, F.R.S., the Right Hon. Robert Lowe, M.P., F.R.S., Baron Mayer A. de Rothschild, M.P., Dr. Burrows, F.R.S., President of the Royal College of Physicians; Dr. Risdon Bennett, Dr. F. Sibson, F.R.S., Dr. W. Munk, Mr. Hancock, President of the Royal College of Surgeons; Mr. G. Kelson, Master of the Society of Apothecaries; Dr. James Andrew, Mr. W. Morrant Baker, Dr. Lionel Beale, F.R.S., Dr. A. Billing, F.R.S., Mr. W. Bowman, F.R.S., Mr. G. Busk, F.R.S., Mr. G. Callender, F.R.S., Dr. W. B. Carpenter, F.R.S., Mr. P. Cazenove, Dr. T. K. Chambers, Mr. John Croft, Dr. Hilton Fagge, Dr. Arthur Farre, F.R.S., Dr. F. J. Farre, Sir W. Fergusson, Bart., F.R.S., Mr. J. Cooper Forster, Dr. H. W. Fuller, Mr. W. Fuller, Dr. G. T. Gream, Sir W. Gull, Bart., F.R.S., Dr. C. J. Hare, Mr. Ernest Hart, Mr. Cæsar Hawkins, F.R.S., Mr. Prescott Hewett, Dr. Graily Hewitt, Mr. John Hilton, F.R.S., Sir Henry Holland, Bart., F.R.S., Mr. Barnard Holt, Dr. Bence Jones, F.R.S., (Treasurer), Dr. Handfield Jones, F.R.S., Dr. R. Martin, Sir Ranald-Martin, F.R.S., Mr. N. Montefiore, the Rev. W. F. Erskine Knollys, Mr. T. Lucas, Dr. John Murray, Professor R. Owen, F.R.S., Dr. W. Odling, F.R.S., Dr. H. Oldham, Sir James Paget, Bart., F.R.S., Dr. F. W. Pavy, F.R.S., Mr. G. Pollock, Mr. Henry Power, Dr. W. O. Priestley, Mr. R. Quain, F.R.S., Dr. R. Quain, F.R.S., Dr. C. B. Radcliffe, Dr. Owen Rees, F.R.S., Dr. Russell Reynolds, F.R.S., Mr. S. J. A. Salter, F.R.S., Mr. W. S. Savory, F.R.S., Dr. W. Sharpey (Secretary R.S.) Mr. S. W. Sibley, Dr. E. H. Sieveking, Mr. John Simon, F.R.S., Mr. W. H. Smith, M.P., Dr. W. Tyler Smith, Dr. W. H. Walshe, Sir Thomas Watson, Bart., F.R.S., Mr. Spencer Wells, Dr. C. West, Mr. A. Willett, Dr. S. Wilks, F.R.S., Dr. C. J. B. Williams, F.R.S., Mr. Erasmus Wilson, F.R.S. George Eastes, M.B., 5, Albion Place, Hyde Park Square, and Mr. W. G. S. Harrison, B.A., Town Clerk, Folkestone, are the honorary secretaries.

MR. STANLEY AND THE BRIGHTON MEDICO-CHIRURGICAL SOCIETY.

Every one must regret the unfortunate occurrence at the dinner of the Brighton and Sussex Medico-Chirurgical Society on Saturday, which has been noticed in most of the daily papers with more warmth and inaccuracy than discretion, or, indeed, justice. Mr. Jardine Murray, in the first place, has been unjustly blamed for speaking in an unfriendly spirit of Mr. Stanley, the discoverer of Dr. Livingstone, in proposing "The Health of the Visitors." His speech conveyed no such impression to the great majority of those present; quite the reverse. Nor was it intended to be anything but highly complimentary. Mr. Stanley commenced his reply in a humorous strain, but was interrupted by a laugh—of incredulity, it is alleged—and thereon left the room. It is difficult to say whether the conduct in question was intentionally insulting or imagined to be so by the distinguished guest; but the matter, however annoying it may be, hardly justifies the kind of language which has been freely used by some of our daily contemporaries towards so distinguished a body of our professional brethren. Mr. Stanley's reappearance at the *déjeuner* given by the ever hospitable Mr. Cordy Burrows on Wednesday, and his enthusiastic reception on that occasion, fully show the real appreciation of his noble exploit felt by the whole nation, the members of the Brighton and Sussex Medico-Chirurgical Society not excepted.

CHARGES OF MALAPRAXIS.

In a case tried this week before Mr. Justice Grove, Edward Jones Humphage was indicted for the manslaughter of Sarah Morgan. The prisoner was the assistant of Mr. Lewis, a medical practitioner of Newport in Monmouthshire, and was called in at the request of the deceased, whom he had previously attended on similar occasions, to attend her during her confinement, on the night of June 20th, 1872. The deceased died during childbirth at 9 A.M. on the morning of the 21st. It was alleged on behalf of the prosecution that the prisoner, whose name did not appear on the *Medical Register*, had contributed to the death of the deceased by his negligence and want of skill. The principal witnesses on behalf of the prosecution were a midwife named Amelia Watkins, who had been present during the confinement, and Mr. Alfred Kidger, who had made a *post mortem* examination of the body. It appeared from the evidence of the former that the prisoner had, during the night, and up to about half-past eight o'clock the following morning, with the exception of about an hour, sat by the bedside of the deceased. The labour was a difficult one, and it was admitted by Mr. Kidger that the prisoner had attempted to relieve the patient; but he thought that the prisoner ought to have called in at an early hour further medical assistance. At 8.30 A.M. the following morning, being, according to Watkins's evidence, much exhausted by his endeavours, the prisoner left the room and returned home, having advised that other medical assistance should be obtained, and promising to return in an hour. The woman, however, shortly after his departure became rapidly worse, and died. The prisoner, it was stated, did not return, though twice sent for. His Lordship, after explaining to the jury the amount of negligence which was necessary in order to render a person criminally liable, left it to them to say whether the prisoner's omission to call in further medical assistance at an earlier stage of the case, taking into consideration the absence of proper medical qualification on his part, was or was not such negligence. The jury returned a verdict of Not Guilty, with which the learned judge expressed his concurrence.—In another case case also, in the Western Circuit, a surgeon defended himself successfully against a charge of negligence. It was the case of Watkins *v.* Meeres, tried at Bristol on August 15th, before Mr. Justice Lush and a special jury. The plaintiff (Mrs. Watkins) was cook and housekeeper to Sir John Awdry, and was a widow, thirty-four years of age. On November 25th, 1870, she trod on a small stone and fell, and broke her leg a little above the ankle. She was first taken to a cottage near, and Mr. Crisp of Lacock was called in, who put up the limb in splints and sent the patient home. The defendant, Dr. Meeres of Melksham, is the regular medical attendant of Sir John Awdry, and was called in on the morning following the accident to attend the plaintiff. He applied M'Intyre's splint, and put the limb in Salter's cradle. Some time afterwards, a wooden splint was used, and then a starched bandage. The plaintiff declared that on her returning to her work on February 13th, the defendant had told her she was strong enough to go back, and that he had advised her to use her foot without fear, and to discard crutches and go about with a stick. She denied further that Lady Awdry had cautioned her not to do any work. On the other hand, the defendant swore that he had

only consented to her returning on the express condition that she should leave all the work to a kitchen-maid. Lady Awdry, too, deposed that she had warned the plaintiff not to use her leg. The plaintiff said that when she went back to work the ankle was not straight, whereas the defendant said that it was. Some time afterwards the fracture began to give way, and the injury became permanent. She went in April 1871 to see Mr. Bishop of Calne, and got from him a boot with splints, which enabled her to go about. The two grounds of complaint were, that the defendant had not treated the fracture correctly, so that the foot became inverted, and that his direction to the plaintiff to exercise her leg was utterly wrong. For the plaintiff three medical men were called. Mr. Crisp, who first saw the plaintiff, stated his belief that there were fractures of both the bones of the leg. He did not think it was a case of great difficulty; but he would not say that the treatment of the defendant was wrong. Mr. Bishop, to whom the plaintiff went, said that when he saw the patient four months after the accident the foot was everted. He thought that fracture of the tibia and fibula was not insuperable, if proper care were used and the patient were not refractory. Mr. Gore, the senior surgeon of the Bath Royal United Hospital, believed the fracture was an instance of Pott's fracture. He did not believe that the tibia was not broken. He was of opinion that the treatment was quite wrong, and that the foot never had been rightly placed in position. For the defence, a number of witnesses were called to prove that the injury was due to overwork of the limb at a time when she had been directed to keep it at rest. The defendant stated the nature of the injury and the treatment. From the first, owing to the fracture being oblique and close to the joint, he had feared that there would be deformity, and had told the plaintiff so. If the plaintiff had followed his directions and kept the limb at rest, she would have had an useful limb, though not a perfect one. Dr. Thomas Green of Bristol, Mr. Stockwell of Bath, Mr. Crosby Leonard of Clifton, Mr. Atchley and Mr. Dobson of Bristol, and Mr. Bolton of Birmingham, all deposed that, in their opinion, the defendant's treatment was skilful and correct. The plaintiff in April of this year applied to the defendant for assistance, and he appeared willing to give her £50, while repudiating any liability, but declined to give her £100, which she asked. The learned Judge directed the jury that a medical man was only expected to bring reasonable care and skill to the exercise of his calling. In order to charge the defendant, there must be something more than a mistake on his part. There must have been either culpable ignorance of his profession, or culpable want of care in his treatment of the case. The jury, after a minute's consultation, returned a verdict for the defendant.

THE SEAFORD CONVALESCENT INSTITUTION.

THE seaside convalescent hospital at Seaford, near Newhaven, has for years proved itself and been known as a most valuable aid to convalescence and cure. Its great value to the London poor is known to every medical man in the metropolis; and we are glad to find by the Twelfth Annual Report, just received, that the benefits of the charity have been during the past year more amply felt than in previous years. The Committee have also purchased a very eligible building site in the best part of Seaford. They have also renewed for three years the tenancy of the premises now occupied, and during that period propose to make energetic efforts to secure a building fund, and solicit co-operation. While new convalescent hospitals are rising in every direction on the coast, it is hoped that the pioneer institution of the class will not be forgotten, and will continue to receive generous support.

HARD TREATMENT.

THE *Australian Medical Journal* for May states that on the 2nd March, Mr. W. H. Jackson, a medical practitioner, residing at Merino, in the western district, had occasion to perform craniotomy under somewhat exceptional circumstances. Not having the ordinary instruments with him, he used a gimlet, an auger, a chisel, and a hook of telegraph-wire. The woman did well, but because the child was of necessity dead, an inquest was held, and a verdict of manslaughter returned against Mr. Jackson, who thereupon wrote to Mr. Knaggs, one of the vice-presidents of the Medical Society of Victoria, and stated what had befallen him. A meeting of the Committee of the Society was at once called, and the secretary was instructed to write to the Solicitor-General, requesting audience for a deputation from the Committee, so that the true position of the case might be laid before him. After a delay of a fortnight, and not before two other letters had been written repeating the request, a reply was received declining any communication with the Society, on the ground that the case was *sub judice*, and that it would be improper to take any steps in anticipation of the ordinary investigation at the trial in July next. Our Australian contemporary remarks that the law-officers seem to have committed the error of confounding the proceedings of a scientific society with the private representations of an interested individual.

SCOTLAND.

THE Aberdeen Small-pox Hospital has now been closed for about a fortnight.

DR. D. CAMPBELL BLACK and Dr. John Dougall are candidates for the Lectureship in Medical Jurisprudence in Anderson's University, vacant by the election of Dr. P. A. Simpson to the analogous chair in the University of Glasgow.

THE ABERDEEN LUNATIC ASYLUM.

DR. JAMIESON'S annual report of this institution has come to hand, and presents an equally favourable account of the institution with those of previous years. The average mortality has been only seven per cent., which is much below the average of the Scottish asylums for the year. A pathological supplement has been added to the detailed statistical tables by Mr. McGregor, one of the resident assistants, which adds to the value of the report.

PRACTICAL BOTANY.

MANY old students of the University of Edinburgh look back with pleasure to the weekly "outings" in search of plants so energetically and enthusiastically carried out by Professor Balfour. It may occasionally have happened that botany, theoretical or practical, did not exactly form the leading idea of some of the students who attended these excursions; but, on the whole, the results were highly satisfactory in creating increased interest in a delightful and instructive pursuit, and afforded means of seeing some of the most picturesque scenery of Scotland, while, at the same time, many of the students were more happily brought into social contact with each other than would have been expected in the ordinary routine of student life at Edinburgh. These excursions are still a feature of the botanical course at Edinburgh; and at the other Scotch universities the good example of Edinburgh has been more or less followed for years. A more ambitious programme is, however, carried out after the close of the Summer Session by the Scottish Botanical Alpine Club, which was instituted some years ago for the exploration of the Scotch mountains, and which, curiously enough, demands as a *sine quâ non* for membership that the candidate for admission shall have ascended three mountains in Scotland at least 3,330 feet above the level of the sea. This year the members of the Club, including Professor Balfour of Edinburgh, Professor Dickson of Glasgow, Mr. Sadler, and other gentlemen, including some students of medicine, visited the rich botanical district of Clova in Forfarshire, and obtained a large number of rare species of plants. The party broke up after a most successful expedition lasting several days.

IRELAND.

IT is expected that Dr. Evory Kennedy of Dublin will be a candidate for Derry at the forthcoming election of a member of Parliament.

DR. MACNAMARA.

OUR associates will learn with pleasure that Dr. Rawdon Macnamara has completely recovered from his late illness. His genial presence was much missed at the Birmingham meeting, where his welcome compatriots, Haughton, Burke, Hayden, Stokes, Eames, filled an honoured place, but did not fail to remind us, by their presence, of others who have passed away since the first year which knit at Dublin cordial bonds of unity and affection amongst many Irish and English colleagues, and of many more whom we would fain tempt in flocks to our annual reunions.

SMALL-POX IN DUBLIN.

THE epidemic of small-pox, which has attacked, it is said, about twelve thousand persons, is now almost at an end. It has lasted from March 1871, and has added fifteen hundred persons to the list of mortality in Dublin. It is to be hoped that a lesson of such terrible severity may lead to such steps being now taken in the better enforcement of vaccination, and in the affording of proper means of isolation and the carrying out of the general sanitary measures required in the city, which may render the recurrence of an epidemic of the kind impossible. The great necessity for a convalescent hospital is now recognised, and it is to be hoped such an institution will not be long wanting.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.

ON August 7th, the usual quarterly committee meeting of the Belfast Branch of this Society was held; Dr. T. H. Purdon, President, in the Chair. The President stated that he, together with Dr. C. D. Purdon, had in June last attended, as a deputation from this Branch, the annual meeting of the parent society in the King and Queen's College of Physicians, Dublin. Amongst the resolutions unanimously passed at the meeting, was one to the effect that "the thanks of the society be given to the medical students of Belfast for their generous contribution to its funds;" in proposing which, Dr. Duncan mentioned that, although single contributions had before now been received from students, this was the first occasion when there had been any united contributions as a class—a noble example which, he hoped, would be imitated by the other medical colleges in the kingdom. The total sum at the command of the society for distribution this year was between £800 and £900, which enabled assistance to be given to seventy-seven applicants, in sums varying from £26 to £5 for each recipient.

THE WRONG CUE.

A MEDICAL student makes the following complaint to the editor of the *Irish Times*.—"The medical students of Dublin owe a debt of gratitude to you for your kindly calling the attention of the Governors of the Coombe Lying-in Hospital to the miserable accommodation afforded to students in waiting at that hospital. They find it difficult to devote themselves to study at night after their day's duties; and, as a number have to sit up in turn for night duty, perhaps the Governors (if their funds would admit) would kindly place a room at our disposal, properly furnished. A billiard table, and a few other necessaries for making themselves comfortable, would keep some of the number, at least, out of the temptation of frequenting publichouses for refreshments." Amongst the many inducements to study, it has never been thought that a billiard table is the most successful. As a rolling stone gathers no moss, so the student whose wanderings are round the billiard table, will scarcely reap academical honours. The Governors cannot object to giving the students a convenient room in which to burn the midnight oil, but they might see some reasonable grounds for refusing to make the waiting-room of the hospital a field for the cannonades of "saw-bones," while waiting for other labours. Whoever prompted the writer of the letter, has given him the wrong cue, and suggested its use in the wrong place. He must be a sad baby, if to wean him from the publichouse it is necessary to convert a lying-in hospital into a taproom. *Non sic itur ad astra.*

CHOLERA.—Cholera is reported, *via* Königsberg, to have revived in an alarming form in Russian Minsk.

CORRESPONDENCE.

M. RICORD'S VIEWS ON SYPHILIS.

SIR,—Will you kindly publish the annexed letter, which I have just received from M. Ricord? I am not surprised that your reporter has been unable to epitomise my late master's views. I assure you it required a good deal of explanation the next morning in the railway, before I could literally render into English certain technical expressions which have different meanings in French and English. I fear my friend's views have lately been much misunderstood. I am, etc.,

August 20th, 1872. W. ACTON.

My dear Acton,—In the article entitled "The Treatment of Syphilis, by M. P. Ricord", published on the 17th August in the BRITISH MEDICAL JOURNAL, I have not been quite understood, or rather my views have not been correctly rendered. In the first place, as to Mercurialis, whose authority I cited, he is certainly not the only one who asserted that syphilis could give rise to later manifestations of disease; but Mercurialis has stated (which proves that he did not believe in the radical cure of syphilis) "that syphilis may grant a truce, but never signs peace". Without undertaking to rectify the whole of my speeches as I did with you, there is one question upon which I should like to set myself right. I have truly said, as the BRITISH MEDICAL JOURNAL has reported, that with regard to the *unicity of the syphilitic diathesis*, syphilis obeys the same law as does small-pox, vaccination, or measles; namely, that as long as the diathesis lasts, patients are not liable to contract a fresh indurated chancre, followed by constitutional manifestations. Now, as we have authentic examples of fresh contagions of indurated chancre, with consecutive evolution of the whole series of constitutional symptoms, this proves that patients have been cured; just as the possibility of contracting small-pox afresh, or of vaccination again taking, proves that the first variolous or vaccine influence has ceased. This has allowed me to state—although no one is justified in proposing the experiment—that inoculation of a fresh indurated chancre would be a certain proof that the patient was cured. Now, what *experimentation does not sanction*, patients effect of their own accord.

Will you, my dear friend, always kind to me, send this rectification to the JOURNAL; and I entreat you to translate it for me yourself.

Believe always, dear friend, in my most affectionate sentiments,

Paris, August 19th. RICORD.

PROFESSOR HUMPHRY'S LECTURES ON HUMAN MYOLOGY.

SIR,—In Dr. Humphry's third lecture on Human Myology, reported in the BRITISH MEDICAL JOURNAL of 27th July, I find the following remarks.

"In a paper reported in the *Proceedings of the Royal Society*, xviii, p. 359, Dr. Haughton endeavours to establish a difference between a hand and a foot, as shown by their flexor tendons. He argues that, as there is friction to be overcome at the wrist and the ankle, the tendons will be thicker, stronger, and heavier, in each instance, between the end at which the force is applied and the seat of the friction, than on the other side of the friction. He further maintains that, in the case of the hand, the flexor muscles of the forearm act upon the finger-tendons in a direction from the muscles towards the tendons; and that, as the forces are diminished by friction at the wrist, we should expect the strength of the tendons above the wrist to be greater than below it. Conversely, in a proper foot, he conceives that the force is applied by the ground to the extremity of the tendons of the toes, and is transmitted to the muscles of the leg by means of the tendons of the inner ankle, which undergo friction in passing round that and the other joints of the foot. In this case, therefore, he says, we should expect the united strengths of the flexor tendons of the toes to exceed the strength of the flexor tendons above the ankle. He adduces various observations in proof of these propositions. Without staying to question the correctness of the grounds upon which this difference is based, and of the view which conceives the force to be applied by the ground and transmitted through the tendons to the muscles in the leg, I may state that I have very carefully weighed equal portions of the tendons taken at the wrist, as well as above it in the forearm and beneath it in the hand, in the human subject, and found no difference whatever. The three portions weighed precisely alike. The same was the case with equal portions of the tendons taken at, above, and beneath the ankle. If there was any difference, the balance was slightly against Dr. Haughton's view, as it gave a trifling preponderance to the portion of the

flexor longus pollicis taken from above the ankle. I confess I should have been rather surprised if the experiment had corroborated this view of the mode of distinguishing between a hand and a foot."

Without wishing to enter upon a controversy in your pages, I may be permitted to make the following observations on Dr. Humphry's remarks, the logic of which somewhat surprised me.

1. In my short paper, read before the Royal Society on May 19th, 1870, and referred to by Dr. Humphry, I made no statement of any kind respecting the hand or foot of Man.

2. The single observation recorded by Dr. Humphry (which I have no doubt was as carefully made as the forty-seven observations recorded by myself) proves nothing as to the question at issue in my paper. In order to be comparable with my observations, Dr. Humphry's observation should have compared the cross sections of the flexor tendons above the wrist or ankle, with the sum of the cross sections of the tendons of the five fingers or toes. Dr. Humphry's observation simply proves what I am quite prepared to admit, that the difference in cross section caused by friction is small, when the distance between the sections is also small.

3. It is not a matter of theory or argument, but a demonstrated matter of fact, that in many animals the united cross sections of the flexor tendons of the toes exceed the cross sections of the flexor tendons above the ankle, and that in many animals the united cross sections of the flexor tendons of the hand fall below the cross sections of the flexor tendons above the wrist.—[N.B. The only exceptions to this rule that I could find were—the goat, the boomer kangaroo, the alligator, the porcupine, and the phalanger.]

4. If Dr. Humphry will consult some of his mathematical friends in Cambridge, he will find that I am correct in stating that friction acts in opposite directions in a *hand* regarded as a *grasping* organ, and in a *foot* regarded as a *propelling* organ.

I am, etc.,
SAMUEL HAUGHTON.

Trinity College, Dublin, 29th July, 1872.

THE WATERS OF CARAVAÑA.

SIR,—A short time ago, my friend Dr. Jelly, now practising at Madrid, was kind enough to send me a sample of a mineral water found at Caravaña, a town situated on the Taguña, a tributary of the Tagus, and at a distance of nine leagues from Madrid. Although Spain is rich in mineral springs, little is known of them; and I find no reference to this particular spring in the books at my command. Even in Spain, as Dr. Jelly informs me, there is no good work on the mineral waters of the country, but he recommends that of Dr. Gual as the most reliable, and as containing a fair account of most of the springs. He adds that little or no accommodation for invalids is to be found at most of them. We can scarcely hope, under these circumstances, that we shall for the present utilise the waters of Spain for our patients. But, as many of our professional brethren are about to flit away in search of recreation or information, it is not impossible that one or the other may be tempted to examine for himself the particular spring to which I beg to draw their attention, and others, like the ferruginous waters of Alhama, the springs of Trillo, of Bejar or Mombuy. The Romans already fully appreciated the health-giving properties of the numerous mineral waters to be met with in the Pyrenean peninsula, as is evidenced by the extensive ruins yet existent in the vicinity of the Baños de Estremadura, the Caldas de Reyes and de Malarelle, and many other places, which may form additional points of interest to the traveller.

Not possessing a personal knowledge of Spain, I should not trouble your readers with any remarks on the subject, but that I apprehend you will think proper to put on record the analysis of the Caravaña water which the lecturer on chemistry of St. Mary's Hospital, Dr. Wright, has kindly made at my request. This analysis shows it to be a very remarkable product, and it supports the remark of Dr. Jelly, that it is the strongest he has ever seen or tasted, and that it is probably too strong for general use.

	Grammes per litre.	Grains per gall.
Chloride of sodium	1.94	135.8
Sulphate of sodium	71.33	4993.1
,, calcium	1.74	121.8
,, magnesium	4.95	346.5
,, ammonium	Trace	Trace
Sulphuretted hydrogen ...	Small trace	Small trace
Iodine	*Nil*	*Nil*
Total dissolved solids	79.96	5597.2

The specific gravity of the water is 1.070. The exact amount of solids contained in analogous mineral waters is somewhat variously stated by different chemists; but, according to the most recent analyses, the following sulphate of sodium and sulphate of magnesium waters yield per gallon

Sprudel, Carlsbad	335 grains of total solids
Saidschütz	1424 ,, ,,
Püllna	2008 ,, ,,
Friedrichshall	1554 ,, ,,

It follows that the water of Caravaña is more than twice as strong as the strongest of those mentioned, and that its purgative effect may fairly be assumed to be of a very active character. It is clear, and of a saline taste. Dr. Wright states that it contains more than twice as much dissolved matter than sea-water, and that the water of the Dead Sea is the only stronger natural water with which he is acquainted; that of Caravaña amounting to one-thirteenth, that of the Dead Sea containing one-fifth of its weight of solids. Dr. Wright also suggests that, if the spring gives an ample supply, it may be valuable for alkali-making. The quantity sent me has been too small to make any experiments on the action of the water on the human economy, but the analogy it offers to other well known combinations of a similar kind can leave little doubt as to the effects that it is likely to produce.

I am, etc.,
EDWARD H. SIEVEKING, M.D.

THE ADDRESS IN MEDICINE: DARWINIAN VIEWS OF MAN.

SIR,—While I have read with much general interest Dr. Wilks's Address in Medicine to the British Medical Association, I have been especially interested by his discussion of a question which has often presented itself to my mind—the question whether, in combating disease and in preserving the puny and sickly members of society, medical men are not assisting in the degeneration of the human race? Dr. Wilks has not presented his hearers with a satisfactory solution of this question. In fact, as he himself informs us, he has carefully shut his eyes to these speculations. But he says that, "if the Darwinian doctrines be in any way true, they are applicable to the *genus homo* as well as to any other race of beings; and that we, by preserving the puny, the wretched, and deformed, are assisting in the degeneration of the race;" and he goes on to quote Herbert Spencer, who, in reference to the care taken of the miserable, says, "instead of diminishing suffering, it eventually increases it. It favours the multiplication of those worst fitted for existence, and, by consequence, hinders the multiplication of those best fitted for existence, leaving, as it does, less room for them." Here, then, according to Dr. Wilks, the medical profession is perched upon the horns of a dilemma.

But it appears to me that, by accepting the Darwinian theory of evolution, we are by no means necessarily driven to this disagreeable conclusion. It is not necessary even to imitate Mr. Wallace in excluding man altogether from the theory as a special and distinct creation of the Almighty obeying special laws. We may follow the theory to its logical conclusion, and look upon man as simply the highest link in the one great continuous chain of organic life, subject, equally with the rest, to the law of natural selection, without having any scruples about preserving the lives of our physically weak patients.

Physically considered, man is near akin to the higher apes. But between the intellect of the lowest savage and that of the highest of the quadrumana, the most enthusiastic Darwinist is forced to admit a vast chasm, which cannot now be bridged across. The "missing links" may be imagined, but they have not yet been found. Back in the distant ages of the past, primeval man may have existed with a rudimentary intellect as near akin to that of apes as their bodies are now. Then—wandering about in small tribes—the struggle for existence may have been severe, and physical advantages alone would lead to the "survival of the fittest," and the gradual improvement of the race. But when the growth of the human intellect has reached a certain stage, it appears probable that physical advantages have been and are by no means the most important in the further advancement of humanity. Among the lower orders who prey upon one another, whose means of locomotion are small, and who have to seek their food in a limited area, it may be important that the natural law of the survival of the fittest should have free action. With man it is now vastly different. He travels from country to country until he finds a home; there are thousands and thousands of square miles of unoccupied territory where he may "increase and multiply;" with the steam-engine, by land and by sea, he fetches from the uttermost parts of the earth the food which he requires for his daily wants. In such a state of civilisation as this, intellectual achievements reckon for more than physical advantages. It is not the superior *physique* alone of the Anglo-Saxon which has made him pre-

eminent among the nations of the earth. The North American Indian and the Maori, who dissolve before his footsteps, like snow before the sun, are surely not so far behind him in physical advantages. In the last wonderful continental war, it was not the superior fighting qualities of her soldiers which enabled Germany to vanquish her foe and prostrate her rival headlong in the dust. Bismarck and Moltke, with their iron intellects, were the spiders which spun the web to envelope France, like a fly caught in the toils. The Spartans and the Romans, to whom Dr. Wilks alludes, were not saved from decay by the means which they adopted for preventing the physical deterioration of their people.

Physical improvement, indeed, counts for much, but it is by intellectual growth that man must continue to rise. One scientific discovery will do more for human advancement than fifty thousand fighting men. Intellect is the great lever which moves the world. But intellect is not always combined with physical strength. One could easily mention a score of names prominent in the history of human progress, whose owners would inevitably have succumbed in a struggle for existence under purely physical conditions. It is, then, by no means certainly true "that, if we were able to preserve all those miserable creatures the lives of whom their parents would give a fortune to save, we should be instrumental in causing a deterioration of the race." Under the guise of a puny, delicate child, we may be saving a benefactor to his kind. The law of the survival of the fittest still holds good; but the fittest is not he who is physically strong, but he who is plenteously endowed with intellectual gifts; for wisdom is better than strength in promoting human progress.

It is with great diffidence that I would even appear to question anything which has the stamp of Dr. Wilks's authority; but, with your permission, I venture to lay these stray thoughts before your readers. In doing so, it will be seen that I have regarded the question from a purely Darwinian point of view, and have abstained from considering it in its relation to religion. I am, etc., WILLIAM DATE.

Crewkerne, August 13th, 1872.

OBITUARY.

SIR ANDREW SMITH, M.D., K.C.B.,
LATE DIRECTOR-GENERAL ARMY MEDICAL DEPARTMENT.

SIR ANDREW SMITH died on August 11th, at his residence in Alexander Square, Brompton. He was born in Roxburghshire in 1797, and having received his medical education at Edinburgh, entered the army as assistant-surgeon in 1815. He served with distinction for short periods in various parts of the world, and proceeded to the Cape in 1821, returning to England in 1838. Shortly afterwards, he was sent to Fort Pitt, Chatham, and appointed principal medical officer there. He was transferred to London by Director-General Sir James M'Grigor as his professional assistant in 1845; and on the retirement of Sir James in 1851, he was appointed by the Duke of Wellington to the vacant post of Director-General, which he filled till 1858. He then retired from the service in consequence of impaired health, and received the distinction of Knight Commander of the Bath. At the time of the Crimean disasters, grave imputations were made upon the department over which Sir Andrew presided; but the evidence and documents laid before the Sebastopol and other Committees vindicated his reputation as an administrator of a large and highly important department of the public service. In addition to his unceasing and zealous exertions in the interests of the public service, Sir Andrew superintended an expedition for exploring Central Africa from the Cape of Good Hope in 1834; and his scientific researches resulted in the publication of many valuable papers on the Origin and History of Bushmen, and his work, *Illustrations of the Zoology of South Africa*. His copious and valuable notes regarding the aborigines of South Africa, as well as of the different tribes of the Kaffirs, have never unfortunately been laid before the public. His complete and accurate knowledge of the various tribes of Southern Africa rendered his opinion of great value to successive governments, and it was upon his representation and advice that the prosperous district of Natal was constituted a colony. Sir Andrew was elected an Honorary Fellow of the Faculty of Physicians and Surgeons of Glasgow in 1855; of the College of Surgeons of Edinburgh in 1856; of the Medico-Chirurgical Society of Aberdeen in 1855; and M.D. of Trinity College, Dublin, in 1856.

JAMES RENTON, M.D., DALKEITH.

DR. JAMES RENTON died at his residence in Dalkeith, on August 5th. He was the fourth son of the late Dr. Robert Renton, of Penicuik, who left a family of six sons, four of whom followed the profession of their father, viz., Dr. John Renton, formerly of Penicuik, and latterly of Edinburgh; Dr. Alexander Renton, of Peebles; Dr. Robert Renton, of Edinburgh; and the subject of the present notice. Dr. James Renton graduated at Edinburgh in 1818; and, on the death of Dr. Walter Graham, in April, 1827, he commenced practice in Dalkeith, and for forty-five years successfully prosecuted his profession there. In 1840 he was elected one of the Parliamentary Trustees of Dalkeith. It is said that he has bequeathed to the Rev. Dr. Wright the sum of £400 for the poor of Dalkeith, and a like amount to the Rev. James Lamont, for the same purpose in the East Parish.

DAVID WRIGHT, J.P., M.D., DUBLIN.

DR. WRIGHT died on July 25, at Vergemount, co. Dublin. During the Peninsular War he was surgeon to the 48th regiment, when that regiment highly distinguished itself at Albuera, Talavera, etc. He received a medal and clasps. After some years' service in India Dr. Wright went to Ireland, and was appointed surgeon to the Wicklow Militia. He resided at Arklow for upwards of thirty years, and, on leaving, was presented with a handsome salver and service of plate.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 15th, 1872.

Harnett, Alfred, Bittern, Southampton
Little, Robert, Dublin
Wagstaff, Thomas Henry, Camberwell

The following gentlemen also on the same day passed their primary professional examination.

Bond, George Weddall, Guy's Hospital
Coates, William Harrison, St. Thomas's Hospital
Cole, Henry Cornelius, University College
Hales, Robert Turner, St. Bartholomew's Hospital

INDIAN MEDICAL SERVICE.—List of candidates for Her Majesty's Indian Medical Service, who were successful at the competitive examinations held at London in February, and at Netley in August 1872, after having passed through a course at the Army Medical School, Netley. [Maximum number of marks, 6,900.]

Order of merit and names.	Studied at	No. of marks.
1.* Crombie, A.	Edinburgh	6215
2.† Murphy, W. R.	Dublin	5825
3. Joubert, C. H.	London	5540
4. Russell, E. G.	London	5360
5. Scully, J.	London	5325
6. Branfoot, A. M.	London	5190
7. Hall, G. C.	London	4985
8. Roy, G. Ch.	Glasgow and Calcutta	4790
9. Reid, A. S.	Edinburgh	4670
10. Watson, G.	Edinburgh	4595
11. Fasken, W. A. D.	London	4394
12. Lawrie, E.	Edinburgh and Paris	4260
13. Wilson, J.	Cork	4250
14. McNally, C. J.	Dublin	4222
15. Lang, J. A. T.	London	4196
16. Mulvany, E.	Dublin	4195
17. Zorab, J. M.	Calcutta & Edinburgh	4167
18. Dutt, R. L.	Calcutta, Lond., & Ab.	4145
19. Daphtary, G. R.	Bombay and Glasgow	4075
20. Bookey, J. T. B.	Dublin	4036
21. Butler, W. J.	London	4016
22. McGregor, A.	London	4015
23. Young, J.	Edinburgh	3955
24. Duke, J.	London	3912
25. Gupta, B.	Calcutta and Glasgow	3877
26. McConaghey, J.	Galway, Belfast, & Dub.	3856
27. Palmer, E.	Galway and Dublin	3840
28. Williams, A. H.	Aberdeen and London	3715
29. Holmes, R. A. K.	Dublin and Belfast	3650
30. Ferris, J. E. C.	London	3613
31. Lombard, D. E. T.	Dublin and Cork	3555
32. Johnson, W. E.	Dublin and Belfast	3522
33. Aylen, T. V.	London	3494
34. Dobie, S. L.	London	3451
35. Bevan, G. F.	Dublin	3372
36. Lloyd, C.	Cork	3350
37. Dobson, A. F.	Dublin	3345
38. Little, C.	Belfast and Dublin	3221
39. Mayne, T.	London	2939
40. Lawrenson, D. E. T.	Dublin	2935

* Awarded the Herbert Prize, August 1871.
† Awarded the Herbert Prize, August 1872.

APOTHECARIES' HALL, DUBLIN.—At the professional examinations, held in July 1872, the following gentlemen obtained the licence to practise.

Francis Joseph Butler, William Robertson Evans, Peter John M'Quaid, Edward Murphy, George Unthank Macnamara, Roger Macaulay, James Walsh Murtagh, and Richard Dancer Purefoy.

The following passed the examination in arts.

Albert Edward O'Connell, Patrick Joseph Carmody, and Thomas Taylor Reynolds.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ANDERSON'S UNIVERSITY, Glasgow—Lecturer on Medical Jurisprudence.
BASINGSTOKE UNION—Medical Officer for the Basingstoke or No. 1 District: £85 per annum, and extra fees.
BRIDGWATER UNION, Somersetshire—Medical Officer for the North Petherton or No. 9 District: £84 per annum.
BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.
CASTLECONNELL and ANNACOTTY, co. Limerick—Medical Attendant to the Royal Irish Constabulary.
CASTLE EDEN COLLIERY—Surgeon.
CHARING CROSS HOSPITAL—Assistant-Surgeon.
CLOGHAN, co. Donegal—Medical Attendant to the Royal Irish Constabulary.
GLOUCESTER COUNTY LUNATIC ASYLUM, near Gloucester—Junior Assistant Medical Officer: £80 per annum, board, lodging, and washing.
GREAT NORTHERN HOSPITAL, Caledonian Road—House-Surgeon.—Junior Resident Medical Officer.
HUDDERSFIELD INFIRMARY—Assistant House-Surgeon: £40 per annum, board, lodging, and washing.
LIMERICK UNION, co. Limerick—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Annacotty Dispensary District: £100 per annum and fees.
LISKEARD UNION, Cornwall—Medical Officer and Public Vaccinator for the Callington District: £65 per annum, and extra fees.
MARTLEY UNION, Worcestershire—Medical Officer for the Leigh or No. 4 District: £85 per annum.
METROPOLITAN DISPENSARY and CHARITABLE FUND, Fore Street, Cripplegate—Physician.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Two Entrance Scholarships: £25 and £20 per annum, for two years.
MILBANK FORGE WORKS, Castle Eden—Surgeon.
NORTHAMPTON GENERAL INFIRMARY—Dispenser: £100 per annum.
PROVIDENT MEDICAL INSTITUTION AND LYING-IN CHARITY, Pimlico Road—Consulting Physician.—Attending Medical Officer.
ROYAL FREE HOSPITAL, Gray's Inn Road—Resident Medical Officer.
ROYAL INFIRMARY, Glasgow—Extra Physician.
ST. MARY'S HOSPITAL MEDICAL SCHOOL—Scholarship: £40 per annum for three years.—Exhibition: £20 for one year.
ST. MARYLEBONE, Parish of—Medical Officer for the St. Mary District.
SCULCOATES UNION, Yorkshire—Medical Officer for the Sutton District: £60 per annum.
STANLEY HOSPITAL, Liverpool—Physician; Surgeon.
STRANORLAR UNION, co. Donegal—Medical Officer and Public Vaccinator for the Cloghan Dispensary District: £100 per annum, and fees.
SUSSEX COUNTY HOSPITAL—House-Surgeon: £80 a year, with £10 a year from each resident pupil, board, and residence.
TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.
UTTOXETER UNION, Staffordshire—Medical Officer for the Rocester District: £32 per annum, and extra fees
WARNEFORD LUNATIC ASYLUM, Oxford—Resident Medical Superintendent: £260 per annum, with board, furnished apartments, etc.
WATERFORD DISTRICT LUNATIC ASYLUM—Resident Physician Superintendent.
WEST LONDON DISTRICT SCHOOL, Ashford, near Staines—Medical Officer: £120 per annum.
WESTMINSTER GENERAL DISPENSARY, Gerrard Street—Physician.—Resident Medical Officer: £100 per annum, furnished apartments, attendance, coal, and gas.
WESTMINSTER HOSPITAL—Resident Obstetric Assistant.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*LUSH, W. V., M.D., of Weymouth, appointed Physician to the Dorset County Hospital, Dorchester.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

ARGLES.—On August 14th, at 8, Radnor Place, Hyde Park, the wife of *Robert Argles, Esq., Surgeon, of a son.
LONG.—On August 20th, at Richmond Road, Dalston, the wife of *Mark Long, M.D., of a son.
MILLER.—On August 10th, at Shandwick Place, Edinburgh, the wife of *A. G. Miller, M.D., of a daughter.
WOOKEY.—On August 17th, at Potter's Bar, Barnet, the wife of *James Wookey, Esq., of a son.

DEATHS.

BOYD.—On August 16th, at Rye Hill, Newcastle-on-Tyne, Sarah, wife of *James Boyd, L.R.C.P.Ed.
*SKEY, Frederick C., Esq., at Mount Street, aged 73, on August 15th.
TURNER, E. Fulham, M.B., at Lower Sydenham, aged 30, on August 15th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY .....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.
WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2.P.M.
SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

"LARYNGOSCOPE."—Dr. Mackenzie's Lectures on the Use of the Laryngoscope shall be commenced in an early number. We have been compelled to postpone these lectures and several other valuable papers, from unprecedented pressure on our space.

M.D., ABERDEENSHIRE.—We think that, in the circumstances, the parochial board had the legal power to act as they did. If the medical officer led them officially to understand that he had finally left the district, his doing so was tantamount to resignation.

THE "DAILY TELEGRAPH" AND LUNATIC ASYLUMS.

SIR,—Allow me to make a few comments on a sensational leader on the subject of lunatic asylums which appeared in the *Daily Telegraph* of Saturday last. It contains statements at once unjust and untrue, and calculated to mislead the public. It is easy enough to make loose assertions, such as—"Nor is it possible to doubt that there are tens—aye, and hundreds—of lunatics, so called, immured in private asylums, who have every right to be in perfect possession of their liberty." It is, however, a very different matter to verify them; and it is but fair to ask for proofs. Can the writer of the article adduce a single instance, at the present time, of a patient being unjustly confined in an asylum? He must have been thinking of the darkest period of the Middle Ages, when he speaks of patients being confined in *oubliettes*. Is he aware that the medical certificates authorising the reception of a lunatic into an asylum undergo the most rigid scrutiny at the office of the Commissioners in Lunacy, and that the Commissioners make a point of minutely inquiring into the mental state of every fresh patient after his admission into an asylum? One of the writer's accusations is very amusing. Speaking of the so-called hardships to which a patient in a lunatic asylum is subjected, he says: "He is shaved, and cropped, and tubbed. He has to get up and go to bed at a certain hour." I thought we moderns prided ourselves on the valuable institution of tubbing. If the writer had seen much of asylum life, and had witnessed the sad plight in which the patients are often brought, he would have known what a blessing it is to the poor creatures to have a shave and a good wash. As to retiring to rest and rising at stated hours, I cannot imagine how this can be objected to. It is the practice in all well regulated sanitary institutions.

31, Harley Street, W., August 20th, 1872. I am, etc., J. M. WINN, M.D.

SPASMODIC ASTHMA FOLLOWING USE OF LINSEED-MEAL POULTICES.—Dr. W. SMITH (Preston) asks:—Can any of your readers inform me if, in their practice, they have ever seen linseed-meal, applied in the form of a poultice, produce all the symptoms of hay- or ipecacuanha-asthma? I have a patient in whom this effect is produced, whether the linseed-meal be used for herself or for her children.

MR. A. F. MCGILL, resident Medical Officer to the Leeds Infirmary, writes to us that there is no vacancy in the post which he holds, nor is there likely to be one at present.

THE ANNUAL MEETING.—The name of Dr. A. Samelson of Manchester was accidentally omitted from the list of members present.

MR. SIMON'S REPORTS.

SIR,—I want to get together a complete series of the Reports presented by the Medical Officer formerly to the General Board of Health, and latterly to the Medical Department of the Privy Council. All these, prior to 1866, are out of print. If any members of our Association are able to help me, I shall be glad to hear from them, stating the volumes they can dispose of, and the price of them.

I am, etc., FRED. ED. MANBY, F.R.C.S.Eng.

10, King Street, Wolverhampton, August 15th, 1872.

BALMFORTH *v.* BUCKLEY AND FLETCHER.

SIR,—In the issue of the JOURNAL for Saturday, August 10th, there is a notice of an action for malpraxis, tried at the Manchester Summer Assizes, which is so incorrect and unfair towards the defendants, Dr. Ogden Fletcher and Mr. Buckley, that, as the first surgeon who saw the case, I must request you to insert the following history of the case.

On the 11th December, 1871, Alfred Balmforth, a commercial traveller, while attempting to get on to the guard's van of a goods train in motion, missed his hold, and fell between the platform and permanent way of the railway at Mexborough. He was much injured, and immediately carried to a hotel, where I saw him within half an hour after the accident took place. He was placed under the influence of chloroform, and carefully examined. The limbs were accurately measured, and every means taken with a view to detect if any dislocation or fracture existed. The conclusion I at once came to was, that neither dislocation nor fracture had occurred. He was removed home to Manchester the same evening, and seen by Mr. Buckley, one of the defendants, who used the same means for determining the presence of dislocation or fracture, and failed to do so. A few days afterwards, Dr. Ogden Fletcher, on behalf of the "Accidental Insurance Company", examined the plaintiff, and came to the same conclusion. Eleven weeks after the accident occurred, he was seen by the late Mr. Beever, who found a dislocation on to the dorsum ilii, but recommended that it should not then be reduced. I again saw the plaintiff on July 19th, along with Mr. Wheelhouse of Leeds, and Mr. Favell of Sheffield, together with the other witnesses for the defence, and on that occasion found a decided dislocation on to the dorsum ilii, slightly above the sciatic notch. It was, during the trial, proved without contradiction, that no dislocation existed at the time of the accident, and for eleven weeks afterwards; and the simple issue submitted to the jury was whether or not the defendants had been guilty of negligence in not reducing the dislocation at the time when first discovered—a point obviously of purely medical opinion. The evidence of the surgeons of the Manchester Infirmary, who were examined for the plaintiff, only went to prove that a dislocation *now* existed—a fact conceded by the defendants. The very valuable evidence of Mr. Wheelhouse of Leeds, and of Mr. Favell of Sheffield, and that of the other surgeons for the defence, of the defendants themselves, and of my own, was based entirely on the supposition or belief that the diagnosis made in the first place by myself, and subsequently by the defendants, was correct. Trusting in this supposition, it is impossible that any of the witnesses for the defence could come to any other conclusion than that the dislocation was the secondary result of a fracture of the upper and outer rim of the acetabulum—an effect probably produced by the plaintiff's efforts to walk, and by the muscles surrounding the hip-joint having recovered, from the great contusions received, their natural contractile power. Had it been proved that dislocation existed at the time of the accident, I should have been the responsible party, not the defendants. It is a most unfortunate thing that the whole case was not reported fully and fairly in the JOURNAL; still more unfortunate that a case of purely medical opinion should be submitted to a jury of twelve men, however intelligent, but totally unconnected with, and ignorant of, professional matters.

I am, etc., J. M. MACLAGAN, M.D.Edin.

Mexborough, Rotherham, Yorkshire, August 12th, 1872.

SIR,—We have had our attention called to your notice in your impression of the 10th instant, of the actions by Mr. Balmforth against Dr. Fletcher and Mr. Buckley. With the exception of an offer by Mr. Southam, *before* action commenced, to refer Mr. Buckley's case to arbitration, no offer of reference was ever made. As soon as the action was commenced, and the plaintiff showed signs of asserting his claim, the attorney of Dr. Fletcher, and the writer, as the attorney of Mr. Buckley, proposed a reference; but the plaintiff's attorney declined, stating that he had just seen Mr. Southam, but that that gentleman did not advise a reference unless the defendants would, as a preliminary, admit their negligence, which, of course, was declined. No offer of reference was ever made to Dr. Fletcher; and, to the best of our belief and opinion, no reference was ever desired by the plaintiff or his advisers. We are, etc., J. & E. WHITWORTH.

2, St. James's Square, Manchester, August 14th, 1872.

SIR,—My attention has been called to a paragraph under the heading of action for malapraxis, in the BRITISH MEDICAL JOURNAL for the 10th instant, which states that Mr. Southam strongly advised that the case should be submitted to arbitration, but that this was refused by the defendants. It is only right that you should allow me to say, through the medium of your JOURNAL, that, so far at all events as regards my client Dr. Ogden Fletcher, such statement is incorrect. When first instructed in the matter by my client, I put myself in communication with Mr. Whitworth, the solicitor of the other defendant, Mr. Buckley. He informed me that, although no offer had been made to him, he understood that there had been some suggestion by the surgeons who had examined the plaintiff that the matter should be referred to arbitration, and expressed his own desire that it should be. My own views were totally opposed to such a course; but, in deference to Mr. Whitworth, I consented to wait with him upon the solicitors of the plaintiff, to ascertain whether they were willing to go to arbitration. This we accordingly did; but upon our jointly stating our willingness to refer, we were told that, as arbitration had been refused when offered, it could not now take place. Mr. Whitworth thereupon stated that no official offer of arbitration had been made to him, and that, although there had been some suggestion of it, such suggestion had been of a nature that did not warrant him in taking any notice of it. I then stated that, so far as my client Dr. Fletcher was concerned, no offer or suggestion of arbitration had been made, and that I had not heard any mention of it until Mr. Whitworth had mentioned it that day. In the end, the plaintiff's solicitors promised to see their client, and ascertain if he would refer the matter, and to let Mr. Whitworth and myself know his decision. As I did not hear from them at the time promised, I wrote them, asking for their client's decision, but did not receive any answer from them. Mr. Whitworth and myself then waited upon them again to ascertain if their client would consent to refer, and were told that he objected to an arbitration, but that Mr. Southam had suggested that there might be arbitration upon the principle that the defendants should admit their liability, and leave it to the arbitrators simply to say to what extent they were liable. Mr. Whitworth and I replied that the suggestion was too absurd to merit any notice; and from that moment, arbitration was never again mentioned. Under these circumstances, I think you will admit that the assertion that Dr. Fletcher refused to go to arbitration is incorrect.

While writing, there is one other point in your paragraph which I think I ought to set right. I have a copy of Mr. Beever's report before me, and it contains no such assertion as that the dislocation could have been reduced at the time of the accident. I am, etc., WM. H. HEWITT.

8, Marsden Strect, Manchester, August 12th, 1872.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

J. E. B.—The authorities of the University ought to forward the pass list; but, in the present case, they have failed to do so.

AN ASSOCIATE.—We understand that these appointments are generally made on the recommendation of the Lieutenant-Colonel.

THE MEDICAL DIRECTORY.

SIR,—As the circular in connection with the *Medical Directory* is now issued, may I suggest that every member of the British Medical Association should, with his qualifications, register his being a member? In consequence of the continual occurrence of unprofessional and unseemly behaviour of medical men one to another, it becomes absolutely necessary to show that we belong to some society by which the high respectability and honourable conduct of its associates is guaranteed by its laws. I am, etc.,

E. W. S. DAVIS, Mem. Brit. Assoc.; Med. Off. Health; etc.

Mountain Ash, Aberdare, August 14th, 1872.

THE CONTAGIOUS DISEASES ACTS.

SIR,—I notice some serious charges against the opponents of the Contagious Diseases Acts, in the JOURNAL of July 13th, by Mr. Holland; to which, as an opponent of these measures, and a constant reader of your admirably conducted JOURNAL, I trust you will allow me to reply. Mr. Holland stigmatises the opposition to the Acts as a fanatical crusade, preached chiefly among the least educated classes by unscrupulous arts of agitation. He then says, "that those of the agitators not ignorant themselves have relied upon the ignorance of others", in order to mislead them; that, although it is impossible to stamp out disease, it is right to carry out the Acts. He then goes on to say that the opponents of the Act attack it, not for what it did, but for what it did not contain. Having done thus, he proceeds to give an altogether incorrect description of the law, alleging that the Act is only applied to prostitutes who are disorderly characters, and supposed to be diseased; that the Act does not license, but forbids certificates. He declares that such fallacies are repeated by those who knew they are untrue to those who know nothing about it.

Mr. Holland and many others like him would experiment on the body politic and violate the constitution, which is the pride, boast, and safeguard of the people of this country, with as little compunction as some medical men would cut open live animals in the supposed interest of science. To examine any woman against her will with the speculum, is, in my opinion, simply an indefensible atrocity; and, under these Acts, this operation is performed periodically upon women who have committed no crime, are not even suspected of any legal offence whatever, and are quite healthy. Of 100,000 women examined, 86,000 are reported as free from disease. The Acts allow prostitutes to carry on their trade, providing they submit to examination; and it is an insult to common sense to pretend that this is not practically licensing their profession. The Act does not forbid the giving of certificates; in fact, the withdrawal of equivalent papers has been done in contravention of the Acts by the promoters in consequence of the agitation against them, and is at the present moment positively illegal. It is evident that Mr. Holland knows very little of the subject of which he speaks so confidently; and I should wish him to understand that I and other scientific gentlemen protest against these measures: first, because they violate the fundamental laws of this country and the guaranteed rights of British subjects; secondly, because they are altogether unnecessary and uncalled for; thirdly, because, so far from mitigating, they aggravate every evil, both physical and moral; and, lastly, because other measures entirely unobjectionable, and in full accord with the free spirit of all English institutions, would not only suffice but accomplish infinitely more good than vain and aggravating efforts at police control.

I am, etc., THOS. WORTH, M.R.C.S.L.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, August 17th; The North British Advertiser, August 17th; The Tewkesbury Record, August 17th; The Manchester Guardian, August 21st; Saunders's News-Letter and Daily Advertiser, August 20th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. G. H. Savage, London; Dr. H. Simpson, Manchester; Mr. T. L. Rogers, Rainhill; Dr. Campbell Black, Glasgow; Dr. Wiltshire, London; Dr. Bell Taylor, Nottingham; Mr. Manby, Wolverhampton; Dr. Samelson, Manchester; Mr. H. Horton, Eardisley; The Military Secretary, India Office; Mr. James E. Adams, London; Mr. H. F. Banham, London; Mr. W. F. Hunter, Margate; Mr. Renton, Bridge of Allan; Dr. Cheadle, London; Mr. L. J. King, Bath; A Member; Mr. C. Leonard, Bristol; Mr. W. F. Teevan, London; Mr. Alfred Baker, Birmingham; Dr. W. Smith, Preston; Dr. Heywood Smith, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Ferret; Dr. Morris, Spalding; Mr. Wanklyn, London; Mr. Folker, Hanley; Dr. Sieveking, London; Mr. James R. Lane, London; Mr. Mechie, London; Dr. Dalton, Bournemouth; Dr. Samelson, Manchester; Dr. J. J. Ridge, Clapham; Dr. W. V. Lush, Weymouth; Mr. A. F. McGill, Leeds; Dr. Bradbury, Cambridge; Dr. G. B. Mead, Newmarket; Mr. J. H. Gornall, Warrington; Dr. Long, Dalston; Dr. Moxey, Turnham Green; Mr. H. Churchill, Cheshunt; Mr. Horace Green, London; Our Manchester Correspondent; Dr. A. C. Campbell, Dundee; Mr. Acton, London; Dr. Winn, London; Mr. E. Parker, London; Dr. J. Martin, Portlaw; Mr. Lawson Tait, Birmingham; Staff-Surgeon Oliver, Portsmouth; Associate; Dr. James Boyd, Newcastle-upon Tyne; Mr. H. Harris, Birmingham; Dr. Jones, London; The Secretary of the Westminster Hospital; Mr. T. Carr Jackson, London; Mr. G. F. Hodgson, Brighton; etc.

ABSTRACT OF LECTURES
ON
THE USE OF THE LARYNGOSCOPE.

Delivered at the London Hospital.

By MORELL MACKENZIE, M.D.Lond.,
Assistant-Physician to the Hospital.

Lecture I.

It is somewhat remarkable that, though more than twelve years have elapsed since the laryngoscope was brought to perfection, that instrument still remains in the hands of the few. That this new mode of investigation has not been more widely cultivated, is probably due to the supposed difficulties by which it is surrounded. These difficulties, however, yield rapidly to a small amount of perseverance; and, with an hour's instruction, an average student will be able to use the laryngoscope with satisfactory results in nine cases out of ten. Of course, a longer time is required to become familiar with the different parts of the larynx—still more with the different phases and varieties of disease. Compared with the stethoscope, the laryngoscope, though more limited in its range, is certainly easier of employment, and furnishes much more accurate information, the eye being a more trustworthy sense than the ear. Compared with the ophthalmoscope, again, the throat-mirror is not only more easy of use, but it is probably useful in a greater number of cases. The laryngoscope, indeed, possesses an advantage over both the other instruments, inasmuch as it not only aids in diagnosis, but permits "the eye to direct the hand" in treatment. With these few preliminary, and, I trust, encouraging remarks, I will now proceed to describe the laryngoscope, its mode of use, and the various instruments which can be employed with its aid.

The *laryngoscope* is an instrument for obtaining a view of the interior of the larynx during life. It consists of two parts: first, a small mirror fixed to a long slender shank, which is introduced to the back of the throat; and, secondly, an apparatus for throwing a strong light (solar or artificial) on to the small mirror. For thus projecting the luminous rays, a second (larger) mirror, which reflects the light from a lamp or the solar rays, may be employed; or artificial luminous rays may be concentrated by a lens directly on to the small mirror. When artificial light is employed, the illuminating mirror is slightly concave; when sunlight is used, its surface is plane.

The *laryngeal mirror* may be made of polished steel, or of glass backed with amalgam. Though, on theoretical grounds, the steel mirrors give the most perfect image, they so readily become tarnished and rusty from the least moisture, are so immediately spoilt by the accidental contact of the medicated solutions used in treating laryngeal disease, and so soon become scratched in cleaning, that they are not found convenient in practice. The glass mirror, when mounted in German silver, should not be more than one-twentieth of an inch in thickness. The reflecting surface of the laryngeal mirror may vary from half an inch to an inch and a quarter in diameter. It is well to be provided

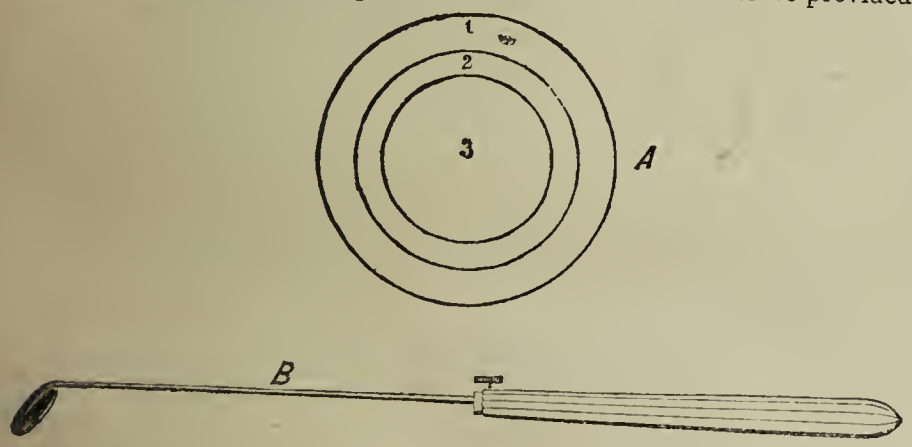


Fig. 1.—The Laryngeal Mirror. *A*. Diagram showing the exact sizes of the reflecting surface of the mirrors Nos. 1, 2, and 3. *B*. The mirror and holder (half size) seen in profile.

with at least three mirrors, varying in size between the dimensions specified; the largest sized mirror is called No. 1; the middle sized one, No. 2; and the smallest, No. 3.

For ordinary purposes, a No. 2 mirror will be found most convenient. It may be of square, circular, or oval shape. The circular mirrors cause least irritation, except when enlarged tonsils are present. In those cases, the oval mirrors are most suitable. The mirror should be fixed to the shank, at an angle of about 120 degrees. The shank of the mirror should be of German silver; it ought to be about four inches in length and one-tenth of an inch in thickness. The shank or stem of the mirror slides into a hollow wooden handle, and is fixed there by a screw, as is shown in the annexed drawing (Fig. 1, *B*). The handle should be about three inches in length, and rather more than a quarter of an inch in thickness.

Illumination.—For throwing a light on to the laryngeal mirror, and thus into the larynx, it will be found most convenient to employ a circular mirror about three inches and a half in diameter, with a small hole in the centre. When artificial light is employed, the mirror should be slightly concave, and have a focal power of about fourteen inches; but when solar light is made use of, the surface of the mirror should be plane. The mirror may be attached in some way to the operator's head, or fixed to a horizontal arm which is connected with the body of the lamp. The former plan is by far the most convenient; and the mirror may be worn either opposite one of the eyes, in front of the nose and mouth, or on the forehead. Of these positions, the first is, on theoretical grounds, the most perfect; the last, the easiest in practice. The plan of looking through the hole of the reflector offers the great advantage of entirely protecting the observer's eyes from the glare of the light; for whilst the luminous rays necessarily fall obliquely on the mirror, and therefore do not reach the pupil of the eye immediately behind the mirror, the other eye is also within the shadow of the reflector.

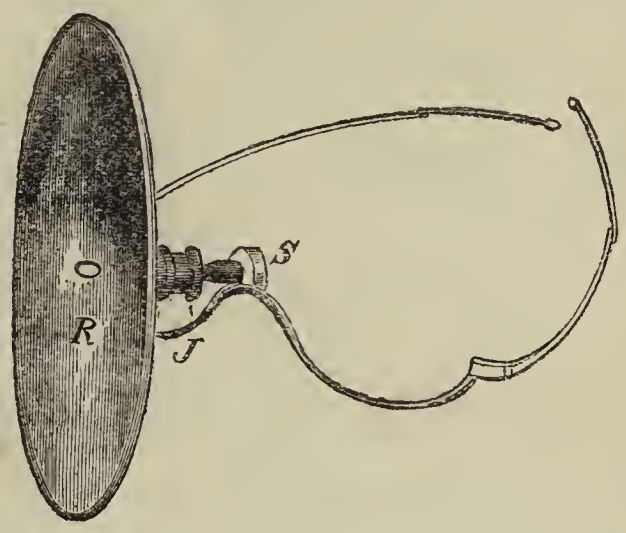


Fig. 2.—Reflector attached to Spectacle-frame (*S*), from which the upper halves of the rims have been removed. At the back of the reflector (*R*) is a small cup, into which a ball connected with the spectacle-frame fits. A ring is screwed over the ball, and the joint is thus formed at *J*.

It is, of course, only when the reflector is placed before the eye, that the observer can look through the hole in the reflector; if, therefore, either of the other methods be practised, the reflector need not be perforated. The reflector may be attached to the operator's head either by a spectacle-frame or by a frontal band. The spectacle-frame, with the upper halves of the rim removed (as seen in Fig. 2), is the arrangement which I have found the most convenient. In either case, the mirror should be connected with its support by a ball and socket-joint. The hole in the centre of the reflector should be oblong, and, when placed in front of the eye, its long diameter should correspond with the long diameter of the eye. A hole of this shape allows for the varying distance between the eye and the nose in different people, and for the varying position of the centre of the reflector in its different degrees of inclination. It should be remarked that, though the employment of the reflector greatly facilitates the inspection of the larynx, a laryngoscopic examination can be effected without it. In this case, a strong light must be thrown directly on to the laryngeal mirror.

Any lamp that gives a bright steady light answers the purpose perfectly well. Many of the most valuable observations have been made with a common "moderator." An Argand gas-burner will be found very convenient, especially if constructed on the reading-lamp principle, so that it can be fixed at different heights. My rack-movement laryngoscopic lamp, which readily admits of perpendicular and horizontal movement, will be found to greatly facilitate the management of the light.

Its action is shown in Fig. 3. The power of the light may be advantageously increased by one or more lenses placed in front of the

flame. For use at the bedside, where gas is not at hand, my new clinical lamp will be found very serviceable. It has the same action as the rack-movement lamp, but paraffin is used for illumination instead of gas.

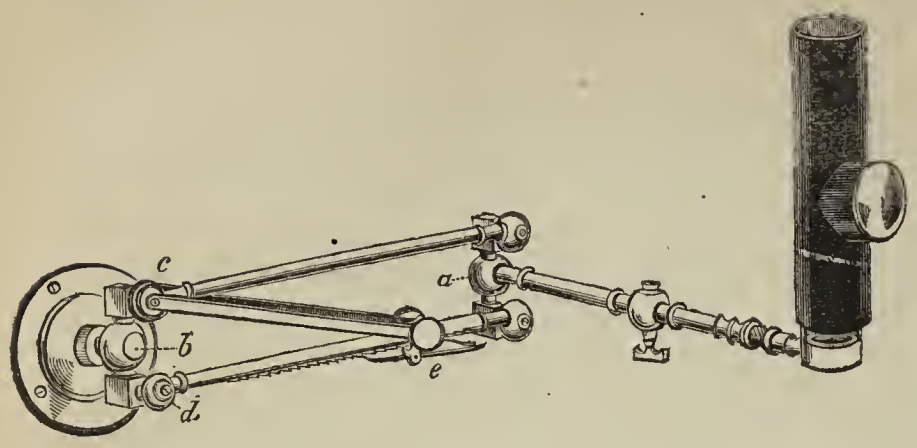


Fig. 3.—The Rack Movement Lamp.* At *a* and *b* the horizontal-movements can be effected; at *c* and *d* the vertical movement takes place. The gas passes only along the upper horizontal tube from *c*; in the lower tube is a rack which regulates the height of the lamp through the little handle, *e*. The chimney of the lamp is made of metal, a round hole being left where the lens fits in.

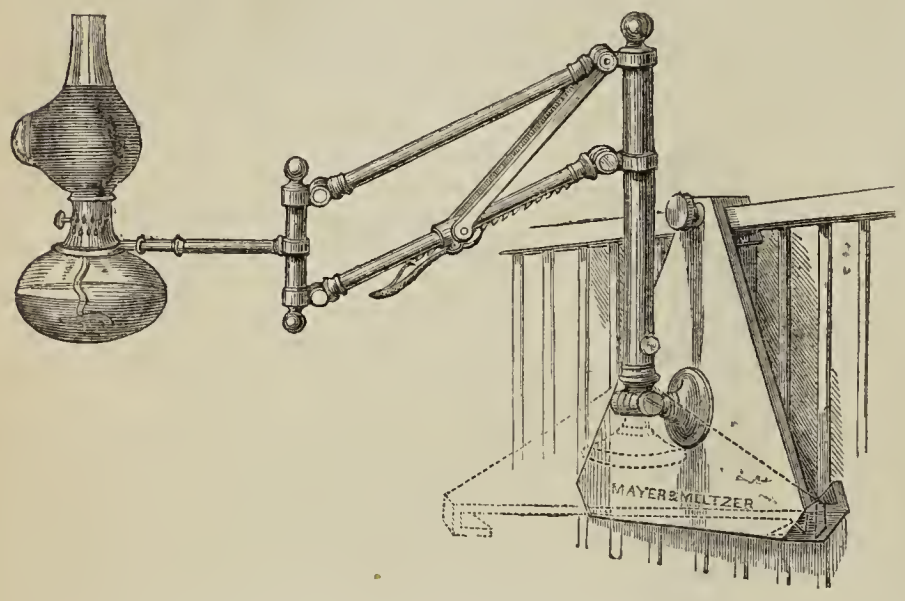


Fig. 4.—The Clinical Lamp. In the illustration, the lamp is seen hooked on to the bar of a bed.

It makes a very useful lamp for the consulting room. By reference to the woodcut (Fig. 4), it will be seen that the base of the apparatus can be hooked on to the bar of a bed, and that the perpendicular stem rotates, so as to adapt itself to this position. On the other hand, when in use on the table, the stem can be easily adapted to the upright position by means of the screw at its foot.

In the construction of an apparatus for increasing the light, it may be well to observe: 1. That, if a lens be used, it should always be placed at its exact focal distance from the flame; this causes the luminous rays to pass through the lens in parallel direction, and thus throws a body of light a considerable distance; 2. That since, when rays fall on a convex surface, a certain number are refracted, and do not pass through it, the plane face of a plano-convex lens should be placed next the flame; 3. That, except when a lens is used, no mirror or reflector should be placed behind the flame for the purpose of strengthening the light; for any scratches or spots on it are apt to be reflected on to the illuminating mirror, and thence again on to the laryngeal mirror; this, of course, interferes with the distinctness of the laryngeal image.

It has been already observed that the employment of a reflector is not absolutely necessary for throwing a light on to the laryngeal mirror. When the observer does not make use of a reflector, the lamp must be placed very near to the patient's mouth, or else the luminous rays must be projected from a lamp in less close proximity, by a lens placed in front of the flame. For direct illumination, the oxy-hydrogen lime-light is by far the best that has been yet invented, and is the best adapted for demonstrations of cases to a number of persons. Not only is the light superb, but the mode of illuminating is much less fatiguing to the operator when a large number of cases have to be seen; and the heat, if not actually less, is less felt, on account of its being further removed from him.

In using an ordinary lamp for direct illumination, either a common plano-convex lens may be used, or a large glass globe about six inches in diameter, filled with water. The latter kind of concentrator (the so-called Schuster-Kugel) was first recommended by Türck, and afterwards recommended by Störck; but whilst the former abandoned its use in favour of the reflector, the latter still employs it. This apparatus is also recommended by Dr. Walker of Peterborough, who has greatly improved it by substituting an elegant metal frame for the cumbersome wooden affair of Störck. It gives a brilliant light, which is most intense about twenty inches from the globe. As it is quite impossible to carry this enormous globe about, its use is necessarily confined to the practitioner's consulting-room. A much more convenient plan is that adopted by several French physicians, which may be thus described. A lamp, provided with a lens, is placed on a table so narrow that the laryngeal mirror can be used by the practitioner on a patient sitting on the opposite side of the table. A shade screens the light from the observer's eyes, whose face in this mode of examination is close to the lamp. In applying remedies, the lamp is between the arms of the practitioner, who, as it were, embraces it. Dr. Fauvel, of Paris, uses a table about three feet long and one broad, in three leaves; the centre leaf, on which a moderator lamp rests, can be screwed up and down to different heights for different patients. Dr. Krishaber, of the same city, employs a round table of small dimensions.

The solar rays, or diffused light, on a bright day may be concentrated on the laryngeal mirror. In the former case, the surface of the reflector must be plane; in the latter, the usual concave mirror may be used. The patient should sit with his back turned obliquely to the window, and the practitioner opposite him. The sunlight in this way passes over the patient's shoulder to the reflector, and is thence projected on to the laryngeal mirror. In other respects, the examination is conducted in the same way as when artificial light is used.

* This lamp, as well as all other instruments used by me, is made by Mayer and Meltzer of Great Portland Street.

ABSTRACT OF A LECTURE
ON
PROGRESSIVE PARALYSIS AND INSANITY.

Delivered at Guy's Hospital.

By J. THOMPSON DICKSON, M.A., M.B.(Cantab.),
Lecturer on Mental Diseases at Guy's Hospital; Physician to the Infirmary for Epilepsy and Paralysis; etc.

THERE is a form of disease, usually insidious in its invasion, steadily progressive in its course, and certainly fatal sooner or later in its termination, to which the expression "general paralysis of the insane" has been applied. Systematic writers have adopted the term "general paresis"; and legal writers have called it "paralysis of the brain." French writers have called it *folie paralytique;* but it seems to me that there is considerable objection to all the terms that have been used; for pathologists have not yet settled whether the affection to which these names have been given is a separate and distinct disease, nor has it by any means been proved that the malady is essentially a disease of insanity. And I purpose in this lecture to use the term "progressive paralysis" as a wide expression, and one less open to objection than any other that I can find; it conveys a clear notion of the disease; and I shall bring forward some arguments to show that insanity, when it complicates progressive paralysis, is an accident only, and not an essential characteristic of the disease. You find progressive paralysis in general hospitals as well as in lunatic asylums. Some physicians have regarded progressive paralysis as a genus, and the cases of the general hospitals and of the lunatic asylums as species. I believe, however, that there is more reason to regard all the forms of progressive paralysis as one disease, and the apparent varieties as degrees of change in the cerebro-spinal centre. I must beg you to call to mind one anatomical fact—viz., that the spinal system does not end in the medulla oblongata, but in the corpora striata and optic thalami; and what we usually call the cranial nerves, are in reality portions of the spinal system of nerves, whilst the grey matter of the surface must be considered as essentially the seat of the intellectual operations. It will then appear to you clearly that, if we have disease affecting the cortical substance of the brain, we shall have disorder of the mental faculties; and if we have disease affecting the spinal system, we shall have disorder of the sensory and motor functions, and of the organs of prehension, locomotion, and special sense; and considering the relation from contiguity of the spinal and the intellectual portions of the nervous system, we cannot

be surprised if we see diseased conditions of the one extending into the other. As a matter of clinical experience, we see progressive paralysis beginning in the lower extremities and ending with mental symptoms; or we see cases in which the first symptoms are mental, and pass downwards through the cord; and in some cases, both mental and bodily symptoms appear at about the same time.

The following outline of a case admitted into St. Luke's Hospital during the time that I was Medical Superintendent of that Institution, will convey a fair idea of the disease as found in asylums. G. H., aged 40, attempted to set fire to his house, and, upon examination before a magistrate, was found to be insane. He had a placid and genial physiognomy, was rather inclined to corpulence, was feeble and tottery in his gait, could only walk very slowly and with his legs straddled; and he had great difficulty in retaining his balance. He had also lost power over his hands, and was unable to dress himself; his speech was either precise but very slow, or muffled and unintelligible; and he had glosso-labial paralysis, and loss of control over his sphincters. He exhibited great loss of memory, and he believed himself to be possessed of millions of money. He developed epileptiform seizures; and, within three weeks of his admission, he died in a fit. The *post mortem* examination exhibited a wasted brain and cord; but the pathology and the microscopical conditions of the disease I shall speak of by-and-by. At this point, I would lay stress upon the fact that you will see in the wards of this hospital cases of progressive paralysis with one or all of the same symptoms, only without the insanity; and I fail to see a good reason why the cases should be considered as belonging to distinct nosologies, when the only variation between them is the accidental presence or absence of insanity. The reason why such a conclusion has been formed, is to be found in the error which has arisen in regarding the insanity as an essential, instead of an accidental, accompaniment of the disease. You will find an excellent example in Stephen Ward, under the care of Dr. Wilks; in the patient, all the symptoms, save the insanity, are well marked. The man is stupid, and has a defective memory; but stupidity and defective memory are not insanity. The question of insanity or sanity in these cases is of great medico-legal importance; as, by a declaration of insanity, you may annul the person's civil responsibility, upset his will, and render his children ineligible for life insurance—a cruel and, I think, unwarrantable assertion, but one that must be maintained if general paralysis is to be considered a disease essentially associated with insanity. Dr. Wilks suggested the term *dementia paralytica* for the feeble, slobbering, helpless, forgetful patients who represent the advanced stage of this disease, and who, in their symptoms, are exactly like the cases of chronic delirium tremens from alcoholism, or like patients whom you sometimes see suffering from the effects of shocks such as are produced by railway accident; but the expression *dementia* conveys a notion of mental disease which it is desirable to disassociate from progressive paralysis, except in the special cases in which insanity occurs. You will find Dr. Wilks's paper, in which he records the fact of shrivelling of the brain in the cases he examined, in the *Journal of Mental Science* for October 1864; but his cases were by no means cases of insanity. You will find another paper by Dr. Wilks on the same subject in the *Guy's Hospital Reports* for 1871.

In the cases of progressive paralysis in which insanity occurs, it is usually taught that a peculiar form of delusion occurs, a delusion called by the French *manie de grandeur*, and in this country exaltation of ideas; but this form of delusion does not occur in as many as thirty per cent. of the insane cases, and depression is as common as, or more common than, the exalted idea. A large majority of the excellent and typical cases which we have seen at Peckham House, have not exhibited the extravagant idea. Dr. Westphal, of Berlin, has refuted the specific character of the delusion, on the ground that, when it occurs, it is but a silly delirium, having its origin in forgetfulness. The patients, it is true, are sometimes very happy; but this may have an origin in absence from pain, the result of their general anæsthesia, and their incapacity for dwelling on pain or trouble. The tremulous tongue, upon which much stress has been laid, is perhaps a prominent rather than a special characteristic; and the ninth is probably not the only nerve having its origin on the floor of the fourth ventricle which is involved; indeed, if all the nerves which have their origin within the skull be observed, their roots will often be found affected. The labial paralysis is often quite as well marked as the lingual; but neither labial nor lingual paralysis is of itself evidence of a disease, the essential characteristic of which is insanity.

Inequality of the pupils is a symptom of some importance, as showing that a change has occurred or is going on in the brain; whilst the physiognomy, though a not very obvious sign, nevertheless, in its blank expression, indicates that the cerebral function is so impaired as not to be very impressionable. The loss of hearing goes with the paralysis of the nervous roots of the upper portion of the spinal centre. The forgetfulness or loss of memory belongs to the impairment of the nervous tissue generally, and specially to the defect of the surface; and the inability to connect two ideas is rather to be regarded as a somewhat advanced degree of change, impressions made not being sufficiently adhesive to attain the prominence necessary for their correction. Hence from forgetfulness, loss of sequence, and inability to correct impressions, we have, sometimes, the silly expression of absurd ideas; and, the disease being progressive, the mental affection may, when it occurs, go on from slight fatuity to absolute dementia.

A symptom on which I may lay stress is the alternation between exacerbation and depression which this disease exhibits. The patients at one time show exacerbation or excitement, at another time depression; sometimes they to all appearance recover, and then again suddenly relapse; and the symptoms reappear with renewed violence, showing that, although for a time the expression of the disease has been masked, its progress has not been arrested. In speaking of the oscillation, so to say, of the symptoms, I should mention in particular the pulse, which demonstrates the variation most beautifully. You lately saw an excellent example of the sudden fall of the pulse in a case of progressive paralysis under the care of Dr. Moxon in the Clinical Ward, the heart's pulsation falling as low as 64. You saw also, at Peckham House, two cases on Friday last: one in which the pulse was 64, the other in which it was 68; and these contrasted well with two cases in which the pulse was 100. In two cases that were under my care—one in St. Luke's, the other in a private asylum of which I had charge—the pulse fell below 50. The point is of this interest, that it frequently indicates that the case is one of rapid progress.

Another very common accident of progressive paralysis is the epileptiform phenomenon. Epileptiform attacks occur sooner or later in most of the cases in which the disorder involves the head; and, regarding the epileptiform phenomenon as a symptom, the light in which I think epilepsy should always be regarded, it may be taken merely as indicative of a wasted brain—a condition very likely to set up enough irritation, at times, to contract the surface-vessels of the organ. The first symptom that appears in many cases is an epileptiform attack. This was illustrated the other day in a patient of Dr. Moxon in the Clinical Ward; and I think that you will find, in the study of the dynamics of these epileptiform attacks, an explanation of many of the mental symptoms which accompany progressive paralysis. In some cases, as we have seen, the disease begins in the head, and passes down the cord; in others, it begins in the cord, and passes upwards; but, in either case, the clinical characteristic of the paralysis is its progressiveness, and another feature is that it is incomplete.

The cases found in lunatic asylums present two well marked varieties of motor affection. The first is called taxic or ataxic; and in it the gait of the patient at first is erect, with a precise and elevated step, as in progressive locomotor ataxy, whilst the patient sometimes complaining that the ground feels soft and spongy, and of lancinating and shooting pains in his limbs. The other is called paralytic or myelitic; in it, from the first, the patient is tottery, his balance unsteady, and his step careful; his legs appear stiff, as if in splints, and he can only stand when they are straddled, or when his feet are apart. In advanced stages, the cases present considerable resemblance to ordinary myelitis. The upper limbs are never as much paralysed as the lower, but the loss of power is sufficient to destroy control over a pen, and also to render the patients incapable of dressing or feeding themselves. The best diagnostic test between ordinary mania and the maniacal condition often displayed in patients suffering from progressive paralysis, is the control over the pen or hand-writing. Besides hypoglossal paralysis, you may have any of the nerves taking their origin on the floor of the fourth ventricle implicated; or, in fact, from the facial paralysis, deafness, ptosis, amblyopia, and amaurosis, which you sometimes see, it is certain that you may have any of the nerves that take their origin in the cranial portion of the spinal system affected.

The mental and the paralytic symptoms have led to the examination of both brain and cord, and some very definite conditions have been found. In the first instance, Rokitansky and Wedl described hyaline sheaths deposited round the vessels, and then fibrous sheaths. Dr. Sankey afterwards described the vessels as wavy or tortuous, or convoluted into knots. Dr. Lockhart Clarke has since further investigated the subject, and he has shown both the sheath and the corrugated vessels lying in the perivascular canals described by His. These perivascular canals, from the wasting of the brain-tissue, become much widened, and the corrugated vessels, with their sheaths, lie in the centre; but Dr. Lockhart Clarke has also described granules or grains of hæmatodin which are contained within the sheath as well as the vessel; and this is an important addition to our knowledge. Under the microscope upon the table, you will see these conditions perfectly displayed; and I am much indebted to Dr. Lockhart Clarke for his kindness in

lending me the specimen for exhibition to you. A second condition found in this disease is a wasting of the nerve-cells, indicated by a loss of their sharp contour and an increase of the contained dark granules, which look like a heap of particles ready to fall asunder. You may see under the microscope a specimen which Dr. Lockhart Clarke was good enough to prepare for me, in which this state is shown.

A granular condition of the surface of the floor of the fourth ventricle has been described; but this condition does not belong only to progressive paralysis, but may be observed in all conditions of irritation of the brain and over the whole ependyma. This granulation I am very familiar with, and you may often see it in this hospital in the *post mortem* room; it belongs to the epithelial formations, and its most common seat is the septum lucidum. I have sometimes seen the brain, or a part of it, in the condition called hypertrophic, or exhibiting an increase of the neuroglia. Dr. Westphal mentions the subject, but he denies the existence of the increase of the connective tissue. There is, however, no doubt that the condition is not an uncommon one. A fatty state of brain, likewise, also sometimes exists, and, in some cases, *corpora amylacea* are also to be found; the existence of these last mentioned states probably is accidental, and must not be considered as essential.

The conditions of the cord have been found to vary considerably. Dr. Boyd has described softening. Dr. Lockhart Clarke has also found softening in some cases; in others he has found areas granular, and fluid disintegration. Dr. Westphal, who has written very ably on the subject, has found wasting of the posterior columns and the posterior and lateral columns, and wasting of the nerve-roots; and my own experience confirms this observation, and, with that of Westphal, tends to pathologically associate, if it does not identify, the disease as found in asylums with locomotor ataxy and other forms of progressive paralysis as found in general hospitals. The wasting or softening of the cord may be only questions of degree, and depend upon the length of time through which the case has run its course.

It has been asked—Does locomotor ataxy ever become progressive paralysis as seen in lunatic asylums? and clinically, I should be inclined to answer affirmatively. I have now at the Infirmary for Epilepsy and Paralysis a case of locomotor ataxy of two years' standing, in which fatuity, loss of memory, and epileptiform seizures have lately made their appearance. I must request you, however, to retain in your minds the general description and the remarks which I have made upon the disease as found in lunatic asylums or as recognised by alienists, whilst you consider the subject in the light in which I have placed it before you. There is no reason why we should not regard progressive paralysis in the light of a large class, of which the various forms with which we are acquainted may be looked upon as divisions, but not in the light of genera or species, for all the forms without line of demarcation run into one another.

The causes of this malady are wrapped in mystery; it occurs alike without assignable cause in the subjects of the highest mental attainment, and in the very ordinary beings of every-day life; it has not been shown to be necessarily of hereditary origin, and it appears sometimes to follow accidents, as shocks and various excesses, whether of labour both mental and physical, or of alcohol and venery. It also is seen to follow sun-stroke, but much of its etiology has yet to be determined. In conclusion, I would again repeat that the character of the disease is paralysis, progressive and incomplete, of body or mind, or of both; the somatic failure being that of sensation or motion, or both; and the mental, when it occurs, being chiefly expressed in defect, though it may range from slight loss of memory through varied conditions of forgetfulness, fatuity, mania, and melancholia, to the most absolute and the most profound dementia.

THERAPEUTIC MEMORANDA.

COMPOUND RHUBARB PILL AS A GALACTAGOGUE.

MATILDA P., aged 24, was under treatment for purulent discharge from the vagina, which existed before confinement with her second child. The infant had been suffering from purulent ophthalmia. It was partly suckled and partly fed, owing to the scanty secretion of milk. A few days ago, two months after the birth, I ordered the mother ten grains of compound rhubarb pill, in consequence of constipation. The pills never acted on the bowels at all; but during the whole of the next day, and part of a second, there was profuse secretion of milk, contrasting strongly with the condition both before and since. This appears a good instance of alternative secretion of an unusual description.

J. JAMES RIDGE, M.D., B.S.

Clapham, August 17th, 1872.

ABSTRACT OF LECTURES
ON THE
SURGICAL TREATMENT OF ANEURISM IN ITS VARIOUS FORMS.

Delivered before the Royal College of Surgeons of England.

BY T. HOLMES, F.R.C.S.,
Professor of Pathology and Surgery.

LECTURE VI.—*June 14th*, 1872.

ABDOMINAL ANEURISM.—(*Concluded.*)

THE propriety of performing the old operation for abdominal aneurism depends on the answers which we can give to the following questions. First, is it true, as Mr. Syme says, that in every aneurism there is only a limited portion of the vessel contained within the sac or embraced by its wall? Secondly, is that limited portion capable of supporting the ligature and taking on reparative action? Thirdly, can the operation be performed with confidence on the surgeon's part that he will be able to complete it? And, finally, allowing that this is so, is it preferable to the other ways of treating a given case? Diagrams were exhibited, showing that occasionally an aneurism has the precise form which Mr. Syme regarded as universal, but that, in a very large proportion of the specimens in our museums, either there is disease of the portion of artery near the opening, or there is a large tubular sac without any definite commencement of the aneurism at all, or there are such important parts—*e. g.*, veins, nerves, etc.—matted to the sac as would render it impossible to lay it all open; or the artery running through the sac is so completely incorporated with it, that it would be exceedingly difficult in an operation to find it. And, in abdominal aneurisms especially, it was shown that these latter forms of sac are more frequent than in other regions. Hence, even judging from dissected specimens, it would seem that Mr. Syme's operation would very often be extremely difficult, if not impracticable; and in the living body there would be many additional difficulties which do not appear in a dissection. From all this, it seems that Mr. Syme was wrong in believing that he had proved the superiority of the old method over that of Hunter. Besides, it seems, both from Mr. Syme's and Sir Astley Cooper's operations, that the method can only be used in cases where the abdominal aorta might be compressed. We must, therefore, answer the above questions in the negative, and allow that the preferable method of treating iliac aneurism, as a general rule, is compression. But in cases where compression has been tried and failed, as in a case published a few years ago by Mr. Hargrave of Dublin, in which he tied the iliac artery, it seems that the operation recommended by Mr. Syme is worthy of trial; for, although exceedingly dangerous, it may be trusted to succeed in a certain proportion of cases; and the Hunterian operation, as practised upon the common iliac, is shown by past experience to succeed so very rarely, that it is worth giving a trial to the other method. Mr. Hargrave's case was referred to, and the preparation from it was produced as an instance in point. Here the aneurism was of the tubular variety, and communicated also with the external iliac vein. It seems, however, that with a very long incision, both ends of the artery, and the venous communication which was known to exist, might have been discovered and commanded; and, in a less complicated case, the operation would of course be proportionately easier.

The method of cure by rapid compression was next discussed. It is impossible to deny that coagula may be formed in a few hours, or even a shorter period, by the total suspension of circulation through an aneurism, which may acquire sufficient solidity to obliterate it permanently. This, however, does not uniformly occur; nor has any proof been given that the method of rapid or total compression is more successful generally than the method of gradual or partial compression formerly in use. In the abdomen, rapid or total compression cannot be carried out without serious danger. This danger depends partly on the risk connected with the protracted administration of chloroform, which is usually, though not always, necessary; partly on the interference with the circulation produced by the pressure, whether from interference with the action of the diaphragm, or from compression of the great sympathetic centres; partly on contusion of the viscera, pancreas, intestines, etc.; partly on contusion of the secondary branches of the aorta and vena cava; partly on renal congestion, due probably to pressure on the renal vein. The reality of these dangers was illustrated by three fatal cases which have recently taken place in London, and by the symptoms of others in which the pressure did not prove fatal. These facts show the desirability of attempting the cure of such aneurisms by milder measures, if possible. At the same time, the

cure of abdominal aneurism by pressure is one of the greatest and most brilliant achievements of modern surgery, and is the only one of the modern methods treated of in this course which can be said to have been undoubtedly successful. The other methods, such as distal ligature, galvano-puncture, manipulation, etc., applied to thoracic aneurisms, are doubtful remedies for diseases which are in themselves almost incurable; but compression is not a more doubtful remedy than the ligature; and abdominal aneurism is a far more curable disease, and much less frequently associated with extensive degeneration of the circulatory system, than thoracic aneurism.

The lecturer then announced that, if he should deliver the course of Lectures on Surgery another year, he would speak of the surgical treatment of external aneurism.

TWO CASES OF CHRONIC INVERSION OF THE UTERUS,: WITH REMARKS.

WITH DESCRIPTION OF NEW APPARATUS FOR REDUCTION.

By J. BRAXTON HICKS, M.D.Lond., F.R.C.P., F.R.S.,
Lecturer on Midwifery and Diseases of Women, and Physician-Accoucheur, at Guy's Hospital, etc.

WHEN inversion of the uterus has continued after the commencement of the involution process, the difficulties attending its reduction increase rapidly as that process approaches its completion; and when involution has been completed, and the organ has contracted to its normal size, the obstacle to its restitution is very considerable indeed. Besides this, there is the risk that the opposed surfaces of the peritoneum, turned inward, will become adherent, and thus render reduction impossible. Hence it is always extremely desirable to reduce the uterus at the earliest possible period.

The first case narrated below is a painful example of the effects of the neglect of this rule; and in the second, although it was cured, yet a large amount of treatment might have been avoided had the case been attended at an early date after its occurrence.

CASE I.—Mrs. ——, primipara, about 25 years old. The labour was natural, excepting that the placenta was adherent, requiring removal, which was done with some trouble. She went on well for ten days, when something came down through the vulva. The nurse called the attention of the medical attendant to the fact; but, without examining, he said it would all come right. It, however, did not cause much distress; but after a few months she began to suffer menorrhagia, which by the time she came under my care had completely blanched her. About the tenth month after delivery, she fell into the hands of another medical man, who examined her and thought it a case of polypus. He asked me to see it, and I found a body hanging from the upper part of the vagina like a polypus; but, upon careful examination all round its attachments by the sound, nothing like the opening into the cervix could be found, nor, indeed, anything of the uterus above the pubis; but the cup-like condition at the position of its attachment could be felt from the exterior, showing clearly that it was the inverted uterus which was felt in the vagina. I made an attempt to reduce it, after placing the patient under chloroform. Compression of the body by the hand in the vagina combined with upward pressure, counteracted by the external support, was, after about half an hour, so far effectual as to restore the cervix, but not the body of the uterus. I then added additional force, but without result, except the production of very severe collapse, upon which the chloroform was withdrawn and the attempt given up. I then, as soon as she was recovered, passed an old-shaped stethoscope into the vagina, and placed the cupped end against the fundus uteri, the ear-end remaining outside the vulva. This end was pressed upward by a T-bandage, and removed twenty-four hours afterwards for a short time and replaced. This pressure was kept up for two days, when she was again placed under chloroform and hand-pressure employed as before. The uterus was partially, but not completely, reduced—that is to say, about half the body still remained unaltered. Again, when the pressure was fairly applied, collapse came on, which gave me great anxiety for a short time, the pulse being for some minutes nearly imperceptible. I then gave up the attempt, for the pulse had risen to 120 before giving chloroform, and the tongue had become dry. There appeared little chance of doing further good, for I employed as much force as was consistent with safety. On both the occasions she was under chloroform. However, she suffered no untoward symptom from the attempts at reduction; indeed, for some time after she had less than ordinary menses, and consequently improved much in general health. I heard about a year and a half afterwards that she was in fair health.

REMARKS.—There can be little doubt that if the medical attendant had examined this patient when the nurse called his attention to "something being down", the inversion would have been readily reduced. One cannot be too strict in practice in observing the rule in all cases, to fully go into all points; and this holds good particularly after delivery if anything be complained of, because nothing like a swelling can exist about the vulva without its being worthy of attention. If it be an inflamed labium, or an irritated pile, or prolapsus of the uterus, these all require attention, for they may lead to much misery, and, if neglected, will be sure to bring the medical attendant into discredit. But if it be a polypus or inverted uterus—particularly the latter—the importance of our attention is self-evident. I believe that most of our errors arise rather (now-a-days at least) not so much from ignorance as from a want of thoroughness in going into every point in a case. There is, especially after labour, a natural wish that everything should go on rightly, and there is consequently a dislike (which we all feel) to disturb this feeling. Anything being wrong half implies that we have not done our work skilfully, and we hope that all will come right in time. We shirk the inquiry which may rudely disturb our complacent feeling; but, in doing so, we but postpone the evil day. The existence of inversion is one of the last things we should wish to discover. To say that the womb is so disturbed from its natural arrangement that it will be necessary to place the patient under chloroform and perform some kind of operation, is a formidable thing to do, only ten or twelve days after labour; and yet it is better to do this than to allow the patient to go about with an inverted uterus, which is sure to give rise to symptoms requiring medical aid sooner or later.

In this case, the involution of the uterus to its natural size, and very probably the adhesion of the inverted peritoneal surfaces to one another, prevented its complete reduction, which, judging from its near accomplishment, we might fairly argue would have been easy shortly after labour.

The extreme condition of collapse is a point of importance, as it twice occurred at the critical attempt at reduction. In considering this and the next case, I am inclined to think that this mode of reduction is not so suited for chronic inversion as for the acute form. It would be best, at any rate, to try the constant pressure with the elastic bags and the pressure recommended in the next case, first of all; and, if these failed, then to give an anæsthetic and try manual pressure. I would also suggest that sulphuric æther should be employed, either alone or in combination, as having a greater tendency to stimulate the heart's action.

At present, this case has not been followed by the menorrhagia and its consequent anæmia, usually found in chronic inversion of the uterus, although before treatment she was losing greatly. For some time afterwards, the quantity was much less than normal.

CASE II was that of a woman aged about 30, in her third confinement. The child was delivered naturally, but the placenta required the introduction of the hand to remove it. The next day, there was retention of urine, which could only be evacuated, and that in small quantities, with very severe straining, extending over four days. At one time, no urine was passed for thirty hours. She did not, after the subsidence of this trouble, appear to have suffered; but about the tenth day she noticed that something came down to or through the vulva. Not much notice was taken of this, and she gradually got about; but, as she supposed that the womb fell, she merely put on an external support. However, at the end of three months she applied to me, without having consulted any one before about it. I found the uterus completely inverted, rather larger than the natural size, and slightly bleeding when examined.

She was taken into Guy's Hospital under my care, and, after a dose of aperient medicine, was placed under chloroform. I passed my hand into the vagina, and grasped the uterus to compress out the fluid within it. This reduced its size; and, by steady upward pressure, the inverted body passed nearly up to the level of the os. The other hand was placed externally, to give support to the vagina. I was watching her condition at the time when the fullest pressure was being employed, lest any such collapse should occur as did in the last case, when I noticed her aspect staring and livid. It was then ascertained that respiratory movements had ceased. Artificial respiration was used, and galvanism employed down the course of the phrenic nerve and from the spine to the front. After a minute or two (the exact time was not taken) she showed signs of recovery, particularly on the use of the galvanic battery; and gradually her appearance became natural. We continued artificial respiration and galvanism five or six minutes, and then waited. She, however, shortly gave signs of relapse, after which the same measures were continued, till, in about twenty minutes, she began to fairly recover. I did not attempt anything further for some hours, when two India-rubber ball pessaries were introduced into the vagina, and a pad placed externally, supported by a T-bandage. This was removed next

day; and it was found that the cervical portion had become more relaxed. The same treatment was continued another day; and then, after the removal of the bags, an attempt was made, without chloroform, to complete the reduction. But, although the fundus went within the os, yet, in consequence of the pain produced and the recession of the parts, I considered it advisable to wait and to apply continuous pressure to the fundus. I therefore adapted a stethoscope, pressing the cup of the chest-end against it. The ear-end, of course, came outside the vulva; upon this a pad was placed, and a T-bandage firmly applied.

On removing the bandage, twenty-four hours afterwards, I found about two inches of the stethoscope within the uterus, firmly held by it; but by pressure with the finger on one side, and by tilting the instrument, it was removed. I found that the fundus had receded, and that the cup of the stethoscope had made its impression on the posterior wall of the uterus, giving somewhat the feeling, at first examination, that the fundus was not quite perfectly restored. However, further examination showed its true nature; and that the cavity of the uterus was forward and hollow upward, as naturally it should be. At the same time, I felt the want of an instrument which should have a convex end, instead of concave, so as to complete the reduction securely. This I have endeavoured to obtain by an easy adaptation to a stethoscope, which is described below.

A dose of ergot was given to promote the contraction of the organ, and the horizontal posture continued for about ten days. At the end of a week, the os and cervix were still somewhat open. An injection of alum-water was employed, and in a few days it was nearly natural, but with some degree of thickening and irregularity. She went out quite well. The parts contracted to nearly their original size.

The remarks made upon the last case are applicable to this. It is surprising that so little discomfort or shock was felt at the time, when we consider the formidable effects usually seen in inversion occurring suddenly immediately after labour. It is highly probable that the change took place slowly—that is, during three or four days. The treatment, which was unsuccessful in the last, was successful in this case; and there seem to be two points worthy of consideration. The first is, that the effect of the air-bags in the vagina is to dilate it, and along with it the os and cervix. This is produced, probably, in part at least, by the stretching of the upper portion. This dilatation of the cervix enables the inverted body of the organ to pass into it; and then pressure of it in an upward direction stretches open the angle of flexion, and thus the way is paved for its slow restoration. As I have above remarked, attempts at sudden restitution are more likely to be unsuccessful; and I think it will be found best always to employ the air-bags for two days first, and then either to give chloroform and reduce, or to employ pressure directly to the fundus for a day. I am inclined to think, from consideration of the habits of the uterus, that the slower mode is the most certain.

I have had some bags constructed by Mr. Arnold, which I think will be more certain of producing the proper dilatation of the vagina and pressure on the fundus. The first to be introduced is a ring-shaped one, about four inches in external diameter, and its opening about two inches; the fundus uteri passing through the ring. This presses on the upper vagina equally all round, and steadies the uterus under the pressure of the second bag, which is a globular one of not too firm walls, and larger than likely to be wanted, about four inches in diameter, so that it may completely fill the whole vagina below the ring-shaped bag. This of course gives support to the first, and also presses directly on the fundus, thus preparing it for the more complete pressure to follow. A T-bandage, with pad externally, should then be applied. The apparatus for pressing on the fundus is a vulcanite stethoscope, having a pear-shaped elastic bag drawn over the thoracic end and tied round the stem tightly. Into the opening at the aural end a stopcock can be screwed, which is attached to the tube of the India-rubber spraying apparatus, by which means the bag at the other end can be distended.

To apply them to a case: The bowels having been previously opened, the ring-pessary, well greased should be passed over the inverted uterus, and then inflated by its tube, which is then tied. The globular ball should then be introduced and inflated. A T-bandage, with a large perinæal pad, must then be applied as tightly as can be borne. Twenty-four hours afterwards, these should be removed, and the vagina washed out with warm permanganate of potash lotion, or, at any rate, warm water. The bags are again introduced, and next day removed, with ablutions afterwards. The state of the uterus should then be examined—whether, indeed, it be not restored to its natural state. If it be not, then the thoracic end of the stethoscope should be pressed against the fundus as much as possible in coincidence with the axis of the organ—that is, with the stem pressed back to the posterior fourchette; a pad being placed on the ear-piece outside it. A T-bandage secures constancy of the pressure. This arrangement is removed next day; and then, if the restoration have been accomplished, the end will have entered the cavity of the uterus. But, to secure the complete restoration of every portion, inflate the ball on the end by the apparatus described. If this be left for two or three hours or more, the air can be let out, and the instrument wholly withdrawn. The distension of the ball is intended to distend the uterus enough to allow the end to be drawn out before it can again close on it. It is well to give a dose of opium every eight or twelve hours, to lessen the irritability of the uterus. A simple stethoscope will do, as this case shows; but it appears to me that a more efficient instrument would be found in the one just described.

Should one day's pressure be not sufficient, it should be continued another day more; but in that case it will be well to allow an interval of half an hour to elapse before reapplying it. If that be unsuccessful, it would be well to give chloroform, and to employ manual pressure.

Excellent hints from various authors, on the restoration of the more obstinate cases of this kind, may be found in the *Obstetrical Transactions*.

SOME REMARKS ON THE "VACCINATION TREATMENT" OF SMALL-POX.

By THOMAS WRIGLEY GRIMSHAW, M.D.Dubl.,
Fellow and Censor of the King and Queen's College of Physicians, Physician to Dr. Steevens's Hospital and Cork Street Fever Hospital, etc.

As I have seen about one thousand cases of small-pox during the present epidemic, six hundred of which have been under my own personal care, perhaps I may be allowed to make a few remarks with regard to the "vaccination treatment" of that disease. I have not employed the vaccination treatment, nor do I intend doing so; as, from what little I have seen, and from all I have heard and read, I have formed the opinion that that treatment is likely to prove more injurious than beneficial. From the various papers that have recently appeared by Drs. Furley, Grieve, and others, I consider the balance of evidence to be against the value of vaccination treatment; and I think the cases which I am about to instance tend to strengthen that conclusion. Although Dr. Furley lays great stress upon the employment of considerable quantities of lymph, yet I think it must be admitted that, where the physiological effects of vaccination were produced, as in three of the following cases, if Dr. Furley's treatment be of value, the operation should have produced some favourable effect on the progress of the disease, which, unfortunately, it did not do. I believe I may say that in the following cases the vaccination treatment had an unusually fair chance, inasmuch as in all the treatment was commenced at an earlier period than we are likely to have an opportunity of when we intentionally employ the method. The cases, which are as follows, all occurred in Cork Street Hospital.

CASE I.—A telegraph clerk, aged 18, vaccinated for the first time at the Cowpock Institution in Sackville Street on a Saturday, got symptoms of small-pox on the same evening (pain in the back, shivering, vomiting, etc.) The rash appeared on the following Tuesday, when he was brought to hospital. This case became thoroughly confluent; the eruption went through its usual stages until the ninth day, when the patient died of laryngitis. The vaccine vesicles followed the usual course, neither modifying nor being modified by the small-pox.

CASE II.—A servant girl, aged 20, vaccinated for the first time ten days before admission, had been suffering from small-pox for eight days before admission to hospital. The eruption was confluent on all parts of the body, and of the appearance usually present at that period of the disease. She died on the fourteenth day of the disease. The vaccine vesicle was beginning to scab when the patient was admitted; and the small-pox eruption was especially thick and full round the vaccine vesicle—owing, I have no doubt, to the increased vascularity of the part.

CASE III.—A child, aged 18 months, was vaccinated four days before admission. There was no sign of the vaccination taking. There was a slight eruption of papules on the face. This proved to be a semi-confluent severe case of small-pox. The child recovered. The vaccination never proceeded further than the stage of slight redness.

CASE IV.—A servant girl, aged 18, was vaccinated for the first time six days before admission. The disease ran exactly the same course as in Case II. The duration of the illness was slightly longer, but it terminated fatally on the sixteenth or seventeenth day.

The above cases, so far from encouraging me to vaccinate patients

suffering from small-pox, rather tend to make me doubt the propriety of vaccinating *in the presence* of the disease, lest the patient may unknowingly be undergoing the preliminary stage of incubation for an attack of small-pox, and by vaccination I should only add to his danger.

In considering questions with regard to the treatment of small-pox, I may be saved from repeating the remark often made by others, that the results of the treatment of vaccinated cases must be received with the greatest caution, as vaccination modifies in so many and so various degrees, that we can scarcely form a prognosis concerning a vaccinated case until it is rather far advanced. We find the disease setting in most favourably in vaccinated cases, and suddenly subsiding, leaving the patient convalescent in a week from the commencement of an apparently severe attack.

NOTES ON CONSUMPTION.

By RICHARD PAYNE COTTON, M.D., F.R.C.P.,
Senior Physician to the Hospital for Consumption, etc., Brompton.

III.—Consumption and Contagion.

There is no question in connexion with phthisis of more practical interest and importance than that of contagion; and there is none other perhaps about which there exists so great a diversity of opinion. It is well known that throughout Italy consumption is classed not only by the public, but also by most physicians, amongst the diseases propagated by contagion; and so greatly dreaded is this supposed character of the disease, that in many parts of Italy the clothes of consumptives are quite as carefully subjected either to destruction or disinfection, as if they had belonged to patients who had been affected with small-pox or scarlet fever. In Germany, the opinions on contagion as regards phthisis are divided; and in France there is an equal want of unanimity upon the point. In our own country, both the medical and general opinions upon the subject are very far from being settled; and whilst some are quite Italian in their views, others—and probably the great majority—believe quite as fully in the non-contagiousness of the disease. We may possibly explain this wide difference of opinion by the recollection that phthisis, notwithstanding all we know of it, is nevertheless so obscure a malady, and arises under such a multitude of very different and apparently opposite conditions, that it must of necessity be frequently associated with circumstances not merely suspicious, but to some minds sufficiently conclusive of a contagious origin.

If the contagion doctrine be correct, not only must it completely revolutionise both the medical and social treatment of phthisis, by rendering the poor consumptive sufferer a being quite as much to be dreaded as was the leper of old, but it must at once crush every hope of our lessening the ravages of so terrible a scourge, by the manifest impossibility of our ever being able to "stamp out" so universally prevalent a morbid element as the tubercular poison. If phthisis be contagious, it is obvious that every consumption hospital must be nothing less than a pest-house; and, instead of lessening disease and suffering, must tend only to their aggravation.

Numerous as have been the believers in the contagiousness of phthisis, no one had fully developed and openly advocated such a doctrine until Dr. William Budd published his startling, but clearly expressed and evidently well matured views upon the subject. In this paper, Dr. Budd expressed his conviction that consumption is a zymotic disease of specific and highly contagious nature, closely allied in such respect to the most contagious diseases with which we are acquainted—viz., scarlatina, typhus, and syphilis, the tubercular material itself being the specific and morbid poison in which the malady originates, and by which it is disseminated through society.

Notwithstanding the high authority under which this view of phthisis is propounded, I most unhesitatingly declare my conviction of its fallacy. Consumption I believe to be a purely constitutional disease, which may be either inherited or acquired, but which, from its very nature, is incapable of being conveyed from one person to another in the ordinary sense of the word contagion. I have, indeed, never met with a case of pulmonary phthisis, however apparently due to a contagious origin, which could not be much more easily and rationally accounted for by generally recognised causes, than by the doctrine of specific and contagious influences. It is quite true that persons previously in fair health are sometimes seen to succumb to phthisis after having attended the last illness of some consumptive relative or friend; but when it is remembered that anything which lowers the physical and nervous powers and depresses the general health is of itself sufficient either to originate phthisis or to develope some hitherto latent tendency to it, we have, I consider, a sufficient explanation of very many such cases, and might even wonder that they are not more frequently happening. In all instances of phthisis originating under such circumstances, it has long been my habit to make, as far as possible, a complete inquiry into their general, and more especially their family, histories; and I have invariably been led to the conclusion that the long nursing and the close connexion with the disease was at most the *exciting* cause of its subsequent development, the predisposing one having been, for the most part, sufficiently apparent, either in a previously existing hereditary taint, or in some other cause far removed from the idea of contagion. If consumption were "caught" like a zymotic disease, how few in comparison must be the instances of escape to those of infection after contact with it; whilst it must be in the experience of us all that cases, arising even under the most suspicious circumstances as regards contagion, are by no means common, and bear a very small proportion to those in which, after the closest contact with the malady, no ill effects have resulted.

It must nevertheless be admitted that cases now and then occur in which consumption has become developed in the widowers or widows of those who have died of the disease, and under circumstances apparently favouring the doctrine of contagion. I have met with several such instances; but from notes taken at the time, I find the very curious fact that they have chiefly occurred amongst women. Such cases, however, do not, in my opinion, give the least support to the doctrine of contagion, but may be explained in a very different way. The union of husband and wife is not only a religious and social, but also a *physiological* one, as may be easily shown by our daily experience. It has often been remarked, for example, that after a variable period of married intercourse, the one person is seen to resemble the other not merely in manner and habit, but in feature and expression. The offspring, too, of second marriages has been frequently known to resemble both in feature and character the husband of the previous union. So well established, indeed, is this corresponding physiological fact with respect to the lower animals, that it has to be ever borne in mind in their breeding and rearing. If, therefore, certain natural and healthy peculiarities can be imparted from husband to wife, or *vice versâ*, there is every reason for concluding that morbid diseases, peculiarities, and tendencies may equally be imparted. But there is another and a less mystical way in which it may fairly be concluded that phthisis may be conveyed from husband to wife. A phthisical father may communicate to the *fœtus in utero* a consumptive taint, which may thus be indirectly transmitted to the mother, just as we well know is often the case with secondary syphilis. And it may be due to this circumstance that, as I have already observed, phthisis arising under such apparently contagious conditions is much more frequently met with in women than in men. I believe, therefore, that in one or other of these ways—either by a transmission through the offspring, or by a mysterious and inexplicable connexion between husband and wife—phthisis may sometimes be developed in either of them; and that we need not resort to zymotic influences in explanation of such an occurrence.

Upon the question of contagion, however, practical evidence is of far more value than anything speculative; and as a great experiment upon the zymotic character of phthisis has long been going on at the Consumption Hospital, I shall briefly give the results.

The Consumption Hospital was opened in the year 1846, with ninety beds. Ten years later, it was completed; and since that time, two hundred beds have been constantly occupied. We have lost, during this long period, only one nurse from phthisis; and this was a poor creature whose husband had deserted her, and who had long endured, from other causes also, considerable mental anxiety and physical exhaustion. On the other hand, the services of the nurses generally have been unusually prolonged; and I can myself testify to their general health being, as a rule, remarkably good. Of those *now resident*, two have been at duty in the hospital seventeen years; one has resided thirteen years; one, eleven years; two, ten years; two, nine years; one, seven years; one, four years; two, three years; and four, two years. The two oldest nurses have lately died of old age and general decay, after having long been superannuated; each of these had resided in the hospital for upwards of twenty years.

Of the gallery maids, whose duty it is to be much within the wards in sweeping and scrubbing the floors, only one has been known to have been affected with phthisis; whilst it is obvious that, during so long a period, the numbers of persons thus employed must have been considerable.

Our engineer has seen eighteen years' duty within the hospital, and he is now in good health.

We have had, at different times, three attendants in the *post mortem* room. The first of these is still living, but in infirm health, the result of intemperance; the second left with spinal disease; the third has been in his office for nearly four years, and is in good health.

Of the dispensers, one who kept to his post for above ten years is

living, and well; three who have held office in the dispensary since the year 1867 are also well; and the present senior dispenser has been with us for ten years. Many others have been in this department since the opening of the hospital, but only one has been known to have been consumptive.

The resident clinical assistants, of whom we are able to obtain reliable information, amount to seventy-eight in number. Three of these are said to be phthisical; but only one has been known to have died of phthisis. This gentleman I knew intimately; he was always of consumptive appearance, and one of his sisters had died of phthisis.

Our resident medical officer, Mr. Edwards, to whom I am indebted for the statistics I am now giving, has held office for more than twenty-one years; and all those who know him can testify both to his continued health and his undiminished energy and usefulness. The present matron has also been in her office for more than twenty-one years, during which long period her health has been excellent.

The present secretary has been at his post for fifteen years; and his only predecessor, who is still alive and well, had held the same office for sixteen years. The assistant-secretary has been at his duties within the hospital for eighteen years; and a clerk—whose office it is to register the out-patients, and who must, on that account, be exposed to an unusually great extent to phthisical contagion, did such exist—has been at his work for five years. I am happy to add that all of the above are now in excellent health.

The present chaplain has been with us for twenty-two years; and his two predecessors are still living. Happily all of them are well.

Of the staff of physicians and assistant-physicians—nineteen in number—one only has been affected with phthisis; and he was a young man of delicate and decidedly consumptive aspect. The period of office which some of us have had is unusually long. Of the present physicians, two have been upon the staff twenty-four years each; one for seventeen years; one for thirteen years; one for nine years; and one for five years. The late senior physician, who resigned only three years ago, had been attached to the hospital, and in constant work there, from its very foundation. Two of the former physicians who resigned their appointments, and subsequently died of disease quite distinct from phthisis, had held office in the hospital for fifteen and nineteen years respectively.

I have elsewhere given my experience of the statistics of phthisis, in one of our chief metropolitan general hospitals; and the subsequent observation which I have had only tends to convince me the more that the evidence in this respect is greatly in favour of the Hospital for Consumption.

With the above facts before us, must it not appear to all believers in the doctrine of phthisis originating in a special and contagious poison, that a residence in the Consumption Hospital, and long-continued working in its wards, is a very good way indeed *not to catch the disease?*

THE TREATMENT OF PUERPERAL ECLAMPSIA.*

By A. B. STEELE, L.K.Q C.P.,
Lecturer on Midwifery in the Liverpool Royal Infirmary School of Medicine.

THERE is no complication of labour which causes so much terror to bystanders, or demands greater calmness and self-possession on the part of the practitioner, or requires more prompt, decisive, and discriminating treatment, than an attack of convulsions; and yet there are few of the accidents of childbirth, the appropriate management of which is the subject of such diverse and conflicting opinions. Until a comparatively recent period, there was almost an universal agreement as to the necessity of free general depletion in all the severe forms of this affection. Latterly, however, the necessity and even the propriety of the use of the lancet in this disease has been called in question. Chloroform, which undoubtedly has considerable control in many instances over the paroxysms, has been considered by some to be a specific remedy, while others have advocated, in all cases of puerperal eclampsia, manual dilatation of the os uteri and speedy delivery; others, again, have found perforation of the membranes and the evacuation of the liquor amnii, where that fluid has been in excess, sufficient to diminish and ultimately to arrest entirely the convulsions. It is probable that these differences of opinion are to a great extent apparent only, and that theoretical disagreement as to principles would frequently find a solution in a much greater uniformity in actual practice than might be supposed. To paraphrase an expression of Dr. Billing, in his *Principles of Medicine*, "Because it is right for me to bleed my patient in convulsions, it does not follow that it would be right for you to bleed your patient in the same disease". In fact, this formidable affection is not to be managed according to any fixed or undeviating formula, but requires for its successful treatment a pure system of eclecticism.

The rule laid down by a large number of high authorities, that copious blood-letting is the first and great remedy, the extent to which it is to be carried being regulated chiefly by the violence and frequency of the fits, is founded upon a twofold fallacy: first, an entire repudiation of widely differing types and phases which the disease assumes; and secondly, a misapprehension of its true nature and of the effects of blood-letting upon it. Convulsions have been attributed to an overloaded state of the cerebral vessels, as in apoplexy, to relieve which copious evacuation is necessary, when in truth, as was shown by Marshall Hall, eclampsia is a disease not of the brain at all, but of the true spinal system; and Trousseau and Niemeyer have also maintained that congestion of the brain in convulsions is an effect rather than a cause.

The propriety and extent of blood-letting must be estimated not by the violence of the disease, but by the state of the circulation in the intervals of the paroxysms. In an overloaded condition of the vascular system, blood-letting acts as a direct sedative to the spinal cord; in the opposite condition, that of anæmia, or when carried too far, it only adds to the mischief, by increasing the already irritable condition of the spinal centres resulting from their anæmic condition; the pathology of the remedy, as Dr. Tyler Smith has quaintly said, thus closely trenching upon its therapeutic effect. There is, however, one condition in which blood-letting acts directly through its influence on the cerebral vessels—namely, when serous or sanguineous effusion or over-distention of the brain itself causes counter-pressure on the medulla oblongata, and thus indirectly gives rise to convulsions by spinal irritation.

There is yet a further most important effect of blood-letting not generally recognised—namely, its preservative influence in lessening the turgidity of the vessels of the head caused by recurring paroxysms, and which may lead to fatal cerebral congestion or effusion. Thus blood-letting in plethoric states of the circulation is curative in its action on the spinal marrow, preservative in its action upon the brain.

There is a common belief that in the uræmic form of convulsions blood-letting is less effective, or altogether inadmissible: this I believe to be a mistake. Where the other indications for depletion are present, the fact that the blood is charged with a poisonous element is an additional reason in favour of lessening the amount of the circulating fluid, and thus at once eliminating an appreciable quantity of the deleterious matter. Dr. Richardson has recorded the beneficial effects of blood-letting in the convulsions which occur in albuminuria, which he explains on the ground just stated.

The necessity for bleeding more copiously in this than in most other diseases, depends upon the special condition of the vascular system in the parturient female. We know that loss of blood produces little or no effect upon the maternal pulse until it is carried beyond the point which exhausts the surplus blood, so to speak, required for the maintenance of the uterine and fœtal circulation.

Chloroform is unquestionably a valuable remedy in convulsions; but it is neither a specific, nor can it supersede the necessity for blood-letting in plethoric conditions of the system. Nor do I believe that it will, as has been asserted, invariably lessen the violence or frequency of the paroxysms. These being truly reflex in their character, and the influence of chloroform over reflex action being limited, after free depletion, or in cases where depletion is contraindicated, it is most useful. Early and speedy delivery is undoubtedly the best treatment in certain conditions—namely, when, by the eliminative process of reasoning, we arrive at the conclusion that distension of the uterus or the presence of the ovum is the exciting cause of the fits; but the view that it should be adopted as an universal rule is shown to be a fallacy by the following facts. Convulsions in some cases do not occur until after delivery; more often they persist and even increase in intensity after delivery. This practice has been recommended on the ground that the uræmic condition speedily proves fatal, first to the child and then to the mother. But many cases are on record where convulsions exist when there is no evidence of uræmia at all; and again, even when convulsions have lasted for many hours, the case has terminated favourably both to mother and child. I believe that the death of the fœtus, when it occurs, is in most instances to be attributed to asphyxia, from interruption of the placental circulation, from the violence and frequency of the paroxysms, and not to uræmia.

Against indiscriminate and hasty interference with the natural course of labour in convulsions there are strong grounds, both theoretical and practical. Any additional source of reflex irritation may frequently

* Read in the Midwifery Section at the Annual Meeting of the British Medical Association at Birmingham, August 1872.

prove a direct cause of convulsive action; and the carefully recorded statistics of Dr. Murphy show that the mortality in this disease is much greater when labour has been artificially accelerated than when it has been left to the natural efforts.

In conclusion, I need scarcely say that I have given but an imperfect and incomplete account of a very comprehensive subject. Enough, however, I would fain hope, has been said to furnish ample scope for an interesting and instructive discussion on a question of much importance to obstetricians.

RESTRAINT IN INSANITY.*

By STANLEY HAYNES, M.D., Malvern.

THE propriety of mechanical restriction has lately attracted some attention; it was questioned in the treatment of patients becoming maniacal during variola, and, quite recently, with regard to the treatment of otherwise unmanageable, suicidal, violent, or destructive insane persons.

As this topic is now brought forward for the purpose of eliciting discussion, and the expression of medical opinion upon a *quæstio vexata* in our profession, I abstain from here noticing the excesses to which mechanical restraint used to be subject and is now carried, or from recording the judgments of authorities in favour of or against it.

As medical men, we must put aside all mere sentimentality in the consideration of this subject, and confine our attention to the inquiry whether our patients will be benefited or injured by the imposition of corporal restriction. To avoid irrelevant discussion, perhaps it will be well to define the meaning of restraint, as applied to our treatment of patients. Restraint is moral, intellectual, medicinal, or corporeal. Moral and intellectual I propose to exclude from this investigation. By medicinal restraint I understand the conditions in which patients can be placed by the administration of narcotics, sedatives, or nauseants. Corporeal restriction is of two kinds—by seclusion, and by mechanical appliances. Seclusion, as a form of restraint, is solitary, undesired confinement; when patients request to be kept apart from others, it is unfair to consider them as restrained. Restraint by some appliance, *i.e.*, restriction of motion in any desired direction by some kind of garment, is effected by means of sheets, camisole (or "strait waistcoat") or glove.

It is to be assumed that all practitioners will agree in the propriety of restraint—other means failing—in surgical cases (*e.g.* when a person has a self-inflicted wound and is striving to pull it open); and it will probably be at once conceded that in some of the maniacal conditions consequent on variola, typhus, and other febrile states, we are justified in mechanically repressing our patients from injuring themselves and others, by fastening a sheet across the patients and under the sides of the beds; such patients are too weak to be kept in bed by the hands of nurses, however careful and gentle. There will be more difference of opinion concerning the restraint of insane persons, the lunacy authorities being, naturally, antagonistic to the principle, and the majority of British asylum superintendents condemning it; their example is being followed by some of the German alienists, and it is to be sincerely hoped mechanical restrictions will soon be as rare in America and on the European continent as here.

As the question now stands, mechanical restraint is the bugbear of lunacy practice; we have rushed from too much restraint to too little, if we are never to use it under any circumstances, as some extremists uphold. We can no more advocate prevalence of physical control than we can of depressing procedures; but there can be no doubt there are some very exceptional cases in which the employment of mechanical restraint is the most advisable method we can adopt, and, therefore, our duty as physicians and men. The system of non-restraint is in fashion, but is it not abused by being pushed too far? How long will it be before we have the inevitable reaction? When a patient is prevented from injuring himself or others by being forcibly held by anyone, he usually has the spirit of opposition raised within him and struggles to be free; the then necessary pressure upon his arms may cause bruises, easily produced and tardy to disappear, but he is restrained quite as much as, or more than, if he had worn some special garment; still, it is not "restraint" requiring to be entered in the Case Book and Medical Journal, and so manual restriction is preferred to mechanical, by which a patient cannot injure himself or others if he be guarded by an attendant.

Some persons appear to entertain a morbid aversion to the use of any mechanical restraint; it used to be so much abused that they seem to dread it could be again, notwithstanding the close inspection the authorities exercise so carefully, and the absence now of all privacy concerning the treatment of the insane. Those who advocate non-restraint at any cost err most needlessly, if they imagine mechanical restraint can be again abused; the honesty, humanity, skill, and watchfulness of British asylum superintendents are sufficient guarantees against so sad a relapse, even if the supervision of the authorities, central and local, were relaxed, and if the importance of medical and public opinion, as expressed by the press, ceased to be duly estimated.

In no case where it can be avoided without harm to the patient should restraint be resorted to; but in some few and otherwise unmanageable cases of suicidal melancholia, of excessive and dangerous violence, it is better to employ some appliance than frequent manual, antimonial, or narcotic means. The "moral" effect produced on a wilfully aggressive or destructive patient by the use of gloves or the camisole is often most salutary and valuable; he finds he can do no harm, and ceases to be a source of apprehension and danger; he feels he is conquered, and is reduced to the similitude of a thrashed bully.

With regard to the curability of the patients, is it not infinitely preferable to see an occasional, but only when really necessary, use of mechanical restriction than to find sedatives, or nauseating doses of antimony, given for the purpose of quieting the patients? By the use of the latter, it may be charmingly easy to keep the obnoxious word "restraint" out of Case-Books and Reports, and the patients can be very much less troublesome, noisy, and expensive; but they are also more incurable. It is better to have curable patients with the censure, if such must be, than incurable ones with the commendation of the authorities and journalists. The medical Commissioners in Lunacy are practical men, experienced in the difficulties met with in the treatment of exceptional cases, and, although adverse to the principle of corporeal restraint, are just, and tolerate it when its necessity and circumstances have been indicated and duly reported. Every physician treating an insane person must consider, "What is best for the patient?" and answer the question in accordance with his resources, and conscientiously; otherwise, he fails in his manifest duty.

* Read before the Psychological Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

NECROSIS OF THE CLAVICLE IN A CHILD.*

By JAMES THOMPSON, M.B., Leamington.

IN April of the present year, I was called to see a child aged 4 years—the last surviving child of a family of six children—of delicate appearance, and with evident constitutional taint. There was no history of any injury. The child complained of pain referred to the sternal end of the clavicle; the joint was swollen and red, and had been so for twenty-four hours before I was called to see it. Movement of the head caused much pain, but the child freely moved the arm herself; the whole clavicle was tender to the touch, and the swelling spread towards the acromial end. The diagnosis given at the time was fracture of the clavicle, with some laceration of the sterno-clavicular joint. It seemed most likely that by some slight and unrecorded injury the bone had been fractured in a child with a scrofulous diathesis and history. The ordinary bandage was applied, and a cold lotion over the seat of injury. This appeared to cause much discomfort, and the child wriggled off the bandage, and moved the arm freely. The swelling and tenderness continued, and three days afterwards there was a severe rigor, with subsequent high temperature (106 deg. in axilla), which pointed to the formation of matter. An abscess formed, which was opened when ripe, and a large quantity of pus evacuated. The child was so restless that it was quite impossible to pass a probe into the abscess to investigate the cause of the formation. Dr. Carter saw the case with me, and after consultation we agreed to poultice and support the child's health, and wait the issue. The general health of the child improved greatly, but the local tenderness continued, and a guarded prognosis was given, stating that under the circumstances it was quite impossible to say what was the actually injured part. The abscess continued to discharge for nearly three weeks, during which time the child could not be induced to keep the arm quiet. I had now quite made up my mind that it was diseased bone with which I had to deal, and I requested permission from the parents to use chloroform, but this was refused; palliatives, stimulants, and support were all that was left. Another week passed over, and then another rigor took place, and another abscess formed one-and-a-half inches below the sterno-clavicular joint. This was opened, and another quantity of matter was evacuated with relief to the general symptoms; three days afterwards I fancied I felt loose bone (with

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

the sponge), and then I confidently called on the friends to permit its immediate removal, to which they reluctantly consented. I made an incision over the course of the movable piece of bone, and easily drew it out, when, to my surprise, I found it was at least two-thirds of the whole clavicle. It seems to have died in mass. Near the sternal articulation, there was a well marked pit of the spotted ulceration of scrofula. The opening healed up almost immediately; every effort was made to keep the arm immovable, but without much benefit. The final result is now, that the child has perfect use of the arm, and the distance between the point of the shoulder and the middle of the sternum is only one-half inch less than that of the sound side. There is a ridge of bony matter forming along the site of the former clavicle. I congratulated myself on the successful issue of the case; but I fear that another centre of mischief is now forming in the lower third of the femur of the same side.

CASE OF SPASMODIC CONVULSIONS RESEMBLING TETANUS, OCCURRING PERIODICALLY.*

By S. SPRATLY, M.D., Rock Ferry;
Associate of King's College, London.

I AM induced to bring this case before the Medical Section of this Association; first, because it is one that is very rare; secondly, in order to obtain an expression of opinion from the members present, who from their large experience may be able to throw some light upon it, as hitherto it has resisted all treatment. I shall endeavour to relate the case to you in as few words as possible.

In the early part of April last year, I was sent for to see a young lady about 23 to 24 years of age, who was suffering from cough and general debility. On inquiring into the family history, I found that the mother had died of phthisis about fourteen years previously. On examination of the chest, there were puerile breathing at the apices of both lungs, a very short irritable cough, and slight expectoration. After being under careful treatment for three months, the cough subsided; the breathing became perfectly natural; she could walk without distress, gained flesh, and expressed herself as feeling much stronger and better.

Early in September, a feeling came on of soreness in the stomach, accompanied by a thorough loathing for food. Twelve hours after this, a violent spasm occurred, accompanied with great pain and extreme muscular rigidity; the feeling being, as she expressed it, as if all her inside were being drawn up and tied in a knot in the middle. This lasted two to three minutes, then gradually subsided, to be followed in a quarter of an hour by another, and so on for eight or ten in succession. I was from home at the time, and did not arrive at the house until all was over. After the spasms had ceased, she fell asleep, and awoke early in the morning much exhausted, but perfectly free from pain; she became cheerful, was able to run about the house, go into society, and appeared as if nothing ailed her.

At the end of four weeks from the first attack, another came on, with the same warning—soreness at the pit of the stomach, a loathing for food, and great depression of spirits. At eight o'clock in the evening, the same time as before, the spasms commenced. I was then present. The first appearance was muscular rigidity of the hands and arms; the fingers were stretched out perfectly rigid, and separated from each other; the hands were thrown back, with the palms upwards; the elbows drawn down to the sides; the body writhed to and fro; the face assumed a sardonic appearance; the muscles were thrown into rigid contractions, especially the depressors of the angles of the mouth; the jaws were firmly set; the colour of the skin was slightly livid; the eyelids partly closed; the eyeballs depressed, so that only the sclerotic could be seen. Then opisthotonos came on; the head was thrown completely back; the body was perfectly arched, the feet and the back of the head touching the bed only, the back being raised about six to eight inches from it; the other muscles of the body were in a state of rigid contraction; the abdomen was hard and tense. These symptoms lasted for two or three minutes, then gradually subsided, to come on again in a quarter of an hour, and to be repeated ten or twelve times in succession, and in precisely the same manner. During the paroxysms, the breathing was little if at all affected; the pulse was not increased in frequency, and remained steadily at 74; the temperature was not increased or diminished. These attacks have continued from that time to the present; but the interval has become less and less, and for the last three months they have come on regularly every Wednesday, and always at 8 P.M., lasting generally until one in the morning; the patient generally having twelve or thirteen convulsions during the attack. They have been latterly much more severe; and more so if the spine be touched, however lightly, during the attack, at the junction of the eleventh and twelfth dorsal vertebræ. This part of the spine, within the last two months, has become very tender, and rather prominent and angular, as if the bodies of the two vertebræ in question were diseased: this feature has only shown itself lately. The patient always has the usual premonitory symptoms, and can predict the time of the paroxysms to a minute.

Such is a short history of the case during the paroxysms. All treatment hitherto used to arrest them has been of no avail. Antispasmodics of all kinds at the time of the attack, and tonics and antiperiodics during the intervals, have been perseveringly tried. The only thing that seemed in any way to moderate the intensity of the symptoms was the subcutaneous injection of the extract of Calabar bean along the spine where the tenderness exists, which slightly modified the intensity of the spasms; and since its use only during the last two attacks, the interval has increased from seven to eleven days. Chloroform, while she is under its influence, relieves all symptoms, but the moment sensibility returns the symptoms are as bad as ever. Menstruation is quite normal; and there is no hysterical history.

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

CLINICAL MEMORANDA.

SPONTANEOUS DISLOCATION OF THE JAW THROUGH "TONGUE-SUCKING".

ON Thursday, August 15th, at midnight, a young lady aged 15, a patient of mine, while on a visit at a friend's house, was awakened from her sleep with pain under the ears and inability to close the jaws, or to articulate plainly. She aroused her friends, who, feeling alarmed, sent for their medical attendant, who arrived about three in the morning, when he at once declared the jaw to be dislocated, and quickly reduced it. I went to see her on the Saturday following, and found her well, but much alarmed at going to bed, fearing that the accident would again occur during sleep.

I am anxious to place on record this remarkable case, inasmuch as I am persuaded that the habit of tongue-sucking, which the young lady has always done from her infancy, and so audibly during sleep as to be heard in any part of the sleeping-room, was the true cause of this distressing accident. The action of the pterygoid muscles (which are inserted, the one "into the inner surface of the angle and ramus of the jaw as high as the dental foramen," the other "into the neck of the lower jaw and into the interarticular fibro-cartilage") together brings the jaw downwards and forwards, projecting the lower teeth beyond the upper. The continued action of the above muscles during sleep, I have no doubt, had so preternaturally loosened the ligaments and muscular structures supporting the joint, as to render them unable to resist the violent action of them during sleep.

EDWIN MORRIS, M.D., F.R.C.S., Spalding.

SELECTIONS FROM JOURNALS.

SURGERY.

FOREIGN BODIES IN STRICTURED ŒSOPHAGUS.—Dr. Menzel relates, in the *Archiv für Klin. Chirurgie* (Band xiii, p. 678), two cases of stricture of the œsophagus complicated with the presence of foreign bodies. Both were children, and were under Dr. Billroth's care in the Vienna General Hospital. The first was a boy aged 6, who was reported to have drunk some strong alkaline lye by mistake about a year previously. Narrowing of the œsophagus followed, which was treated by bougies; none, however, larger than a quill could be introduced. Three days before admission, he swallowed a breeches-button. When he was admitted, a bougie could not be made to reach the stomach, but was arrested opposite the upper part of the sternum. All attempts to remove the foreign body by instruments and by emetics were fruitless. Accordingly, on the next day, Dr. Billroth performed œsophagotomy, and removed the button by means of forceps. The progress of the case was favourable; the incision in the œsophagus was healed on the sixteenth day and the external wound on the twenty-fifth day. The child was fed throughout by the mouth; slight pressure on the œsophagus being sufficient (after the removal of the sutures on the third day) to prevent the escape of food. The second case was that of a female child, who, at the age of a year and a half, had swallowed some nitric acid. On her admission, an œsophageal tube of the size

of a quill could be introduced, through which milk was poured into the stomach. For ten days previously, she had been unable to swallow, and had been nourished by enemata. While she was in hospital, it was noted that sometimes she could swallow with tolerable ease, at other times not at all; and that, while sometimes a tube could be readily introduced, at other times this was impossible. The instrument gave no indication of the presence of a foreign body. Febrile symptoms appeared, and the child died on the forty-eighth day after admission. At the necropsy, there was found in the upper third of the œsophagus a semilunar pouch, in which lay a furrowed glass bead of the size of a pea. From the pouch, a fistulous opening led to an abscess in the mediastinum; and there was empyema in the right pleura.

PARTIAL ABLATION OF PROSTATE.—The *Gazette des Hôpitaux* (August 17th) contains a very curious case, in which Messrs. Ricord and Demarquay performed partial ablation of the antero-inferior part of the intestine and of the corresponding part of the prostate for the cure of a fungoid ulceration with indurated borders, which was the source of a debilitating muco-purulent discharge and general distress to the patient. The case, and the nature of this singular operation, are detailed with care.

ASPIRATION IN STRANGULATED HERNIA.—The treatment of strangulated hernia by puncture with the fine cannula of a suction-syringe, and exhaustion of its fluid contents, has recently been tried anew by MM. Dolbeau and Demarquay, and by others, with satisfactory results; and this method of reducing the volume of hernial protrusions is attracting attention in London hospitals, where Mr. Bryant and Mr. Hulke have had recourse to it with advantage. At the Société de Chirurgie lately, M. Fleury of Clermont related some failures, which indicate the possibility that such punctures may excite inflammation of the intestine and peritoneum. M. Verneuil and M. Panas related facts of a similar character.

SIMULTANEOUS AMPUTATION OF BOTH FEET.—Dr. H. Thompson of Tyrone relates, in the *Dublin Journal of Medical Science* for August, the case of W. T., a railway guard, aged 35, who had both feet crushed by a railway train passing over them. Dr. Thompson performed amputation of both feet at the tarso-metatarsal joints by Hey's operation, the projecting ends of the internal cuneiform bones being cut through. The wounds were dressed with carbolic acid. Some sloughing of the flaps took place, and convalescence was tedious; but, nine months after the operation, the man was able to balance his body without a stick, and to walk and run with the aid of a slight one. His gait somewhat resembled that of a man with club-feet; but he was able to perform duty in connexion with the railway, not requiring quite so much activity as his former employment.

A BLANKET SPLINT.—Dr. D. T. Gilliam describes in the *Ohio Clinic* the following ingenious temporary treatment of fracture. He was summoned to a patient who was said to have received some injuries by the falling of trustle-work on the railroad. Upon examination, it was ascertained that the patient had sustained fracture of the thigh, together with other minor injuries. In the locality, there were neither boards, sand, nor tools. Dr. Pullen, who was present, doubled a blanket upon itself until in breadth it corresponded to the length of the limb. He then rolled each end towards the centre, just leaving space enough between the rolls to admit the limb. In this the limb was placed; extension was made, and the bones placed in apposition; strips of muslin were tied around the blanket, and the fracture-box was complete.

BILATERAL ANKYLOSIS OF THE LOWER JAW: OPERATION.—In the JOURNAL for June 1 (p. 585) was a notice of a case of bilateral ankylosis of the lower jaw, remedied by the removal of a wedge-shaped piece of bone on each side. A somewhat similar instance is quoted by the *Wiener Medizin. Wochenschr.* of July 6th, from the proceedings of the Royal Academy of Medicine in Bologna. It occurred in the practice of Dr. Bottini. The patient was a lad aged 17, who, at the age of seven, had fallen on the jaw, and had gradually lost the power of opening his mouth, so that at last for some months he was unable to separate the jaws to any extent. Dr. Bottini introduced wedges; but these were very irksome to the patient, and were removed. Resection of the articular head of the bone was then performed on one side; this had no noticeable result, but, on the operation being repeated on the other side, the jaw could be moved freely. At the end of six weeks, the wound had healed, and the motion of the jaw was normal. The only morbid change that could be discovered was absence of the inter-articular fibro-cartilage.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 31ST, 1872.

THE CHEMISTRY OF THE SECRETIONS.

UNDER the title of "The Chemical Modifications which the Secretions undergo under the Influence of some Agents which modify the Blood-Globule," M. Ritter has written a thesis for the Doctorate of Sciences of Paris, which is abstracted in the *Revue des Cours Scientifiques*, and which furnishes an important contribution to the history of the secretions. He has sought to determine the influence exercised on the composition of the secretions, and especially of the urine, by various agents —oxygen, protoxide of nitrogen, oxide of carbon, antimonials, arsenical salts, phosphorus, and the sodic salts of the acids of the bile. Omitting the details of his experiments, the following are his principal results.

Inhalations of oxygen ought evidently to accelerate organic combustion, and consequently to augment the quantity of the products of advanced combustion contained in the urine. The experiments of M. Ritter accordingly demonstrate that in these cases the urine is more acid; it contains more ammoniacal salts; the proportion of urea to uric acid augments; but, on the other hand, the quantity of urea, as well as the total quantity of nitrogen, eliminated by the urine, diminishes. There is here a contradiction—apparent, at least—between facts and theory. But may not the urea itself be burnt also? May it not be transformed into water, carbonic acid, and nitrogen, which are eliminated by the respiratory organs? And, in fact, Allen and Pepys, Regnault and Reiset, have ascertained an increase of nitrogen in the gases expired by an animal which breathes pure oxygen. The greater acidity of the urine is due to the presence of an organic acid in more than the normal quantity. M. Ritter believes this to be lactic acid, which is known to be a product of the oxidation of nitrogenous substances.

Muscular activity acts nearly in the same way as the inhalation of oxygen. Byasson had already determined that it augmented the urea, uric acid, and chlorides; whilst brain-work augmented the urea in a more marked degree, as well as the sulphates and phosphates. M. Ritter is not completely in accordance with that author. His researches have borne upon the influencing of walking exercise, the brain-work remaining the same. Oxidation is increased, but in a mode differing according to circumstances. A moderate walk by an individual rising from complete rest is followed by an increase of the quantity of nitrogen eliminated by the urine; the proportion of urea to uric acid increases by nearly one-half. If the individual be already leading an active life, the products of oxidation are slightly increased, but in an almost identical proportion. If the individual make a forced march, the total quantity of azote diminishes; but the relation of the urea to the uric acid increases, as after the inhalation of pure oxygen.

Before determining the action of protoxide of nitrogen on the urine, M. Ritter investigates that which it exercises on the blood; and he shows that this gas is dissolved in the blood in greater quantity than in serum deprived of blood-corpuscles; but that all the gases, even carbonic acid and hydrogen, displace it easily, whilst it only displaces these gases incompletely and at the end of a very long time. At the same time, in a long series of experiments, M. Ritter proves that the oxidising action of the gas, at the temperature of the human body, is not comparable to that of atmospheric air. Whether, then, protoxide of nitrogen be breathed, or water charged with the gas be drunk, it is found that the quantity of carbonic acid expired is always diminished; that, in the urine, the quantities of urea, uric acid, nitrogenous matters, are increased, but in a degree proportionate to the quantity of the urine itself, which is also augmented. There is a diuresis here, which must probably be referred to a special physiological action of the protoxide of nitrogen.

The admirable researches of Claude Bernard have taught us that the oxide of carbon deprives the blood-corpuscles of their faculty of absorbing oxygen. This gas, then, ought, *à priori*, to arrest oxidation; and, in fact, if an animal be submitted to the inhalation of oxide of carbon in non-poisonous doses, a diminution is observed of the products, which may be regarded as affording a measure of the intensity of the oxidation, diminution of the urea, of the total nitrogen, and especially a diminution in the proportion of the urea to the total nitrogen.

M. Ritter has studied three bodies which resemble each other very much in their action, and which are, in the order of their energy, antimony, arsenic, and phosphorus. The compounds of these metalloids, introduced into the organism, lead to a diminution of the quantity of urea and of the total quantity of nitrogen, and an augmentation of the quantity of uric acid. The urine is alkaline. Taken in stronger doses, they lead to changes in the blood—dissolution of the corpuscles, and the presence of crystals of hæmoglobine. In these cases, the urine contains albumen, colouring matters of the bile, etc.; it is profoundly changed. If the dose be less strong, there is found in the blood, and in the whole organism, an increase of fat and of cholesterine. They are, then, agents of deoxidation.

As to the acids of the bile, M. Ritter has found that taurocholate of soda, injected directly into the blood, has an action analogous to that of phosphorus, but more energetic.

A criticism is suggested by the perusal of this interesting monograph on the action of various agents on the composition of the urine. Are these changes necessarily consecutive to the changes of the blood-corpuscle? M. Ritter affirms it by the title of his thesis. The oxide of carbon acts on the globule; antimony, arsenic, and phosphorus, do so when they are administered in strong doses; but, in the other cases reviewed, it has not been proved that alteration of the corpuscle takes place. It is probable, but not yet demonstrated.

DENGUE.

THE disease known as "dengue" had not, the *Madras Medical Journal* believes, been seen until last year in India since 1853 or 1854, when it was common in Calcutta and some other places, and was fully described by Dr. Goodeve, late Professor of Medicine in the Calcutta Medical College. During the year 1871, there was a wide distribution of this eminently contagious disorder, especially in the port towns of India in connection with Aden. In the early part of the year 1871 it was prevailing severely in Zanzibar and Eastern Africa; and an account of this epidemic has already appeared in our columns from the pen of Dr. Christie, the Sultan's physician resident at Zanzibar. It first appeared amongst the native population of Aden, a place in constant communication with Eastern Africa and Zanzibar, prior to the setting in of the south-west monsoon early in the month of June. In the native town of Aden the epidemic was very severe. In the beginning of July it began to attack the men, women, and children of the 3rd Battalion Rifle Brigade, then stationed at Aden. Dr. Read, the surgeon of the battalion, and narrator of the history of the epidemic in Aden, was one of the first sufferers; but he notes that some Europeans in the station had previously been attacked. The strength of the battalion, including officers, men, women, and children, was 734, and in a very short time 588 persons had been seized with dengue.

From Aden it seems to have been conveyed by shipping to Bombay, Cannanore, and Calcutta, and occurred also in the town of Madras. From Bombay the disease spread to the troops at Poona, and from Poona it has been taken to Secunderabad. Mr. Sparrow's account of the mode of introduction at Cannanore, published in the above-named journal, is particularly clear in regard to the contagious nature of the malady, and the mode of its communication to residents of the station. But for the precautionary measures adopted in reference to the isolation of the infected troops, it is probable that a much wider distribution of the contagium would have occurred.

Dengue, although a very painful and troublesome malady, is not, happily, dangerous to life. There may, of course, in this as in every other disease, be complications which might result fatally; but we learn at Aden, 588 cases of this disorder were treated in the European force of the station without a single casualty. The duration of the disease at Aden was from five to ten days. Children seemed to suffer less than adults; and with them convalescence was generally established in three days, and it was unusual to find any pain or stiffness of the joints after the disappearance of the fever. In adults, however, Dr. Read states that "fully one-half of those attacked suffered from flitting rheumatic pains in the joints and fingers, lasting from a few days to two months or longer". This experience has, we believe, been generally confirmed in India.

In regard to the more ordinary complications of this disorder, Dr. Read notices that in some of the worst cases, sore throat, pain in the muscles of the neck, and enlargement of the lymphatic glands, appeared before the actual seizure. In two cases there was deep-seated abscess in the tonsils and velum palati; in one case, "severe ulceration of almost the whole buccal cavity and throat"; in another, "the only symptoms at first were swelling of the feet, great debility, and large purpuric patches over the instep and chest". In this case the complication appears to have been due to scorbutus. In three cases "there were severe diarrhœa, pains in abdomen, and tendency to collapse, requiring immediate attention". Pleurisy and slight pericarditis occurred in two cases; and in several instances the disease was followed by free crops of boils.

In regard to treatment, Dr. Read depended chiefly on gentle saline purgatives, followed by diaphoretics. When the fever had subsided, he gave tonic doses of quinine and chiretta. In checking nausea and vomiting, he used effervescing draughts and ice. Opiates, he considers, acted injuriously, whenever they were tried with the object of procuring sleep or relieving pain.

It does not often fall to the lot of one individual in this part of the world to have 588 cases of a disease like dengue passing under observation. The facts, moreover, cannot have too wide a publicity at a time when India is visited by the epidemic.

It is suggested that in all probability the hot season of India may prove inimical to the vitality of the contagium of the disease; but in regard to this point actual facts are required before an opinion can be pronounced.

INFLUENCE OF NERVES ON NUTRITION.

VARIOUS contributions have been made in reference to this physiological question since we last referred to the subject in connexion with the researches of Sinitzin (JOURNAL, vol. i, 1871, p. 535). Fischer (*Berlin. Klin. Wochenschr.*, 1871, No. 13) and Schifferdecker (*Berlin. Klin. Wochenschr.*, 1871, No. 14) have described very minutely the abnormalities of nutrition and the destructive changes which follow lesions to the nerves of the extremities. Both these observers regard the nutrition of the tissues as regulated by a distinct system of trophic nerves apart from the purely vaso-motor nerves.

Bearing on this subject, also, are the important observations of Goltz in regard to the influence exerted by the nervous system on absorption (Pfluger's *Archiv*, v, p. 53). These researches have already been referred to in this JOURNAL (June 15th, 1872, p. 644), in connexion with the pathology of œdema. Goltz looks upon the capillary system as a huge gland under the influence of a system of nerves which regulates the amount of absorption and transudation of fluids in a manner distinct from the mere amount of contraction and dilatation of the vessels, such as we should attribute to purely vaso-motor action. The whole vascular area would in such case resemble the secreting glands, influenced by a system of secretory nerves apparently independent of mere changes in the circulation. Dr. Joseph (*Centralblatt*, No. 46, 1871) likewise investigates the question of trophic nerves as regards the limbs of frogs. He denies altogether the existence of such nerves, and regards the changes which ensue as due to functional inactivity. It is questionable, however, how far these purely negative results obtained by Joseph are to weigh against the numerous cases which have been frequently observed, in which positive results followed, apparently not capable of such a simple explanation. M. Vulpian (*Comptes Rendus* lxx, No. 15) has investigated more particularly the influence of the nerve-centres on the nutrition and contractility of muscular tissue. After section of motor nerves, in addition to the histopathic changes in the nerves themselves, atrophy of the muscles to which they are distributed ensues; and, after section of mixed nerves, the electric muscular contractility undergoes rapid diminution. Vulpian endeavours to determine whether these changes in muscle are due to lesions of motor, sensory, or sympathetic (vaso-motor or other) fibres, of which the nerve may be composed. He had already observed that atrophy of the tongue resulted from section of the hypoglossal, but not from section of the lingualis. As it might be objected that the atrophy in this case was due not merely to the division of motor filaments, but of others, such as sensory, which may be contained in the hypoglossal, he investigates the changes in muscle which follow section of the facial nerve, in which there do not seem to be any sensory or sympathetic filaments. He finds that the nerve itself suffers degeneration; and the same changes take place in the facial muscles as are observed in the muscles of the extremities after section of their respective nerves. He therefore attributes the atrophic degeneration to the section of the motor nerves, which he regards as the trophic nerves of the muscles. He denies that mere functional inactivity is able to account for these changes, inasmuch as the nutrition and irritability of muscles may remain intact in numerous cases of hemiplegia and paraplegia, where functional activity is complete. He likewise excludes the supposition that the degeneration of the muscle is the consequence of a propagation of the irritation caused by section of the nerve to the muscle, because the rapidity and intensity of the degeneration of the muscle stand in no corresponding relation to the changes which take place in the nerve. He also endeavours to show that the degeneration is not due to any changes in the vessels. On this point, however, he merely shows that the walls of the vessels remain unaltered. He concludes, from his observations, that the trophic centre of the muscles is in the central nervous system. In support of this, he adduces the muscular atrophy which results from degeneration of the anterior horns of the spinal cord. He looks on the grey matter of the cord, and the medulla oblongata and its corresponding parts in the pons, as the true trophic centres, which exert their influence on the muscles directly through the motor nerves themselves; and in this way he explains the degenerations which result when the motor nerves are cut by the cessation of the influence of the trophic centres.

THE ATTEMPTED SWIM FROM DOVER TO CALAIS.

THE great feat of Saturday last, performed by Mr. Johnson, the champion swimmer of England, raises several interesting physiological questions, which will, no doubt, receive attention. It is probable that the very remarkable muscular powers of the man are such as to enable him to sustain the continued effort required to cross the Channel. No doubt the actual distance to be travelled must be considerable, probably about forty miles, in consequence of the force of the tides, which is always very great; but, by carefully studying and utilising the tidal currents, the assistance given diminishes the effort required in a most important degree. The real difficulty is, no doubt, in resisting the prolonged exposure to cold in moving water.

On Saturday, Johnson remained in the water not more than an hour and five minutes, during which time he swam over seven miles, or rather more than a sixth of the estimated distance which he engaged to travel. But his condition at the end of this time showed that the long immersion had so prostrated him that, as it is stated, he could not raise a basin to his mouth, while his lower extremities were benumbed and perfectly cold. We cannot very well understand how the statement of the reporters, that his muscular power remained unaffected, coincides with this. Johnson demanded ten hours for the performance of his task: during the whole of this time he was to remain immersed in the water, which was probably at a temperature not higher than 60 deg. Fah., the heat of the body being about 99 deg. A continuous extraction of forty degrees of heat would go on as the water was ever changing, and would not be affected by the evolved heat, as would be the case in a small body of water.

Now we know no evidence which would lead us to believe that the human frame can undergo such a prolonged ordeal, or anything like it. Prolonged exposure to cold air is quite another matter, and numerous trustworthy cases of endurance might be quoted which are perfectly intelligible. Air is a bad absorbent, so to speak, of heat; and, provided there is not a rapid change of the layer of heated air next the skin, very prolonged exposure may be withstood. But, in addition to the constant exposure to cold water, a feat such as that attempted last Saturday would require great muscular exertion and evolution of heat; and this would still further tax the remarkable powers of Johnson. Physiologically, we believe that the feat is utterly impossible, unless some very ingenious artificial means be adopted for keeping up the heat of the body. In that case, the fears of our contemporary the *Pall Mall Gazette*, that all sense of security arising from our insular position would be destroyed, would perhaps come true. An army of invaders swimming across the Channel, each with a stove on his back, would in truth be a curious spectacle.

DR. HENSLEY has been elected Physician to the Royal Hospital for Diseases of the Chest.

A BEQUEST of 10,000 *francs* has been made to the Academy of Medicine in Paris by M. Falret, for the purpose of founding a prize on mental and nervous diseases.

THE *Siglo Medico* of Madrid announces a work on Internal Pathology, in verse, by Don José Zalabardo. The author states that it is on a level with the present state of science.

AMONG the candidates who lately passed the anatomical examination in the University of Berlin with special approbation, was a Japanese student named Sasumi Satoo, son of the private physician of the Mikado.

THE Library of the Obstetrical Society will be closed from Monday, September 2nd, to Saturday, September 14th, both days inclusive.

THE *Times of India*, speaking of some recent appointments made in the Bombay Medical Department—only one of which, it is said, is not open to severe criticism—is of opinion that it is high time that some new force from without was brought to bear upon the Bombay Medical Department.

THERE were during June 302 cases of small-pox in Pesth, including 50 remaining under treatment at the end of May. Of these, 215 recovered, and 67 died; 20 remaining under treatment. From the outbreak of the epidemic to the end of June, the total number of cases was 2,404; of these, 1,378 recovered, and 1,006 died.

CHOLERA.

ACCORDING to the *Berliner Klinische Wochenschrift*, cholera has undergone a marked decrease in St. Petersburg, is disappearing in Moscow, and has almost entirely disappeared in Odessa and Kiew, and in the governments of Mohilew and Minsk. On the other hand, the cases have increased in number, but not in severity, in Tschernigow; and the disease prevails with the greatest severity in the governments of Kiew and Podolia.

THE PATHOLOGY OF THE CHIGNON.

M. LINDEMAN continues his investigation of the parasitic bodies (Gregarinidæ) found on the false tresses and chignons commonly worn by ladies. They are to be found at the extremity of the hairs, and form there little nodosities, visible, on careful examination, to the naked eye. Each of these nodosities represents a colony of about fifty psorosperms. Each psorosperm is spherical; but, by the reciprocal pressure of its neighbours, it is flattened, and becomes discoid. Under the influence of heat and moisture, it swells; its granular contents are transformed into little spheres, and then into pseudo-navicellæ—little fusiform corpuscles, with a persistent external membrane, and enclosing one or two nuclei. These pseudo-navicellæ become free, float in the air, penetrate into the interior of the human organism, reach the circulatory apparatus, and produce, according to this author, various maladies—"cardiac affections, especially valvular affections, Bright's disease, pulmonary affections." M. Lindeman calculates that, in a ball-room containing fifty ladies, forty-five millions of navicellæ are set free; and he concludes that it is necessary to abolish false hair, which often proceeds from unclean persons.

THE PREVENTION OF SEWER-GAS.

SHALL we always have to guard ourselves against sewer-gas passing into our homes and poisoning the air of our town streets? This is a most serious question to the medical man, and a most difficult one to the architect or engineer who has to form his plans with no little sagacity to prevent the entrance of emanations from the sewers. The advice of our best authorities has been to obviate the dangers of sewer-gas by ventilation of the drains and dilution of the gas; and probably, in our present state of knowledge, this is the most important thing to be remembered. But why allow the formation of these gases at all? If this can be prevented simply, and at a cost not likely to frighten parish authorities, the dangers of our present system of town-sewage may be at least largely diminished. This has just been suggested by Mr. W. J. Cooper in a paper read by him in the Chemical Section at the meeting of the British Association. He believes that, by chemical agency, we can prevent the evolution of gas in the sewers. He proposes to apply a chloride of calcium preparation in a powdered form or in solution to the openings immediately in connection with the sewers, at times when the sewers are nearly empty, and especially in times of drought. At the recent Pharmaceutical Conference held in Brighton, Mr. Stanford expressed his opinion that chloride of calcium was the most practicable, cheap, and powerful of all disinfectants, which may account for Mr. Cooper's estimate that the sewers of large towns could be rendered perfectly free from gaseous vapours at the comparatively small cost of one shilling annually per head of population. This would necessitate an outlay in London alone of nearly two hundred thousand pounds, which would be cheap enough if the salts were as effectual as Mr. Cooper imagines them to be, and provided also that the officials whose duty it would be to apply the salts were to be depended upon. This is, we fear, rather too much to expect of parish officials, and we would thus be driven out of our houses every now and again by the foul gases from neglected drains. Combined with a good system of sewer ventilation, however, Mr. Cooper's plan would, we imagine, work admirably, and be an additional safeguard; and we presume he does not propose to do away with ventilating shafts, traps, and other means for preventing the entrance of sewer-gas into our houses.

DEATH-RATE IN THE UNITED STATES AND EUROPE.

IT is a curious fact, says the *Philadelphia Medical and Surgical Reporter*, and one well worth knowing, that the death-rate in Europe is nearly double what it is in the United States, averaging yearly one out of every forty-three inhabitants, while in America it is only one out of every eighty-one. Of the leading countries of Europe, France leads in its mortality, the average being one death to thirty-two people; and England appears to be the healthiest, the deaths being one to every forty-six. In the United States there is a wide range of difference. In Arkansas, for instance, the annual deaths are one to every forty-nine inhabitants, while in Oregon the rate is said to be only one to every two hundred and nine. It appears that the North-western States average the healthiest, and the Gulf States the sickliest.

A SANITARY COMMITTEE FOR VIENNA.

THE municipal authorities of Vienna have decided on appointing health committees to watch over all sanitary matters, both in the city and in the suburbs, during the forthcoming international exhibition. The town committee is to consist of twelve members of the sanitary committtee of the Town Council (one being a chemist), one member from each of the seven sections of the Council, representatives of the building and market committees and other public bodies, together with the public medical officers, and a representative of the *Doctoren collegium* and one of the apothecaries. The suburban committee will contain, with other members, the district police surgeon, the district surgeons of the poor, the inspecting physician, two practitioners of the district, and an apothecary.

ITALIAN SOCIETIES FOR THE RELIEF OF THE APPARENTLY DROWNED.

LAST year, a philanthropic medical practitioner of Leghorn, Dr. Giacomo Ancona, founded an institution—the first of its kind in Italy—on the plan and with the objects of the Royal Humane Society. The Report of the Committee of Directors has lately been published. They have not merely established the Society at Leghorn, but have endeavoured to form similar institutions in other cities of Italy; and as yet Genoa has responded to the call. The report states that the Minister of Marine has taken the matter in hand, and has begun to organise the provision of apparatus and qualified persons in proper localities for the succour of persons apparently drowned.

THE RATING OF HOSPITALS.

A MEETING of Governors of St. Thomas's Hospital was held on the 22nd instant, to consider the question of the rating of the hospital, as fixed at the general assessment sessions. The Treasurer, who presided, stated that it affected the payment of £3,000 a year and the virtual swallowing up of £100,000 of their property; and that they had been obliged to close five wards, thus diminishing the number of beds by 140. The meeting unanimously recommended that the Treasurer and Almoner be authorised to take such steps as counsel might advise for ultimately obtaining a decision of the House of Lords, on the important point whether the hospital was rateable or not, and to confer with the authorities of the other hospitals with a view to gain their advice and support.

THERE is no unfavourable European news of cholera this week.

THE Middlesex Hospital has undergone very thorough repair, and will be reopened on Tuesday.

WESTMINSTER HOSPITAL.

A MEETING of subscribers to the Basham Testimonial Fund will be held at the hospital on Tuesday afternoon, September 17th.

DIARRHŒA IN LONDON.

THE fatality from diarrhœa showed a considerable further decline last week, only 197 deaths being referred to this disease, against 484, 441, and 270 in the three preceding weeks; these 197 deaths were thirty below the corrected average weekly number, and included 182 of children under five years of age, of whom 146 were infants under one year.

AFRICAN EXPLORATION.

DR. SCHWEINFURTH, the renowned German explorer in Central Africa, is about to return with the object of continuing his explorations chiefly in the interests of botany. His brother, a merchant at Riga, has come forward with a handsome sum of money, the interest of which will be given to aid Dr. Schweinfurth in his undertaking, and will afterwards be handed to the Polytechnic School of Riga to found a prize to defray the travelling expenses of future explorers who may have studied there with success.

DEATH OF MR. POLAND.

FOLLOWING closely on the loss of Mr. Skey, we regret to have to record the death of Mr. Poland of Guy's Hospital, on Wednesday, the 21st instant. His laborious work, his painstaking efforts to exhaust and complete every subject he took in hand, and his strictly just and honourable conduct in public and private life, were prominent features of his life. As an essayist he was most successful, and he obtained the Jacksonian Prize of the Royal College of Surgeons, and the Fothergillian Medal of the Medical Society of London. He ably edited, in conjunction with Dr. Wilks, the *Guy's Hospital Reports*, in the recent numbers of which he displayed great research and erudition in his exhaustive monograph on Subclavian Aneurism. He contributed also largely to Holmes's *System of Surgery* and the medical journals. He was an expert and skilful operator, and a great favourite with his students, to whom he afforded every opportunity of manipulating and assisting in the practical work going on in the theatre and wards. We are compelled to defer a fuller notice.

HEALTH OF WATERING PLACES.

THE Registrar-General gives in his Quarterly Return the usual statement of the (annual) rate of mortality in the second quarter of the year 1872 in the districts or subdistricts of England, comprising and approximately representing the watering-places. In Ramsgate, the rate of mortality was as low as 11.7 per 1,000 living; Leamington, 11.9; Eastbourne, 12.8; Folkestone, 12.9; Hove, 13.9; Lowestoft, 13.9; Worthing and Littlehampton, 14.6; Sidmouth, 14.8; Dawlish and Teignmouth, 15.2; Hastings and St. Leonard's, 15.5; Tenby, 15.6; Weymouth, 15.8; Southend, 16.1; Cheltenham, 16.3; Isle of Wight, 16.4; Torquay, 16.5; Clifton (with part of Bristol), 16.5; Tunbridge Wells, 16.7; New Brighton, 16.9; Harrogate, 17.6; Buxton, 17.7; Ilfracombe, 17.8; Brighton, 17.8; Yarmouth, 18.1; Bangor and Beaumaris, 18.1; Scarborough, 18.5; Blackpool, 19.1; Aberystwith, 19.1; Exmouth, 19.5; Weston-super-Mare, 20.2; Penzance, Marazion, and St. Ives, 20.6; Malvern, 20.9; Llandudno, 21.1; Rhyl, 21.2; Bath, 21.4; Margate, 22.5; Herne Bay, 23.6; Southport, 23.7; Matlock, 24.3; Whitby, 24.3; Anglesey, 27.5; Dover, 35.6. There is also a statement of the quarter's mortality from the seven principal zymotic diseases—small-pox, measles, scarlet fever, diphtheria, whooping-cough, fever, and diarrhœa. In Buxton, there were no deaths from these diseases; in the districts or subdistricts containing the following places, less than 1.0 per 1,000 living—Herne Bay, Hastings and St. Leonard's, Weymouth, Sidmouth, Bangor and Beaumaris, New Brighton, Harrogate, Malvern, and Leamington; in the following, 1.0, but less than 2.0—Ramsgate, Folkestone, Eastbourne, Hove, Worthing and Littlehampton, Exmouth, Dawlish and Teignmouth, Torquay, Ilfracombe, Tenby, Aberystwith, Llandudno, Rhyl, Southport, Blackpool, and Cheltenham; in the following, 2.0, but less than 3.0—Scarborough, Southend, Brighton, Isle of Wight, Weston-super-Mare, Tunbridge Wells, and Bath; in the the following, 3.0, but less than 4.0—Whitby, Lowestoft, Margate, Penzance, Marazion and St. Ives, and Clifton; in Yarmouth, 4.0; in Anglesey, 5.0; in Matlock, 6.7; in Dover, 17.1. In all England, the mortality was at the annual rate of 21.0 per 1,000; from the seven zymotic diseases, 3.4 per 1,000 persons.

THE "DREADNOUGHT".

THE hospital-ship *Dreadnought* has been transferred by the Metropolitan Asylums Board to the City of London, as the sanitary authority of the port. The veteran ship has been recently used for the convalescent patients from Stockwell, Hampstead, and Homerton hospitals.

THE TWICKENHAM SEWAGE.

THE Twickenham Local Board has received notice from the Conservators of the Thames that they will proceed against them for penalties, unless they take immediate steps for the diversion of the town-sewage from the river. The fine for non-compliance with the order of the Conservators is a hundred pounds per day.

CHOLERA IN INDIA.

CHOLERA appears to be on the increase at Lahore. In the week ending July 13th, eighteen cases were reported, eight of them being fatal. An imported case of cholera has occurred at Simla. There has been a serious outbreak of cholera at Khandeish Model Farm in the Bombay Presidency.—A Bombay despatch of the 26th instant says that cholera is raging in Cashmere.

CHLORAL AND STRYCHNIA.

M. RABUTEAU, at the sitting of the Société de Biologie (August 3rd), denied the alleged antagonism in the action of chloral and strychnine, asserted recently by M. Oré, which has been much discussed. His experiments lead him to opposite conclusions. Moreover, he considers that the experiments of M. Personne place it beyond doubt that chloral, administered in small doses, acts like chloroform administered in a continuous manner. In a large dose, there is a transformation of a part of the chloral; the other acts by its own properties. We have, then, to do with a poison which would add its effects to those of the strychnine, if the latter have been previously injected.

HOSPITAL SUNDAY IN CUMBERLAND.

A MEETING of the Hospital Sunday Fund Committee was held in the Town Hall, Carlisle, on August 21st, for the purpose of appropriating to the several charitable institutions in the county the Hospital Sunday fund for this year. The Worshipful Chancellor Burton presided. The Secretary announced that the total amount of collections this year to the fund, together with the bank interest and balance in hand from last year, was £731 2s. 9d.; and that £189 17s. 6d. of the total amount was specially appropriated, leaving £541 5s. 3d. at the disposal of the Committee. The expenses for printing, stationery, and stamps, amounted to £3 16s. 10d., and certain other expenses remained to be met; and the Committee unanimously agreed to divide £530. In consideration of special claims, the sum of £30 was appropriated to the House of Recovery. The remaining £500 was divided into thirty-one parts, to be distributed among the different institutions in the following proportions: Cumberland Infirmary, nine parts, £145 3s. 2½d.; Whitehaven Infirmary, seven parts, £112 18s. 1d.; Carlisle Dispensary, Carlisle House of Recovery, and Convalescent Institution, Silloth, each five parts, £80 12s. 10½d., making in all £500. The following sums have been specially appropriated by ministers: Cumberland Infirmary, £97 3s. 10½d.; Carlisle Dispensary, £4 2s. 11d.; Carlisle

House of Recovery, £4 13s. 4d.; Silloth Convalescent Institution, £41 4s. 11½d.; Whitehaven and West Cumberland Infirmary, £42 12s. 5d. —total, £189 17s. 6d. Mr. Isaac James and Mr. Yeld were reappointed auditors; and the Secretary having been requested to prepare the annual report, a vote of thanks was accorded to the Chairman, and the proceedings terminated.

THE MEDICAL SOCIETY OF LISBON.

THE Society of Medical Sciences in Lisbon held its meeting for the election of officers on July 27th. The business was followed by a dinner given to the retiring President, Dr. Barbosa. Fifty-five members sat down; and the number of toasts proposed was seventy-seven. Among them, in addition to that of Dr. Barbosa, were the following: "The Society of Medical Sciences in Lisbon"; "The Committee on Hospital Tents and Barracks"; "The Medico-Chirurgical School of Lisbon"; "The Medical Schools of Coimbra and Oporto"; "The Agricultural Institute"; "The Royal Academy of Sciences"; "The Portuguese Medical Press"; "The Medical Service of the Navy"; "The Medical Service of the Army"; "The Hardworking Medical Men, who, in the most populous and poorest districts of the city, devote themselves with unabated zeal to their ill-paid labours at the bedside"; "The Medical Officers of the Rural Districts, for their arduous, brave, and ill-remunerated services"; "The English Medical Profession"; and many others, principally referring to individual officers and members of the Society.

SMALL-POX AFLOAT.

THE necessity for some systematic action on the part of port authorities was lately exemplified. A large steamer arrived at Gravesend from Cronstadt, and, having hoisted the yellow flag to indicate sickness, was boarded by the Customs' medical officer. He found one very bad case of confluent small-pox on board, and another man sickening for the same malady. But as small-pox is not a quarantine disease, and no floating or any other sort of hospital exists at Gravesend for the reception of infectious cases occurring afloat, the steamer proceeded on her way up the river, and was moored alongside another vessel. If the city authorities (who now alone have sanitary jurisdiction on the river) had their machinery in working order, this vessel would (or should) have been stopped at Gravesend, her sick removed, and her decks and cabins thoroughly fumigated in accordance with the directions given by the Medical Department of the Local Government Board.

SMALL-POX IN VIENNA.

THE epidemic of small-pox in Vienna continues to manifest at times signs of decrease, followed by augmentation in the number both of cases and of death. In the week ending August 16th, the number of deaths was 71, having been 61 in the previous week. The fatal cases included 18 adults. The average daily number of cases in the general hospitals and the two communal hospitals had increased from 313 to 367. In the week ending August 23rd, there were also 71 deaths, 23 of which occurred in adults. The average daily number of cases in the hospitals was 352. A third communal hospital is to be erected outside the walls, for use during the winter.

DRY GANGRENE FOLLOWING THE USE OF CARBOLIC ACID.

M. PONCET, an *interne* of the Lyons Hospitals, records in the *Bulletin de Thèrapeutique* (July 30th) a case which he considers rightly to convey a caution against the rash use of carbolic acid by non-professional persons. A girl, aged 13, had her forefinger injured by a splinter of wood, which penetrated under the nail. The end of the finger was dipped in a bottle of solution of carbolic acid; and a compress soaked in the acid was applied. The next day, the part had a greyish colour and was insensible; and, when M. Ollier first saw her a week afterwards, mortification had extended as far as the upper third of the second phalanx, and a line of demarcation was being formed. The finger assumed a mummified appearance, and separated on the thirty-fifth day. This occurrence suggested to M. Ollier the possibility of amputating fingers and toes by means of the application of carbolic acid; and experiments were accordingly made by M. Viennois on rabbits and fowls. The results showed that the application of carbolic acid was liable to be followed by toxic symptoms; but that these might be prevented by the application of a ligature. M. Ollier endeavoured to put the plan into execution in a case of disease of the great toe, by plunging it for some minutes in a concentrated solution of carbolic acid; the thickness of the epidermis, however, prevented mortification from being produced. M. Poncet records also the case of a man, aged 23, who, having wounded the end of one of his fingers, applied for ten days charpie impregnated with carbolic acid, and afterwards poultices. When he applied to M. Ollier two months after the accident, the terminal phalanx was in a state of dry gangrene, and was removed a few days afterwards.

MRS. GLADSTONE'S HOME FOR MIDDLE-CLASS INCURABLES.

IN connexion with Mrs. Gladstone's Convalescent Home, a very excellent institution was experimentally inaugurated in April last in Brook Road, Upper Clapton, namely, an incurable hospital for the poor middle-class. We say experimentally inaugurated, for, to ensure the success of the institution, immediate and steady public support was required. It was determined to gauge its probable success by a six months' trial, and accordingly two adjoining houses were acquired at Upper Clapton for the purposes of the undertaking in an open and detached position. The houses contain a number of small rooms, and are capable of accommodating from twenty to thirty patients. The total sum fixed upon to be paid by each patient is £20 *per annum*. Dr. Gardiner attends as medical officer. A comfortable home is thus placed within the reach of many incurable persons of the poor middle-class who are unable to meet the pecuniary demands and consequent discomforts of a prolonged and progressive illness. It must be evident that an institution such as this—indeed, very many like it—is desirable, provided the system of election ultimately adopted be founded on the basis of impartial selection of deserving cases. The institution has now been opened nearly five months, and it has met with only partial success; no doubt, in consequence of its obscurity. It has indeed rather strangely and happily fulfilled its mission during one month of its career in affording a temporary home to the patients of the cancer wards of the Middlesex Hospital, which, during August, has been undergoing repairs. At our visit, a considerable number of these patients were in the Home, under the care of Mr. Henry Morris. But, with the exception of this unexpected addition, the support given to the undertaking renders it doubtful if Mrs. Gladstone will be enabled to continue an excellent work well begun. The knowledge of its existence and advantages may be of use to our readers, and gain their advocacy and practical support to a good cause.

THE LEIPZIG MEETING OF THE GERMAN MEDICAL ASSOCIATION.

THE Association of German Naturalists and Physicians has held its forty-fifth meeting at Leipzig, from the 12th to the 18th of this month. The members enrolled amounted to 1,277. Three general meetings were held in the new theatre, at which addresses were delivered. The chief address or "Festrede" was given by Professor Ludwig, who reverted to the labours of Oken and Alexander von Humboldt in founding and organising the Association, and afterwards proceeded to deal with the question whether, through the character of the modern time, through the striving after rapid productiveness and wealth, the pursuit of the ideal and the scientific would be made to cease. At the same sitting, Professor Preyer of Jena delivered an address on the Investigation of Life, in which he contended that the "mechanical" explanation of life was the one that investigators could pursue to most purpose. Among the addresses at the other general meetings, was one by Professor Dubois-Reymond, on the Limits of Scientific Inquiry, in which he concluded that the human mind would never come to understand the essential nature (*das Wesen*) of matter and force, nor of con-

sciousness. Professor Fischer, in speaking of the Development of Military Surgery, stated that the mortality among the wounded in the late war was only seven per cent. The work in the sectional meetings was carried on with great vigour. Of the twenty sections, eight were devoted to department of medical and surgical practice; viz., Medicine, Surgery, and Ophthalmology; Gynæcology and Midwifery; Psychiatry; Public Health Diseases of Children; Military Surgery; Pathological Anatomy and General Pathology; Diseases of the Ear. The other sections were devoted to the pure sciences, including Anatomy and Physiology. It was resolved to meet next year at Wiesbaden, in the end of September. A resolution was passed, that the editor of the *New York Herald* was entitled to great credit for the discovery of Dr. Livingstone. An excursion to the picturesque town of Erimmer brought the meetings to a close. The railway station and the place of rendezvous were decorated with flags and garlands. In the town, many of the houses hung out the Saxon and German colours; and the streets were spanned with festal arches.

STATISTICS OF THE PROFESSION IN FRANCE.

DR. REVILLOUT, writing in the *Gazette des Hôpitaux*, calls attention to some statistics published by the French Minister of Public Instruction. Among other matters, there are tables giving, for each department, the numbers of physicians and *officiers de santé* in 1847, 1853, 1857, and 1866. In 1866, there were 11,643 doctors of medicine, being 1,000 more than in 1847; while the number of *officiers de santé* was 5,697, the decrease, as compared with 1847, being 2,145. There was thus a total decrease of 1,145 medical practitioners, notwithstanding that the population had increased from thirty-four and a half millions to nearly thirty-eight millions. M. Revillout attributes this falling off in great measure to the defective encouragement afforded by the State to high class education.

AMBULANCE SERVICE DRILL.

IT is much to be regretted that our military authorities take little interest in the thorough equipment and efficiency of our ambulance service. In Germany, as is well known, the practising of ambulance bearers has been for some years in vogue, and in the Russian service a similar system has been carried out. Professor Longmore has fully and ably described, in the tenth volume of the *Army Medical Reports*, published in 1870, the detailed drill adopted at the manœuvres held at Berlin in 1869, at which he attended. Through his exertions, very much has been done to improve our ambulance service, but in completeness and efficiency we are behindhand. We fear that, during the manœuvres now going on, the facilities afforded to our ambulance service will not extend much beyond the more ordinary and simple duties of a campaign.

THE SEWAGE COMMITTEE OF THE BRITISH ASSOCIATION.

FOR several reasons, the proceedings of this Committee have excited much interest among scientific men. The sewage question is one of the questions of the day; the Committee had collected from the towns a large sum of money, and there was in some minds an uneasy feeling lest the subject should be dealt with in a partial manner. The subject being one of great importance, and the action of the Committee being watched with considerable jealousy, full and even ostentatious publicity should have been courted by the Committee. The first presentation of the report, at the recent meeting of the British Association, took place, not on the first day of the sections, but on the fourth day on which sectional meetings were held. In the Mechanical Section, there was no discussion on the report, the President pointing out, in answer to those who desired to criticise it, the existence of a rule of the British Association which prohibits the discussion of reports of Committees. In the Chemical Section, on the next day, the sewage report was read at the end of the meeting. In this section, it was decided by an unanimous vote that the report should be discussed; and a discussion accordingly took place on the following day.

DEATH FROM BICHLORIDE OF METHYLENE.

THE death of a patient while under the influence of bichloride of methylene occurred last week at the Bath United Hospital. A man aged 51, who had had his arm broken and his shoulder dislocated on April 29th, and who had for some time been a patient at the hospital, was about to be operated on by Mr. Gore for the reduction of the dislocation. The bichloride of methylene was given, and the patient became insensible in two or three minutes; but his face then became livid, and his breathing suspended. The pulse was at the same time observed to fail. The tongue was drawn forward, ammonia was given, and the galvanic battery was used for three-quarters of an hour but without effect. The heart was found to be large and flabby, but there was no other sign of disease in the organ. In his evidence at the inquest, Mr. Gore said that, according to the records of the hospital, bichloride of methylene had been used there two hundred and fifty times in the last two years.

SCOTLAND.

WE observe it stated that Dr. Ogston and Dr. Alexander Ogston have resigned their appointments as medical officers of health at Aberdeen.

A SAD accident occurred near Fort William, by which Dr. Neil Murray lost his life. This gentleman went sailing with a party in an open boat; the boat capsized between Cupach and Fort William. By his exertions one boy was saved; and, in a noble attempt to prevent another from drowning, Dr. Murray met his death. In the struggle to get the boy safely ashore, both sank. The sad event has cast a deep gloom over the town.

IRELAND.

THE UNION OFFICERS (IRELAND) SUPERANNUATION ACT.

ON the very last day of the session, Sir Dominic Corrigan succeeded in obtaining the insertion of the amendment suggested by Dr. Maunsell, to which we directed attention some months ago, by which the emoluments derived by dispensary medical officers from vaccination and registration might be included in the computation of the amount of their superannuation. The words of the Act are: "The superintendent registrar of births, deaths, and marriages, appointed in any union in Ireland, being also the clerk of such union, *and the registrar of births, deaths, and marriages*, shall be deemed officers within the operation of the recited Act; and, in computing the salary of any officer of a union under the recited Act and this Act, the amount of the emoluments of his office, on the average of the three years concluded in the last preceding quarter, may be taken into calculation by the guardians; and the allowance awarded in respect thereof under the recited Act and this Act shall be charged upon the rates of the union at large." In Ireland, dispensary medical officers are *ex officio* registrars of births, deaths, and Roman Catholic marriages.

THE CHANCES OF CHOLERA IN DUBLIN.

THE *Freeman's Journal* of the 27th instant says, in alluding to the possible visitation of cholera to Dublin: "We invite the attention of our sanitary authorities to the condition of our city. It is disgraceful. Save in the one item of pure water, Dublin can compete with any city of the empire in inducements to the pest to make its home amongst us. The frightfully filthy condition of some portions of the city must be seen to be believed. Some persons—we can scarcely say whom—will incur a responsibility we would not care to share if this state of things is permitted to continue in face of the danger which threatens us." The Local Government Board (Ireland) Act just passed gives ample powers for improving the sanitary condition of both urban and rural districts. A clause has been inserted enabling urban authorities to erect convalescent homes. The sad experience obtained during the small-pox epidemic would prove the necessity for the immediate erection of such an institution.

INTERNATIONAL OPHTHALMOLOGICAL CONGRESS.

Thursday, August 1st.—Dr. DONDERS in the Chair.

Dr. JOY JEFFRIES (Boston, U.S.) read a paper on the Use of Ether in Ophthalmic Surgery. A discussion followed, in which Mr. Brudenell Carter and others took part.

Dr. DE WECKER (Paris) read a paper on the Surgical Treatment of Optic Neuritis. Referring to the pathological condition, distension of the external sheath of the optic nerve near to the eyeball, he said that the indications were to let out the accumulated cerebral fluid by an incision, and relieve the pressure upon the nerve and on the cerebral centres. He had operated on two cases, in which there was probably a tumour of the brain. The operation was performed as follows. An incision was made between the rectus externus and the rectus inferior, at a point distant one *centimètre* from the margin of the cornea. Cutting the conjunctival and subconjunctival tissues, he penetrated the capsule till the optic nerve was reached. He then luxated the eyeball by a spatula. An incision was then made into the sheath of the nerve by a special knife, which he showed, the instrument being moved from behind forwards. The hæmorrhage was very slight. The results were fairly encouraging.—M. GALEZOWSKI (Paris) thought that the advantages obtained were questionable, and did not outweigh the risk involved.

M. WARLOMONT (Brussels) read a paper on Sympathetic Ophthalmia. He contended that the operation of enucleation as a preventive measure ought to be encouraged, and enumerated some of the indications for it.—M. CERVERA (Madrid) thought that the cases for operation had not been sufficiently discriminated. Dr. De Wecker, Dr. Noyes, and Mr. Critchett joined in the discussion.

At the afternoon sitting,

Mr. BADER showed cases of Conical Cornea successfully treated. An interesting discussion followed, in which several members joined.

Dr. TAYLOR (Nottingham) described his Operation for Extraction of Cataract.—Mr. JABEZ HOGG and Dr. WOLFE criticised the method unfavourably.

M. BRIBOSIA (Namur) read a paper on the same subject, describing his method, which was a modification of the usual one with a view to simplify it.—M. WARLOMONT followed with another paper on the Extraction of Cataract, describing the method which he adopted.—Mr. CRITCHETT had practised the operation of M. Warlomont, and was of opinion that it was of considerable value. It was most unphilosophical to practise the same operation for every case. Any one could operate according to an universal rule, but he hoped that surgeons would come more and more to consider each case separately and apart.—Dr. HANSEN (Copenhagen) thought that the operation of Liebreich was practically the same. He had practised Liebreich's operation in a number of cases, of which he gave the results. In a considerable proportion, adhesion of the iris followed.—Mr. SOELBERG WELLS was indebted to Dr. Hansen for giving the detailed results of this operation.

Friday, August 2nd.—Dr. DONDERS in the Chair.

Mr. VOSE SOLOMON (Birmingham) described an operation for Division of the Ciliary Muscle in cases of Extreme Myopia. He demonstrated by means of a table the results following the operation in two cases.—Dr. ROOSA (New York) and Mr. BRUDENELL CARTER made some remarks.—Dr. DONDERS was not satisfied that the facts tabulated by Mr. Solomon proved the refraction to have been altered by the operation.—Mr. SOLOMON replied.

Mr. BRUDENELL CARTER described his improved Demonstrating Ophthalmoscope, which merely embodied a new arrangement of familiar details.

Mr. JABEZ HOGG also showed a Demonstrating Ophthalmoscope.

Mr. CARTER showed an improved Perimeter. Its recommendations were that it was cheaper, more portable, and otherwise more convenient to work with than the instrument of Dr. Förster.—Mr. SOELBERG WELLS had used both Förster's perimeter and that now exhibited. He found the latter more convenient.—Dr. BRETTAUER (Trieste) criticised the details of Mr. Carter's perimeter. He exhibited a number of perimetric measurements in cases of amblyopia from alcoholic intoxication and other pathological states.—Dr. WAINOW (Moscow) considered the construction of Mr. Carter's instrument inadequate for scientific uses.—Dr. De WECKER (Paris) recommended Mr. Carter's instrument. At his *clinique* he reserved Förster's instrument for particular cases. He found it too complicated for ordinary use.—Mr. CARTER thought that very great accuracy in the measurements was not to be looked for. Ordinary patients were not trained to habits of observation, and that was a continual source of error.—The PRESIDENT complimented Dr. Brettauer on the valuable series of perimetric measurements which he had exhibited.

Dr. WOLFE (Glasgow) gave the tabulated details of a series of cases of Traumatic Cataract. A discussion followed, in which Messrs. Power, Solomon, Hulke, Jabez Hogg, and the President joined.

Dr. PAGENSTECHER (Wiesbaden) exhibited an album of drawings for a proposed Atlas of the Pathological Anatomy of the Eye, by Dr. Hermann Pagenstecher and Dr. Carl Genth. The atlas would be published by subscription, and he directed the attention of the members to it.

At the afternoon sitting,

Dr. TAYLOR (Nottingham) showed a patient illustrating his operation for the Extraction of Cataract.

Dr. VON ZEHENDER (Rostock) gave an account of a remarkable case of Congenital Malformation of the Eyes. The skin of the face extended over the eye-sockets, there being only a small aperture on the left side. The tissues representing the eye were variously developed. He showed a preparation of the parts and a photograph of the appearance during life.

Dr. ARGYLL ROBERTSON (Edinburgh) read a paper on a case of Unilateral Irideremia. The case was interesting as to the cause of the disappearance of the iris, and as affording opportunity for observing the accommodation of the lens.—Dr. DOIGER (Leyden) related a similar case, also traumatic in origin. He believed that the iris had not escaped from the eye.—The PRESIDENT was also of opinion that in these cases the iris could not have escaped from the eye. His experiments had satisfied him that young animals could suffer the loss of the iris with least bad consequences.—Dr. GALEZOWSKI and Mr. SAMELSON also joined in the discussion.

Dr. WILLIAMS (Cincinnati) read a paper on Herpes Corneæ Serpens treated by carbolic acid, and on the use of poultices in Iritis.

Mr. COUPER read a paper on the Ophthalmoscope as an Optometer in Astigmatism.—M. JAVAL (Paris) spoke in favour of the proposal.

Mr. OLDHAM read a paper on the same subject.—Dr. JOY JEFFRIES (Boston, U.S.) called attention to certain observations that he had made in his own person on variations in the acuteness of vision under different conditions.

Dr. SCHROEDER (Leipzig) described and exhibited a Binocular Ophthalmoscope designed by Professor Coccius.

Dr. SAMELSON (Manchester) read a paper on Diphtheritic Conjunctivitis. It had recently become common in the neighbourhood of Manchester.—Mr. SOELBERG WELLS briefly criticised the paper.

Dr. GAMA LOBO (Rio Janeiro) demonstrated mathematically a method of determining the Posterior Convexity of the Lens.

Dr. NOYES (New York) gave an account of a series of cases of Muscular Asthenopia and its complications.

Next Meeting.—Dr. H. W. WILLIAMS (Boston) invited the Congress to hold its next meeting in 1876 in America. In the month of July of that year would be celebrated the centenary of their national independence.—The PRESIDENT read an invitation from the Spanish members present, inviting the Congress to Madrid in 1876.

Saturday, August 3rd.—Dr. DONDERS in the Chair.

Mr. SPENCER WATSON demonstrated a convenient method of Applying Cold to the Eye. He also read a paper on three cases of Intra-orbital Dermoid Cyst.

Mr. STREATFEILD described the Knife which he used in opening the anterior chamber, and his method of operating.

Mr. PRIDGIN TEALE (Leeds) read a paper on the Treatment of Symblepharon by Transplantation. The operation, which was a delicate one and occupied usually about an hour, consisted in removing a band of conjunctiva, one-fourth of an inch broad, and cut in a horizontal direction over the upper half of the globe, and transplanting it into the gap. He showed three cases.—Dr. WOLFE (Glasgow) and Dr. MEYER (Paris) made some remarks on the operation.

M. JAVAL (Paris) gave an account of the conclusions arrived at by a commission appointed to report on the desirability of introducing uniformly the Decimal System for the Notation of Accommodation and Refraction.—The PRESIDENT, who had been a member of the commission, supported the proposal.—Mr. SOELBERG WELLS read a form of declaration to adopt the recommendation, the new system to come into force after July 1873. It would lie on the table for signature. [This declaration was afterwards signed by most of the members present.]

Dr. SCHMIDT (Marburg) read a paper on the condition of the Optic Nerve in Neuritis. From experiments and from extensive pathological observations, he concluded that, in cases of tumour of the brain, there was an effusion of fluid between the inner and outer sheath of the nerve. His observations, therefore, confirmed those of Dr. De Wecker.

He believed the fact was sufficiently established for a treatment to be based upon it.—Dr. DE WECKER repeated in French the substance of the communication.—Dr. GALEZOWSKI's experience had led him to a different conclusion, and he thought the operation of incising the sheath unjustifiable.

Dr. GREEN (St. Louis) made a statement on the improvement of Test-types. He recommended that all letters should be inscribed exactly within a square. He further recommended that various sizes of Snellen's types should be constructed in an exact mathematical ratio to each other.—The PRESIDENT was sure that the adoption of Dr. Green's proposals would be of great service.

Next Meeting.—The Congress then proceeded to decide on the next place of meeting. After hearing Drs. Williams (Boston), Williams (Cincinnati), Noyes (New York), Cervera (Madrid), Delgado Jugo, Warlomont, and others, the meeting resolved by a majority to hold the Congress of 1876 at New York.

The Congress met again at 2 P.M., the President in the Chair.

Mr. POWER read a paper on Transplantation of Cornea. The idea had arisen in Germany as far back as 1823. He had satisfied himself by experiments on animals that there could be complete union between the transplanted tissue and that surrounding it. He showed microscopic preparations of the united parts. He presented a case where the operation had been done. There was at present some opacity, a few days after the operation, but it was stated by some observers that the opacity disappears in the course of two or three weeks.

Dr. WILLIAMS (Boston) described the kind of Corneal Suture employed by him in the operation for Cataract.

Mr. BOWMAN described (1) an operation that he had performed for enlarging a linear pupil that had followed in a case of Conical Cornea. He had practised a similar operation in cases of nuclear cataract. 2. New methods of excising Structures in the Papillary Region. 3. Operations for Conical Cornea. 4. Some uses of Eye Trephines.—M. MEYER (Paris) commented on some details.

M. QUAGLINO (Milan) read a paper advocating the operation of Sclerotomy in Glaucoma.

Dr. DONDERS made some remarks on Förster's Theory of Accommodation, pointing out a fallacy which, he thought, might prove mischievous. He read, also, a short paper on Traumatic Keratitis, criticising the views of Stricker and others as to the nature of corneal inflammation.

This concluded the scientific business of the meeting.

On the motion of Dr. DE WECKER, an enthusiastic vote of thanks was passed to the English Committee for the very admirable arrangements they had made, and for the cordial reception they had ensured for the foreign members of the Congress.

The PRESIDENT proposed a vote of thanks to the College of Physicians for placing their spacious rooms at the disposal of the Congress.

THE ROYAL ORTHOPÆDIC HOSPITAL: MR. W. ADAMS AND MR. BRODHURST.

AT a meeting of the Council of the Metropolitan Counties Branch held on August 21st, the following report from the Committee appointed to investigate the charges of unprofessional conduct made by Mr. William Adams against Mr. Brodhurst, was presented.

The Committee appointed by the Council of the Metropolitan Counties Branch of the British Medical Association to investigate certain charges made by Mr. William Adams against Mr. Brodhurst in connection with recent occurrences at the Royal Orthopædic Hospital, beg to report as follows.

Mr. Adams charges Mr. Brodhurst with unprofessional conduct—

1. In having been privy to the purchase and fabrication of a number of votes on the day prior to the meeting of the governors of the Royal Orthopædic Hospital on the 13th March, which votes were used at that meeting to injure Mr. Tamplin and Mr. Adams.

2. In having been privy to the use of the same votes, and of others similarly purchased at a subsequent date, for the rejection of a proposition brought forward and supported by Lord Abinger, Lord Shaftesbury, Lord Ebury, and other of the Vice-Presidents, at the meeting of the 8th April, for the reparation of that injury.

To these charges Mr. Brodhurst gives an explicit and unqualified denial. He asserts that the names and subscriptions of new governors were sent to him prior to the meeting of the governors of the Royal Orthopædic Hospital on March 13th, for the support of a resolution which would place him in the position of full surgeon. He states positively that he had no cognisance of, nor did he directly or indirectly seek to influence, the vote of any governor, new or old, respecting the adoption of the report of the Committee which has ended in the resignation of Mr. Adams and Mr. Tamplin; and he further states that he had no knowledge of the contents of the report, or that it contained anything which, if accepted by the meeting, would necessitate the resignation of his colleagues. He also denies that he was cognisant of or privy to the creation of new governors prior to the meeting of governors on April 8th, for the purpose of supporting the report or of opposing Lord Abinger's motion; and states that he did not in any way or at any time attempt to influence the vote of any one of the governors who were present at that meeting.

While the Committee consider that, under the circumstances of the case, Mr. Adams was justified in asking for an investigation of Mr. Brodhurst's conduct, they cannot refuse to accept Mr. Brodhurst's positive and emphatic denial, as they have failed to obtain sufficient evidence to establish the charges made against him.

August 16th, 1872. WM. FERGUSSON.

It was unanimously resolved by the Council—

"That the report of the Committee be accepted, and that copies be sent to Mr. Adams and Mr. Brodhurst, to the BRITISH MEDICAL JOURNAL, and to the other medical journals."

The members of this Committee were: Dr. Russell Reynolds, F.R.S.; Sir W. Fergusson, Bart., F.R.S.; T. Heckstall Smith, Esq.; R. Dunn, Esq.; Dr. A. P. Stewart; Campbell De Morgan, Esq., F.R.S.; John Marshall, Esq., F.R.S.; Dr. Sieveking; John Wood, Esq., F.R.S.; and Dr. Henry, *Secretary*.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETINGS.

THE next meeting of the members of the above district will be held at the Saracen's Head Hotel, Ashford, on Thursday, September 19th, at 3 o'clock; Mr. THURSTON in the Chair.

Dinner will be provided at 5 o'clock precisely. Charge 5s., exclusive of wine.

All members of the South Eastern Branch are entitled to attend, and to introduce friends.

Gentlemen who wish to make communications to the meeting are requested to inform me *at once*, in order that a notice thereof may be included in the circular convening the meeting.

CHARLES PARSONS, M.D., *Honorary Secretary*.

2, St. James's Street, Dover, August 28th, 1872.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

AT the Annual Meeting of this Branch on July 17th (see BRITISH MEDICAL JOURNAL, August 3rd, p. 137), the following papers were read and cases exhibited.

1. T. D. Griffiths, M.B. (Swansea). On Displacements of the Ovaries consequent on acquired Malposition of the Uterus: illustrated by six cases.

2. J. Russell, Esq. (Neath). On the Various Modes of Amputation of the Leg.

3. J. Williams, M.D. (Pontypool). On two Sudden Deaths, presenting peculiarities in their medico-legal aspects.

4. Mr. E. Crockett (Merthyr) related a case (and exhibited a preparation) in which the Scrotum and Testicles were amputated by an Iron Ring, worn in the expectation of relief thereby from attacks of epilepsy, to which the patient had been subject.

5. Mr. Cresswell (Dowlais) exhibited a case of successful Amputation at the Hip-joint in a lad aged 14.

CUMBERLAND AND WESTMORLAND BRANCH: ANNUAL MEETING.

THE fifth annual general meeting of this Branch was held at the County Hotel, Carlisle, on Wednesday, July 10th, 1872. Previously to the commencement of the ordinary business, several members visited the County Asylum at Garlands, on the invitation of Dr. Clouston, the medical superintendent. The proceedings at the meeting commenced at one o'clock. R. ELLIOT, M.D., of Carlisle, the retiring President, was called to the Chair.

Report of Council.—The SECRETARY read the report of the Council, as follows.

The Council of the Cumberland and Westmorland Branch, in presenting their fourth annual report, are again able to congratulate the members on the prosperous condition of the Branch. The number of members at the commencement of the year was seventy. Two new members have been elected; one has withdrawn from the Associaton, and one has been removed by death, thus leaving our list precisely the same in point of numbers as last year, and still including more than half the number of medical men residing in Cumberland and Westmorland. Considering that the Branch has only completed the fourth year of its existence, and that previously to its formation the number of members of the Association in these two counties only amounted to about a dozen, this result is very satisfactory. The Council feel, however, that much may yet be done by individual effort in still further extending the Association, and would earnestly urge members to impress on their medical neighbours who have not yet joined, the important advantages of membership of the British Medical Association, and the great influence for good which the profession acquire by organisation.

The Council have to lament the death of that highly accomplished and much respected physician, Dr. Barnes, who being one of the oldest members of the Association and the patriarch of the profession in the northern counties, was unanimously elected as the first President of the Branch, and afterwards as Vice-President. He was warmly interested in our success, and the Council feel that the influence of his name attracted many to our ranks, and did much to overcome the early struggles of the Branch.

During the past year three general meetings have taken place, the inaugural meeting of the session having been held at Carlisle, the autumnal meeting at Wigton, and the spring meeting at Penrith. On each occasion papers of a high standard of merit were read, and good discussions followed. Indeed, owing to the shortness of time allowed for the meeting, papers already provided had to be held over, and the discussions closed. The attendance at the meetings, also, has been in excess of last year; and at two of the meetings was above the average of the last four years.

The Public Health Bill, now before Parliament, was considered at a special meeting of the Council, and a petition to Parliament was adopted praying for certain amendments insisted upon by a General Committee of the Parent Association, the most important of which bore reference to the necessity for a consolidation of existing sanitary laws. The Council regret that, although the Bill has passed its second reading, the present period of the session has arrived before it has got into Committee, and that it has been found necessary to deprive it of its most important clauses. It had far better share in the general slaughter of the innocents usual at this time of year.

The balance in hand at the commencement of the year was £4 : 11 : 2; arrears of subscriptions paid, £2 : 2 : 6; subscriptions for year paid, £5 : 12 : 6; total, £12 : 6 : 2. The expenditure for the year was £3 : 7 : 1, leaving a balance in hand on June 1st, 1872, of £8 : 19 : 1.

The adoption of the report was moved by Dr. HENRY (Whitehaven), and seconded by Dr. CARLYLE (Carlisle), and after some remarks from Dr. Head, Dr. Reeves, and Dr. Barnes, was unanimously agreed to.

New Members.—The following gentlemen were elected members of the Association and Branch: J. Dixon, L.R.C.P.Ed., Whitehaven; J. H. Nicholson, L.R.C.P.Ed., Cleator; P. Divorty, M.A., M.B., Silloth; J. S. Leland, L.R.C.P., Kirkby Stephen.

Votes of Thanks.—Votes of thanks were accorded to the office-bearers of the past year, and acknowledged by Dr. Elliot.

The President of the year, T. S. CLOUSTON, M.D., was then introduced by Dr. Elliot, and took the Chair.

Election of Office-bearers.—Dr. TIFFEN (Wigton) moved, and Mr. GREAVES (Penrith) seconded, the election of Dr. Elliot as permanent Vice-President. The motion was carried unanimously.

The following office-bearers of the Branch were elected for the year 1872-73. *President-elect:* R. Tiffen, M.D., Wigton. *Members of Council:* M. W. Taylor, M.D.; W. Reeves, M.D.; H. Dodgson, M.D.; T. F. I'Anson, M.D.; W. T. Greaves, Esq.; and E. W. Henry, M.D. *Secretary and Treasurer:* Henry Barnes, M.D., re-elected. *Representatives in General Council.*—R. Elliot, M.D.; W. T. Greaves, Esq.; and W. Reeves, M.D. *Representative on Parliamentary Bills Committee.*—W. Reeves, M.D.

President's Address.—The President, Dr. CLOUSTON, delivered his inaugural address. The subject of the address was "Lunacy in its Modern, Medical, and Social Aspects." After referring to the modern definitions of lunacy, he gave an historical sketch of the progress of medical opinion in regard to the nature of insanity, and glanced at the various systems of classification propounded at different times. Dr. Skae's system of classification is in process of universal adoption because it is founded on bodily causes and symptoms. "We have seen the last of the mental classifications of insanity, and now wait on the progress of brain-pathology for the pathological—which will be the true and final—classification of the future." The labours of Griesinger, Morel, and Moreau were sketched, and the later works of Laycock and Maudsley in this country described. Maudsley was shown to have done for the science of medico-psychology what Carpenter had done for physiology in this country, taking up the various threads of speculation and research, and weaving them into as complete a texture as was possible. The relationship of insanity to other nervous and bodily diseases, its connection with criminality and drunkenness, with eccentricity and certain kinds of mental power, its interchangeability in individuals and in different generations with epilepsy, chorea, consumption, neuralgia, etc., were all gone into. Hereditary transmission was shown to be the most powerful of all the predisposing causes of insanity, being present in 70 per cent. of the cases, if those diseases now recognised to be so closely allied to insanity be taken into account. The perils and pitfalls of the life of a hereditarily neurotic person were described as fearfully numerous. A table was shown that exhibited side by side the prevalence of crime and insanity in the different counties of England. Lunier's most able and striking researches just published on the connection between the increase of the consumption of wines and alcohol and the increase of alcoholic insanity and suicides in the different departments of France between 1849 and 1869 were referred to. Dr. Clouston concluded that drunkenness was the most common of all the exciting causes of insanity in this country, accounting for 30 per cent. of the cases where any cause could be clearly ascertained. The local distribution of insanity and the extraordinary difference that exists in the different counties and districts in England as to the prevalence of insanity itself, and of many particular kinds of insanity, were mentioned, and their causes discussed. Dr. Clouston showed, from statistics derived from the reports of the Registrar-General, the Commissioners in Lunacy, and lunatic asylums, the existence of centres and focuses of epileptic insanity, congenital insanity, general paralytic insanity, and puerperal insanity in different parts of the country. Insanity was shown to cause nearly one-half per 1,000 out of the 23 per 1,000 deaths in the general population, and to cost at present in England two millions sterling annually, three-fourths of which was derived from public rates. The question whether insanity is increasing was gone into very fully, Dr. Clouston's opinions and his facts going strongly against the common notion that there has been a great increase of this disease in recent years. Lastly, the prevention of insanity was discussed, the conclusion being that on this most important point theories and opinions were plentiful enough, but facts and knowledge rare indeed. "But, though all the evidence goes to prove that insanity may be considered the type and representative of all nervous diseases—being the most widely diffused, the most Protean, the most marked, the most hereditary, the most persistent, and the most hurtful to mankind of them all—yet, if any true conclusion can be reached as to its prevention from the facts we have been considering as to its local distribution, it would be that if the mass of the people are well fed, have plenty of work, some excitement and change in life, and if they intermarry with new stocks every generation, then we shall have insanity reduced to a *minimum*."

On the motion of Dr. J. I'ANSON, seconded by Dr. ELLIOT, a cordial vote of thanks was accorded to the President for his valuable and interesting address.

Dinner.—In addition to the gentlemen present at the meeting, the following gentlemen were present at the dinner as guests; viz., The Rev. B. A. Marshall, Vicar of St. Cuthbert's; The Rev. H. Whitmore, Minor Canon of Carlisle Cathedral; The Rev. R. S. Adams, Rector of Sebergham; Mr. Robert Ferguson, Mr. Herbert Page, and Mr. John Manson, Town Clerk of Carlisle.

REPORTS OF SOCIETIES.

MANCHESTER MEDICAL SOCIETY.

Injury of the Eye: Enucleation.—Dr. LITTLE related the case of a mechanic whose left eye had been injured by a piece of iron three or four months previously. The eye was lost after repeated attacks of irido-choroiditis, and was enucleated, on account of sympathetic irritation in the sound one. The specimen showed a splinter of iron impacted in the sheath of the optic nerves.

Lead-Opacity of the Cornea.—Dr. LITTLE also exhibited a well-marked case of lead-opacity of the cornea, on a deep ulcer, arising from the injudicious use of a lead lotion.

Prolapsus Ani with Ovarian Cyst.—Mr. STOCKS exhibited an ovarian

cyst which descended with a prolapse of the rectum. The case was described in the JOURNAL for June 1st, page 584.

Tumour in a Child.—Dr. HARDIE narrated the further history of the case shown at the previous meeting. The tumour had continued to increase; and, still believing that it was a congenital cystic tumour, he made an incision along its whole length, in order to dissect it out. It was covered by the trapezius and latissimus dorsi muscles throughout its extent, and had pushed aside the smaller muscles, comprising the erector spinæ, which were closely adherent to it. Its lower surface was in contact with the ribs and the costo-vertebral ligaments, but no distinct place of origin could be made out. As the dissection proceeded, it became evident that the tumour was of the nature of soft cancer. This was borne out by subsequent microscopic examination, thus confirming the opinion of Mr. Lund. The child was in a very exhausted state at the close of the operation, but afterwards progressed favourably for a fortnight, when it was attacked with bronchitis, and died in two days. The wound had all but healed. No necropsy was obtained.

Excision of the Mamma for Cancer.—Dr. HARDIE advocated particularly incisions well free from diseased tissue, the removal of axillary glands beyond those affected, and prompt interference in the case of a return of the disease should it be within reach. With such precautions, he believed, this operation would be much more successful than it generally is. He showed two cases. One had been operated on four years ago; in this case the disease returned in the axilla three months afterwards, and a second operation was performed. The other was operated on two years ago, and there had been no return. Both patients were now in excellent health, with soft movable cicatrices, and no appearance of return of disease.

Treatment of Hydrocele.—Mr. S. MESSENGER BRADLEY gave an account of his method of treating hydrocele, the details of which appeared in the BRITISH MEDICAL JOURNAL of June 1st, and mentioned a number of cases showing the success of his plan in every instance.

Cast of the Bladder.—Mr. WESTMORLAND showed a cast of the mucous membrane of the bladder which had been passed, as is usual in such cases, during the puerperal state. The pathology of this phenomenon appears still to remain unsolved; and, although Mr. Westmorland was most interested in the details of his case, he was unable to supply any explanation to account for the occurrence.

Death under Chloroform.—Dr. GLASCOTT showed the heart, loaded with fat, of a man who had recently died at the Manchester Royal Eye Hospital, whilst chloroform was being administered to him previous to an intended cataract operation.

Orbital Tumour.—Dr. GLASCOTT showed, for Dr. SAMELSON, a case of tumour supposed to be fibro-cystic, wedged as it were between the roof of the orbit and the eyeball on the right side, and said to have originated from a blow inflicted about four years since. The patient was a woman, 30 years of age, and mother of six children. The right eye, the movements of which were unimpeded except upwards, occupied a position almost half an inch lower than the left, and there was corresponding double vision. The main trunk of the retinal veins in the right eye was comparatively gorged, and pulsated freely. There was no suffering whatever; and besides the difference of level between the two eyes, and a very slight bulge below the right eye, there were no outward signs of disease. Two days after the meeting the tumour was removed in its entirety through an incision below the eyebrow. It proved to be a very dense encysted fibroma.

Fibrous Polypus of Uterus—Dr. LLOYD ROBERTS exhibited a specimen of fibrous polypus of very large dimensions, growing from the fundus uteri. The woman ultimately died from hæmorrhage, having declined, whilst under the care of Dr. Roberts, any surgical treatment.

PATHOLOGICAL SOCIETY OF DUBLIN.

JOLIFFE TUFNELL, Esq., President, in the Chair.

Idiopathic Endopericarditis—Dr. JOHNSTON reported the case of a soldier who died of this affection at the age of 20. From early in December last he had suffered from pain in the region of the heart, but it was not till late in February of the present year that he sought for medical aid. There was at this date excessive action of the heart and vessels; the pulse was 130, and the temperature 103.0 deg. The respirations numbered thirty-two in the minute, and were laboured and sighing. A harsh, loud, double friction-murmur was audible over the front, left side, and back of the chest. There was also a soft musical basic systolic *bruit*; and, later in the case, a mitral murmur became developed. Effusion into the pleuræ took place after a time, and, finally anasarca set in. At the necropsy the pericardium appeared thickened and adherent, except over a small extent on the right side. The inner aspects of the aortic and mitral valves were fringed with lymph. The muscular structure of the heart was much hypertrophied, but healthy and free from any trace of inflammatory action. The left lung was greatly compressed, and patches of pulmonary apoplexy existed in the right lung. There was no history of rheumatism or of syphilis in the case, which seemed to be one of idiopathic disease of the endocardium and pericardium. The morbid specimens were exhibited to the Society.

Round-celled Sarcoma.—Dr. EVELYN LITTLE showed the abdominal viscera of a boy, aged 5. In January, 1871, a swelling appeared in the right lumbar region. This grew but slowly, yet in time became so large as to form a prominent projection into the right posterior lumbar region. A photograph represented the appearance of the tumour at this time. After death, an enormous mass was found occupying the greater part of the abdominal cavity. It was adherent to the surrounding parts, except on its upper surface and left side. The viscera were much displaced. The tumour weighed (with the adherent organs) 12 lbs. 12 ozs. and seemed to have originated in the right kidney, for the ureter was distinctly traceable into the mass; and a large vein, apparently the renal vessel, also ran from it. A capsule enclosed the tumour, which was composed of several cysts separated one from the other by strong septa. Some of these cysts were translucent, with fluid contents; others were quite filled. In some of the latter, evidences of fatty degeneration were present, and in others colloid transformation had occurred. The lungs showed secondary deposits of sarcoma, varying in size from a pin's head to a small nut. The microscopical appearances were those of round-celled sarcoma; many granular bodies representing a form of fatty degeneration were also observed.

Dissection of Luxation of the Sternal End of the Clavicle, upwards, forwards, and inwards.—Dr. R. W. SMITH showed the structures engaged in this injury, a case of which he had brought forward at the preceding meeting of the Society. The inner edge of the sterno-mastoid muscle of the opposite side overlay the displaced end of the bone, which was situated just over the trachea. A portion of the costo-clavicular ligament was torn across, while all its fibres were stretched to a greater or less degree.

General Mollities Ossium.—Dr. SMITH also exhibited the calvarium of a patient who was the subject of this affection. The bone cut like a turnip. The thigh-bones were only eight or nine inches in length, and frequent fractures of the other bones, ribs, clavicles, etc., had occurred.

Lithotrity.—Mr. G. H. PORTER showed four urinary calculi, removed by crushing. One weighed two drachms, and consisted of lithate. The patient was 70 years of age. The second collection of fragments weighed seventy-five grains. The patient, 51 years old, had suffered for two months, hæmaturia being a marked symptom. The third was small, and consisted of a nucleus of oxalate of lime, with an outer layer of lithate. The patient, 30 years of age, had complained for nine months. In the fourth case the stone was small, and the case was one of diabetes. There was much hæmaturia. The patient was aged 68, and had suffered for nine months.

Encysted Hydrocele (?) and Iliac Abscess.—Dr. BARTON showed the testes of a man, aged 50, which he had removed the same morning. An abscess in the groin opened externally, a little above Poupart's ligament on the left side. Through this opening exit was given to pus, fœtid gas, etc., so that a communication with the intestine perhaps also existed. Thirty years ago the man received a kick in the testicle, which subsequently enlarged, and afterwards remained in the same state. The iliac abscess resulted from a recent injury. After removal, the testicle was found to be healthy; but close to it a large cavity existed, containing pus similar to that which escaped from the opening in the iliac region. With this the cavity communicated by a long tortuous canal. The interior of the abscess was lined with a hardened layer, perhaps of cholesterine.

Malignant Intestinal Growth, resembling Ovarian Tumour during Life.—Dr. JAMES LITTLE described and exhibited a large tumour, engaging the intestines of a woman, unmarried and 40 years of age. An irregular swelling was noticed in the lower part of the abdomen; on the left side it seemed like a hard lump, on the opposite side it gave the idea of a fluctuating cyst. It had first appeared twelve years before, was very slow in growth, and painless. Menstruation had always been regular. The cyst was discovered to be connected with the intestine, and was full of fluid fæces, and the whole tumour was a malignant growth.

Glioma of the Brain.—Dr. EVELYN LITTLE showed a tumour of this description. During life, paralysis of the third, fourth, fifth, sixth,

and seventh nerves on the affected sides existed. The tumour was intimately connected with the dura mater, and seemed to take its rise at the origin of the fifth nerve. The microscopical appearances were those of the glioma of Virchow.

Concluding Address of the President.—Mr. TUFNELL expressed his regret that there had been no competition for the gold medal usually presented by the Society to the best essayist of the undergraduate class. The session just closed was the thirty-fourth of the Society, and was in every respect worthy of its predecessors. He believed that a debt of gratitude was due, by the students who had enjoyed the privilege of being present at the Society's meetings, to the members who had brought forward such a number of most valuable and instructive communications.

CORRESPONDENCE.

DR. WILKS'S ADDRESS IN MEDICINE.

SIR,—You have spoken highly—perhaps not too highly—of Dr. Wilks's medical speech at Birmingham. It had indeed many qualities which excite approval—a cultivated scepticism, an assumed superiority of intelligence of the lecturer and his hearers over the rest of mankind in general and the medical profession in particular. Refined nihilism is always acceptable to the mass; and easy ridicule of idols, real and imaginary, delights the multitude. Reading Dr. Wilks's address, I am not surprised that it was listened to with applause. I shall be more astonished if it be read with approbation.

I ask permission, such as he must perforce desire to have accorded to me, and as you will not, I am persuaded, refuse, to examine briefly some of the vaguely cynical propositions with which he unwisely charmed his audience.

To point to the ridicule with which the few have met great inventions and discoveries, as a proof that all novelties are of necessity or as a rule undervalued, is a taking fallacy, borrowed from the quacks—one which answers the purpose of a Hahnemann or a Morison, but which a Wilks should disdain. He has seen an old gentleman "who smiled at Laennec and made his stethoscope a bouquet-holder;" and, "more astonishing still," has "heard his own favourite pursuit of dissecting the dead denounced as useless." But the moral he deduces—that those only who love new doctrines of nihilism are entitled to rank among the elect, is not less "preposterous" than that laudation of the acted past which he denounces. The stethoscope made its way so fast that, in his own time, Laennec saw himself elevated to the highest pinnacle of fame, and all Europe working with his tools. The laryngoscope and the ophthalmoscope have no sooner been created than they have become the chosen weapons of whole armies of investigators, to whom novelty has a flavour which sugars the driest and most minute granules of scientific dust. Pathological investigation has been the idol, the dream, the ideal mistress, of the most enthusiastic masters of biology and medicine from Aristotle to Astley Cooper. It is not a little strange to hear a physician of Cooper's school and of the present day stand up before a grave medical audience to speak of this science patronisingly, as nothing else than "my own favourite pursuit"—as something of which he and they have newly discovered the importance. If the sphygmograph has not yet gained a formal place amongst modern clinical apparatus, it is because those who have most loudly protested its clinical capability have signally failed to do much more than make a little noise with it, and have almost pronounced its death-warrant clinically. But it is capable of resuscitation, if any accurate and modest observer can effect some useful clinical work with it. *Teste*, the clinical thermometer, which has been enthusiastically adopted all over the world by physicians, and the antipyrexial use of the cold bath, which your leaders have driven the whole profession into using, and that so recklessly, that I am not sure that the said leaders had not better never have been written.

It is, of course, much easier to misstate the doctrine of "change of type" of disease as one which implies that "man, having existed on the earth for six thousand years (according to orthodox notions) should *alter his type* in the course of one generation," than to refute or replace the belief that the medical constitution varies in undulating cycles; that as, in the course of one single observed epidemic, varying types of intensity and cause of disease may be observed—slight, short, and abortive at the outset, intensely developed in the middle, and fading into brevity or faintness at the end of an epidemic—so types of other diseases not epidemic may be in one cycle of years sthenic, and in another asthenic, in one malignant, and in another benign. That meteorological conditions, or conditions of soil or modes of feeding or living, may during secular epochs alter the medical type of races or of majorities, may be untrue; but it is not a ridiculous, or groundless, or preposterous theory. It is not to be killed by ridicule, or by a form of misstatement which is hardly excusable *ex cathedrâ*, even if be put forward in ignorance.

The importance of studying the slow beginnings of disease—*obstare principiis*—is well stated by the orator. He has ingeniously rediscovered Hippocrates, and may claim that among the glories of the new school. The disbelief in the existence of acute disease in a healthy subject may not be so Quixotic as Dr. Wilks oddly considers the belief to be; but until he has abolished physiology as well as therapeutics—has shown that septic ferments will not poison healthy blood, that cold will not freeze, and that heat will not disorganise albuminous tissues, I must claim permission to think it less reasonable. It contrasts oddly with his subsequent assertion that the immense classes of diseases arising from vicissitudes of climate, from specific, contagious, and epidemic causes, attack the strong and healthy, rather than the weak and diseased. Both propositions appear equally wide of the mark. It is certainly those who live under depressing conditions of insufficient food and clothing, impure air, soil, and clothing, who suffer most severely and in greatest numbers from all epidemics; and I am surprised to find an intelligent physician making a blank assertion to the contrary. This is the place in which to ask for facts. Can Dr. Wilks produce them? I pause for a reply.

I am, etc., LAUDATOR TEMPORIS ACTI.

PROFESSOR HUMPHRY'S LECTURES ON HUMAN MYOLOGY.

SIR,—The logic in my third lecture on human myology, respecting which Dr. Haughton expresses his surprise in the last number of the JOURNAL, is simply this. Dr. Haughton seeks to establish a "difference between a hand and a foot as shown by their flexor tendons," maintaining that in a proper hand the strength of the tendons above the wrist should be greater than the united strength of all the finger tendons, and, conversely, that in a proper foot the united strength of the flexor tendons of the toes should exceed the strength of the flexor tendons above the heel. He weighed certain lengths of tendons from various animals above the wrist and ankle, and compared these weights with the weights of equal lengths of the flexor tendons of the fingers and toes, deducing the difference in cross section and strength from the difference in weight. He found the result to accord with his views. Dr. Haughton does not appear to have made the experiment on the tendons in man. Yet it is in man that the difference should be most apparent, forasmuch as in him the hand and the foot are more specialised than in any other animal. I accordingly carefully weighed equal lengths of the flexor tendons of the fingers from above and below the wrist, and of the flexor tendons of the toes from above and below the ankle, and could discover no difference in either case. Dr. Haughton remarks that I should have compared the cross sections of the flexor tendons above the wrist or ankle with the sum of the cross sections of the tendons of the five fingers or toes. But as I found no difference in the weight, I clearly could not deduce any difference in the cross sections.

I confess that the view expressed by Dr. Haughton in the paper referred to (*Proceedings of the Royal Society*, xviii, p. 359), respecting the different action of friction in the two cases, did not sufficiently commend itself to me to induce me to continue the investigation by repeating the experiment. In his letter, Dr. Haughton says, "If Dr. Humphry will consult some of his mathematical friends in Cambridge, he will find that I am correct in stating that friction acts in opposite directions in a *hand* regarded as a *grasping* organ, and in a *foot* re-

garded as a *propelling* organ." I have accordingly consulted three mathematical friends, two of whom were senior wranglers and the third high in the mathematical tripos, showing them Dr. Haughton's paper (the abstract of it, that is to say, in the *Proceedings of the Royal Society*) and letter. They all agree that Dr. Haughton's view, as expressed in the abstract and letter, is so evidently wrong that they cannot but think that he means something different from the impression they derive from the perusal of these statements.

If, therefore, Dr. Haughton will kindly favour us with a more explicit, and perhaps mathematical, statement of his views, which could be submitted to one of the meetings of the Cambridge Philosophical Society, it would, I feel sure, receive the attention due to a suggestion from so high an authority, from one to whom both mathematics and anatomy are so much indebted. The result of the discussion would have the effect of elucidating the question at issue, and the contingent, but not less important, effect of increasing in mathematicians the desire to apply their knowledge to the investigation of the science of anatomy.

I am, etc.,

G. M. HUMPHRY.

Anatomical Museum, Cambridge, August 26th, 1872.

THE CONTAGION OF SMALL-POX.

SIR,—As I was not able to be present at the Association meeting at Birmingham to read my paper on the Relative Contagiousness of the two forms of Small-pox, and had therefore no opportunity of replying to any criticism it might call forth, I hope you will give me an opportunity of correcting a misapprehension of the views I put forward, enunciated by Dr. Burke. He says that non-epidemic small-pox is known as chicken-pox, and that he does not believe in any distinction between the two diseases, which are alike contagious. Now the point on which I dwelt, and which I desire to press home to the notice of the profession, is this: that there are two distinct forms of small-pox; one contagious, the other absolutely non-contagious; and, further, that these two forms are, each of them, distinct from chicken-pox. To put the matter as plainly as possible, I will briefly enumerate what I regard as the leading diagnostic symptoms of each form of disease.

1. In true small-pox, we have marked constitutional symptoms; headache, intense pain in the back, and milky tongue; the pustules are depressed, and all in the same part of the body run their course simultaneously. This form of disease is contagious.

2. In modified small-pox, as I use the term, we have the same constitutional symptoms, more or less intense; but the pustules are all conical, without any central depression. This form, according to my experience, is not contagious.

3. In chicken-pox there is scarcely any constitutional disturbance; the pustules are depressed, and complete their course in four or five days. Moreover, they appear in successive crops, often for many days; so that in the same part, as for example the face, pustules may be seen, side by side, in all their different stages. This is absolutely diagnostic of chicken-pox, and is never seen in small-pox. It is, as is well known, contagious, but it cannot give rise to small-pox, nor small-pox to it.

The non-contagiousness of small-pox with conical pustules, without any admixture of depressed ones, is, I believe, an entirely new view, but one which, from the large nuumber of cases on which I found it, I confidently put forward as worthy the serious attention of the profession. The term modified small-pox has hitherto had but a vague significance, and has been applied to almost any case in which the pustules have, from whatever cause, run a more or less incomplete course. It will be seen that I would confine the term to that variety of the disease marked by conical pustules without depression. Should the truth of my observations be confirmed, it might perhaps be more emphatic to speak of "contagious" and "non-contagious" small-pox, leaving the term "modified" still to denote those cases which merely run an irregular course.

I am, etc.,

W. S. BRITTON.

KREASOTE IN GASTRIC DISORDER.

SIR,—In the clinic of Dr. Murchison, as reported in the JOURNAL of July 20th, the virtue of kreasote is extolled as a remedy in sarcinous vomiting. His opinion is also confirmed by Dr. Sawyer (August 17th). In upwards of thirty years of experience in the use of kreasote, with or without anodynes or antacids, according to the symptoms, I have generally found it the most efficacious remedy in almost every form of muco-enteritis. Personally, I have been subject to chronic inflammation of the lining membrane of the stomach at its cardiac orifice for thirty years. I can always cover the seat of pain with the tip of my finger beneath the end of the ensiform cartilage. Nearly sixteen years ago, I vomited blood so excessively, from a ruptured blood-vessel in the same locality, that upon my arrival at Gloucester station from Swansea, a fainting fit nearly proved fatal to me. I rallied and proceeded on my journey to Cheltenham, accompanied by Dr. Wood, now of Basswood House. Cases such as mine are most admirably described in Dr. G. Budd's book on *Diseases of the Stomach* (*vide* "Simple Ulceration"). With great perseverance under a milk-diet, with the aid of setons, and especially with the use of kreasote, the ulcer healed. In the autumn of 1870, I took a voyage to Sydney. I was intensely sea-sick during a terrific gale in the Channel, and occasionally throughout the voyage outward and homeward bound. I lost twenty pounds in weight, in consequence of the shipowner not having put a cow on board. I found the preserved milk to disagree with me.

In my experience, kreasote in pills or draughts is the best remedy for sea-sickness or simple diarrhœa, but it will not prevent the former. A severe and protracted attack of diarrhœa was eventually cured by one dose of half a drachm of dilute sulphuric acid and ten minims of tincture of opium, in water, where every other remedy used had failed to give me relief.

I had a slight attack of hæmatemesis in May last, while in London. I am now as well as I have been for the last thirty years of my life. I hope shortly to make a voyage to India or China, although I have nearly attained the average years of man. When I reflect that I had legal notice nearly four years ago to quit a position I had occupied for the best years of my life, on the grounds of hopeless illness, I have much to be thankful for. I shall hope to be enabled to report something to interest your readers after further experience at sea.

I am, etc., WILLIAM DALTON.

Midhurst, August 17th, 1872.

COLUMN FOR THE CURIOUS.

BUXTON WATERS.—In a rare and curious old work, entitled a *Description of England and Wales* (London: 1769), occurs the following comprehensive summary of the properties of the Buxton hot spring.

"The water possesses an intermediate degree of heat, between those of Bath and Bristol; and is the principal *calcarius* [*sic*] water described by Dr. Short; who informs us, that if five-eighths of a pint of boiling water be added to three pints of river water in the summer, it will give the exact heat of Buxton water in that season. It has a sweet and pleasant taste; and, when cooled, weighs eight or ten grains in a pint less than river water. Its nature approaches nearer to that of Bristol than Bath; and it may be safely used both inwardly and outwardly in cases where Bath waters are hurtful.....It has relaxing, diluting, sweetning, and attenuating qualities, and opens obstructions of the smallest vessels. It cools the parts that are too hot, gently warms those that are too cold, and dries up those that are too moist. It is not followed with sweating, but rather with coldness; and is good in consumptions, for hot scorbutic humours, and all fluxions and bleedings, as well as hypochondrical and hysterical cases. It is also of great use, both externally and internally, in the regular gout, in rheumatic and scorbutic pains, in vomiting of blood, and in inordinate fluxes of the piles, as well as in other bleedings. It is proper in an inflammation of the liver, and in heat and obstructions of the kidneys; in all which cases it has been found successful even by external use. Internally it is good in a diabetes, in bloody urine from a weakness in the urinary passages, in a bilious cholick, in want of appetite, in cold stomachs from hard drinking, especially of spirituous liquors, and in an atrophy, from a sharpness of blood, occasioned by free drinking at improper times of the day. To these may be added, contraction and stiffness of the vessels, especially in old age; cramps, convulsions, the dry asthma without a fever or quick pulse, barrenness from various cases [*sic*], and also a gonorrhœa. It likewise cures St. Anthony's fire, ringworms, scabs, the itch, morphew, nodes, chalky swellings, and all hard, callous tumours, and old strains and witherings of the parts; in all which last cases bathing is chiefly to be used."

J. HORNSEY CASSON, Ashbourne, Derbyshire.

PORT OF LONDON SANITARY AUTHORITY.—The first meeting of this new Corporation Committee was held on the 22nd instant. Various matters were discussed bearing on the new and important duties entrusted to the Corporation; and a valuable account of the precautions taken and the work done by the Thames Inspection Committee, which was appointed a year since under the Privy Council, was presented by their subcommittee, who attended with their Honorary Secretary, Dr. Meymott Tidy, so as to render every assistance in their power to the new authority in putting the Act into operation.

OBITUARY.

GEORGE JEPSON, Esq., Gainsborough.

Mr. George Jepson was the son of the Rev. George Jepson, a prebendary in Lincoln Cathedral, in which city he was born in 1788. He was apprenticed to the late Mr. G. Parnell of Ganiston; and at the expiration of his apprenticeship he went to Guy's Hospital, where he studied under Sir Astley Cooper, for whom he dressed. He became a Member of the Royal College of Surgeons in 1810, and in the following year entered into partnership with his former master, who retired from practice in 1827. Mr. Jepson continued in active practice to within a short period of his death, which took place on August 17th, in the eighty-fifth year of his age.

MEDICAL NEWS.

University of London.—First M.B. Examination, 1872. Examination for Honours.—Anatomy.

First Class.

Houghton, Walter Benoni (Exhibition and Gold Medal), University College
Duncan, Peter Thomas (Gold Medal), University College

Second Class.

Gould, Alfred Pearce, University College

Physiology, Histology, and Comparative Anatomy.

Second Class.

Houghton, Walter Benoni, University College
Gould, Alfred Pearce, University College
Crocker, Henry Radcliffe, University College
Duncan, Peter Thomas, University College
Herman, George Ernest, London Hospital

Organic Chemistry and Materia Medica and Pharmaceutical Chemistry.

First Class.

Houghton, Walter Benoni (Exhibition and Gold Medal), University College
Crocker, Henry Radcliffe (Gold Medal), University College
Duncan, Peter Thomas, University College

Second Class.

Gould, Alfred Pearce, University College
Herman, George Ernest, London Hospital

University of Aberdeen.—During the past year, the following candidates, after the usual examinations, received degrees in Medicine and Surgery.

Degree of M.D.—Harcourt M'Leod Busfield, Lonmay; Thomas Edward Clark, M.R.C.S., L.S.A., Clifton; Thomas Robert Pearson, M.R.C.S.Eng., L.R.C.P.Ed., Shotley Bridge, Durham.

The following candidates received promotion to the degree of M.D.

Alexander Thomas Anderson, M.B., C.M., Wigan; George Watson Beattie, M.B., C.M., Ballater; Arthur Woolsey Blacklock, M.B., C.M., Brighton; Edward Thomas Blake, M.B., Reigate; Robert Catto, M.B., C.M., Portsoy; John Gillies, M.B., Melksham, Wilts; George Wright Hutchison, M.B., C.M., Belford Hospital, Fort William; Alexander Lawrence, M.B., C.M., County Asylum, Chester; Alexander Edward M'Rae, M.B., C.M., Fettercairn; George Archibald Maconachie, M.B., C.M., Grant Medical College, Bombay; David Manson, M.B., C.M., Amoy, China; Thomas Milne, M.B., C.M., New Deer; George Morison, M.B., C.M., Huntly; Alexander Begg Munro, M.B., C.M., St. Helen's, Melrose; Alfred Henry Newth, M.B., Hayward's Heath, Sussex; Walter Rosser, M.B., Trinity College, Glenalmond; George Thomson, M.B., C.M., Oldham, Lancashire; John William Thomson, M.B., C.M., Brechin; John A. J. Timmins, M.B., C.M., Wellington; Edward Allan Waterworth, M.B., Newport, Isle of Wight; Albert Williams, M.B., C.M., Sydenham, Surrey; Richmond Cotts Willock, M.B., C.M., Aberdeen; William Yeats, M.B., C.M., Stafford.

The following candidates received degrees in Medicine and in Surgery.

Charles Aldridge, L.R.C.S.Lond., West Riding Asylum, Wakefield (M.B. and C.M.); Alexander Burrell, Fort William (M.B. and C.M.); Harcourt M'Leod, Busfield (C.M.); William Campbell, Kinnellar (M.B. and C.M.); William Carless, Stroud, Gloucestershire (M.B. and C.M.); Thomas Edward Clarke (C.M.); William Alexander Cushny, M.A., Fochabers (M.B. and C.M.); Frederick William Elliot, M.R.C.S.Lond., London (M.B.); Patrick Davidson Farquharson, New Deer (M.B. and C.M.); Edward Footner, M.R.C.S.Lond., 91st Highlanders (M.B.); Alexander Forsyth, Aberdeen (M.B. and C.M.); George William Fowler, Chalmers' Hospital, Banff (M.B. and C.M.); Robert John Garden, Aberdeen (M.B. and C.M.); Robert Shirra Gibb, Cults, Aberdeen (M.B. and C.M.); Cuthbert Chapman Gibbes, Plymouth (M.B. and C.M.); John Stephen Gibbons, Swallowvale, Lincolnshire (M.B. and C.M.); Clement Godson, M.R.C.S.Eng., London (M.B. and C.M.); Charles Gosse, M.R.C.S.Lond., South Australia (M.B. and C.M.); James Inglis, Aberdeen (M.B. and C.M.); William Bisset Knowles, Aberdeenshire (M.B. and C.M.); James Law, Aberdeen (M.B. and C.M.); Alfred Edward Aust Lawrence, Bristol (M.B. and C.M.); David Low, Skene (M.B. and C.M.); John Lyon, Peterculter (M.B. and C.M.); John Davidson Macdonald, M.A., Glass, Aberdeenshire (M.B. and C.M.); Duncan John MacKenzie, Ross-shire (M.B. and C.M.); William M'Gregor, L.R.C.P. and L.F.P.S.G., Lunatic Asylum, Aberdeen (M.B.); George Mickle, M.A., Ripon (M.B. and C.M.), Andrew Mitchell, New Deer, Aberdeenshire (M.B. and C.M.); John Taylor Parkinson, M.R.C.S.Ed., Yorkshire (M.B. and C.M.); Thomas Robert Pearson (C.M.) John Pringle, Torwoodlee (M.B. and C.M.); James Reid, M.A., Ellon (M.B. and C.M.); James Alexander Reid, Kildrummy, Aberdeenshire (M.B. and C.M.); Robert William Reid, Auchindoir (M.B. and C.M.); Thomas Rennie, Inverurie (M.B. and C.M.); John Rigby-Hughes, M.R.C.S.Eng., Runcorn, Cheshire (M.B. and C.M.); George James Robertson, Daviot (M.B. and C.M.); George Washington Smith, Methlic (M.B. and C.M.); James Stephen, M.A., St. Cyrus, Kincardineshire (M.B. and C.M.); Frederick Robert Swaine, Bengal (M.B. and C.M.); Peter Tytler, Midmar (M.B. and C.M.); Francis James Wright, L.S.A., Preston, Lancashire (M.B. and C.M.); James Davidson Wyness, Aberdeen (M.B. and C.M.); George Edward Welford, Sunderland (M.B. and C.M.).

Of the above-mentioned Candidates—Alexander Forsyth, Robert John Garden, David Low, James Reid, Thomas Rennie, John Rigby-Hughes, and Peter Tytler, received their Degrees in Medicine and Surgery, with Highest Academical Honours; Charles Aldridge and George James Robertson their Degrees in Medicine, with Academical Honours; George William Fowler and Robert William Reid their Degrees in Surgery, with Academical Honours; and "A series of Illustrations of Pathological Histology", by William M'Gregor, was considered deserving of high commendation.

At the same time, Walter Gawen King, Francis Ogston, David Aikman Patterson, and Alex. Reid Urquhart, were certified as having passed all the Examinations, but did not Graduate.

At the late Graduation Term, the following were declared to have passed part of their Examinations:—James Adams. John Alexander, Alfred Baldock, Percy Hugh Benson, Anthony Butler, George B. Councell, John S. Craig, Alexander Craigmile, John Craven, Meldon J. Dempsey, Arthur H. Downes, James M'Call Fehrsen, John Ed. Ferguson, Alex. D. Fraser, John Roubel Gray, Charles C. Greig, Frederick S. Hardwicke, Philip N. Hart, Francis Hay, Lucius Holland, George A. Imlay, John C. Innes, Francis E. Jackson, James Laing, Ralph W. Leftwich, Edward J. Lloyd, Colin M. Macandrew, George R. MacGregor, John M'Combie, Finlay A. M'Ewen, Irvine K. Milne, John Hay Moir, Robert James Morice, Alex. D. L. Napier, Henry A. A. Nicholls, Malcolm Poignaud, Andrew Richardson, William Roberts, Henry John Robbins, John Scott, William T. Sheppard, Wm. Japp Sinclair, Chas. G. L. Skinner, Robert Gordon Smith, Francis H. Spencer, Henry G. T. Strickland, James W. H. Trail, John B. B. Triggs, Albert John Venn, Wm. Edward Webb, Patrick A. Weir, Robert Wharry, Henry Wilcox, Wm. H. Williamson, Robert M. Yule.

Apothecaries' Hall.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 22nd, 1872.

Atkins, Francis Thomas, Plumstead, Kent
James, Arthur Culver, Kennington Park Road

The following gentlemen also on the same day passed their primary professional examination.

Davey, Charles James, Guy's Hospital
Harsant, William Henry, Guy's Hospital

Indian Medical Service.—List of successful candidates at the competitive examination held at Burlington House, on August 12th, for fifteen appointments as Assistant-Surgeons. [Maximum number of marks, 3700.]

Order of merit.	Names.	No. of marks.	Order of merit.	Names.	No. of marks.
1.	Brereton, S.	2429	9.	Ahmed, Z. A.	1870
2.	Bovill, E.	2255	10.	Gilligan, W. A.	1860
3.	Price, G.	2233	11.	Hill, H. W.	1795
4.	Moriarty, M. B.	2215	12.	Beech, L.	1785
5.	Dundas, G. A.	2097	13.	Cullimore, D. H.	1785
6.	O'Brien, B.	2035	14.	Griffiths, W. E.	1775
7.	Levinge, E.	1985	15.	Esmonde-White, H. B.	1750
8.	Rogers-Harrison, A. W.	1893			

MEDICAL VACANCIES.

The following vacancies are announced:—

ALVERSTOKE UNION—Medical Officer for the Town District: £90 per annum.
ANGLESEY UNION—Medical Officer for the Llangefni District: £50 per ann.
BASINGSTOKE UNION—Medical Officer for the Basingstoke or No. 1 District: £85 per annum. and extra fees.
BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon: £100 per annum, furnished apartments, coal, gas, and attendance.
CASTLE EDEN COLLIERY—Surgeon.
CHARING CROSS HOSPITAL—Assistant-Surgeon.
DAVENTRY UNION, Northamptonshire—Medical Officer and Public Vaccinator for District No. 5: £30 per annum, and extra fees.
GENERAL HOSPITAL, Birmingham—Assistant Dispenser.
GLOUCESTER COUNTY LUNATIC ASYLUM, near Gloucester—Junior Assistant Medical Officer: £80 per annum, board, lodging, and washing.
GUY'S HOSPITAL—Surgeon.
LIMERICK UNION, co. Limerick—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Annacotty Dispensary District: £100 per annum, and fees.
LISTOWEL UNION, co. Kerry—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballylongford Dispensary District: £100 per annum, and fees.
METROPOLITAN DISPENSARY and CHARITABLE FUND, Fore Street, Cripplegate—Physician.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Two Entrance Scholarships: £25 and £20 per annum, for two years.
MILBANK FORGE WORKS, Castle Eden—Surgeon.
PLYMOUTH. Pride of Devon Lodge of Odd Fellows—Surgeon.
PROVIDENT MEDICAL INSTITUTION AND LYING-IN CHARITY, Pimlico Road—Consulting Physician.—Attending Medical Officer.

ROYAL INFIRMARY, Glasgow—Extra Physician.
ROYAL PORTSMOUTH, PORTSEA, and GOSPORT HOSPITAL—Medical Officer for the Gosport Dispensary.
ST. MARY'S HOSPITAL MEDICAL SCHOOL—Scholarship: £40 per annum for three years.—Exhibition: £20 for one year.
ST. MARYLEBONE, Parish of—Medical Officer for the St. Mary District.
STRANORLAR UNION, co. Donegal—Medical Officer and Public Vaccinator for the Cloghan Dispensary District: £100 per annum, and fees.
SUSSEX COUNTY HOSPITAL—House-Surgeon: £80 a year, with £10 a year from each resident pupil, board, and residence.
TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.
WARNEFORD LUNATIC ASYLUM, Oxford—Resident Medical Superintendent: £260 per annum, with board, furnished apartments, etc.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

DICKINSON, Edward H., M.A.Oxon., M.B., M.R.C.P., Physician to the Liverpool Northern Hospital, appointed Lecturer on Comparative Anatomy and Zoology at the Liverpool Royal Infirmary School of Medicine.
HUNTER, George Yeates, Esq., appointed Surgeon to Sir Jamsetjee Jejeebhoy's Hospital at Bombay, Professor of Anatomy in the Grant Medical College, and Curator of the Museum.
SHARPE, Alfred, M.D., appointed Assistant Visiting Surgeon for Woolwich, under the Contagious Diseases Act, *vice* J. B. Ryley, Esq., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGES.

*EADE, Peter, M.D., of Norwich, to Ellen, widow of the late Henry LING, Esq., and only daughter of Hugh RUMP, Esq., of Wells-next-the-Sea, at Norwich, on August 22nd.
MORRIS, Joseph, Esq., Surgeon, of Leamington, to Gertrude Hannah, youngest daughter of the Rev. J. W. WATSON, M.A., Vicar of Christchurch, Folkestone, at the Parish Church of Stand, Manchester, by the father of the bride, on Tuesday, August 20th.

DEATHS.

CRAMER, F. A., L.R.C.P.Ed., at Lower Sandlin, near Malvern, on August 6th.
WINSTANLEY, Robert, Esq., Surgeon, at Wigan, aged 38, on August 17th,

EXTRAORDINARY FECUNDITY.—Dr. E. Mason, of Alabama, recently reported a case of a lady who bore seventeen children in nineteen years—twice twins, and once four at a birth. The latter died, but the other thirteen survived.

COMMUNICATIONS, LETTERS, ETC., have been received from:—
Dr. C. Handfield Jones, London; The Rev. Dr. Haughton, Dublin; Dr. Braxton Hicks, London; Dr. Morell Mackenzie, London; Dr. A. Edis, London; Dr. J. Thompson Dickson, London; Mr. C. W. Thorpe, Todmorden; Dr. McConville, Glasgow; Dr. T. R. Fraser, Edinburgh; Dr. Newman, Stamford; Mr. Martin, Evesham; J. S.; Mr. F. E. Pearse, Wellington; Mr. Freer, Stourbridge; Dr. T. E. Clark, Clifton; Dr. E. H. Dickinson, Liverpool; Mr. Wanklyn, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. H. Barnes, Carlisle; Dr. G. M. Humphry, Cambridge; Dr. Thorowgood, London; Mr. T. Robinson, London; The Military Secretary, India Office; Mr. S. M. Bradley, Manchester; Mr. G. M. Harrison and Mr. Ledward, Manchester; Mr. C. L. Kemp, London; Mr. Nettleship, London; Mr. Edmund Parker, London; Mr. W. Cobbett, Manchester; Dr. Jepson, Stone, Dartford: Rev. W. G. Procter, Lower Darwen; Mr. W. S. Britton, London; Dr. Stanley Haynes, Malvern; Mr. G. E. Rundle, Gosport; Dr. Drury, Pulham St. Mary; Dr. Dobell, London; Dr. Diver, Coterham; Dr. Wiltshire, London; Dr. Alexander Ogston, Aberdeen; Dr. Steele, Portobello; Our Dublin Correspondent; Prophylaxis; Dr. Parsons, Dover; Mr. Skrimshire, Brynmawr; Mr. J. W. Langmore; etc.

BOOKS, ETC., RECEIVED.

The Twenty-fifth Annual Report of the Chinese Hospital at Shanghai. Under the care of Dr. James Johnson. Shanghai: 1872.
Report of the Sanitary State of the Hackney District for the year 1871. By John W. Tripe, M.D. London: 1872.
The Abuse of Alcohol in the Treatment of Acute Diseases. By T. P. Heslop, M.D. London: 1872.
Statistics of Mortality among Prisoners. By D. Nicolson, M.B. London: 1872.
On the Preservation of Health. By Thomas Inman, M.D. Third Edition. London: 1872.
On the Restoration of Health. By Thomas Inman, M.D. London: 1872.
The Heart and its Diseases: with their Treatment. By J. Milner Fothergill, M.D. London: 1872.
The Abuse of Alcohol in the Treatment of Acute Diseases: a Review. By T. P. Heslop, M.D. London: 1872.
Observations in Myology. By G. M. Humphry, M.D., F.R.S. Cambridge and London: 1871.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY ..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.
WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY .... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY ..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

DR. ALEXANDER OGSTON (Aberdeen).—Thanks. It shall receive early insertion.

J. S.—A member joining the Association at the present time pays a subscription of ten shillings and sixpence for the half year commencing July 1st. This has been a rule of the Association for some years.

SPASMODIC ASTHMA FOLLOWING USE OF LINSEED-MEAL POULTICES.

IN reply to Dr. W. Smith's question on this subject, Dr. T. E. CLARK writes:—Some time ago (in 1858), I had under my care an old lady, aged 83, who not only suffered as if under the influence of asthma, when the linseed-meal was applied to her person, but would even say "that there was linseed-meal in the house, and that she knew it by the irritation in her nose and chest." Having lodged in her house, I can testify to the truth of her statement; for, unknown to her or any of the household, I had some linseed-meal in my room. Shortly afterwards, she began to get all the symptoms of catarrh. When I saw her, she asked if linseed-meal was in the house; and then told me that for years she could not bear linseed meal near her.

DR. THOROWGOOD writes:—In reply to Dr. W. Smith's query, I cannot call to mind any instance of asthma caused by a poultice of linseed-meal; but I remember a few years ago being consulted by a grocer, who told me that the opening of a drawer, a packet, of linseed-meal in his presence, invariably brought on a severe attack of spasmodic asthma.

DR. DIVER (Caterham Valley) writes:—I recommended a man who consulted me a year or two ago to use a linseed-meal poultice, and he told me he dared not use it; nor, indeed, could he sit in his room if any linseed-meal were in the cupboard, for he got an attack of asthma under such circumstances. Three years since, I was administering some medicine which contained spirit of nitrous ether to a child. An old lady was sitting near; and all at once I heard asthmatic breathing, and found her in distress and breathing with difficulty. The trouble lasted for about a minute, when all was right again. She then told me that the smell of the medicine named always produced the same effect upon her.

ANOTHER correspondent says:—I have two nephews, for whom (after many trials) linseed-meal poultices are never prescribed. Their application is invariably attended with irritation and œdema of the face. In one instance, where one was placed on the leg, the same result followed. One of them, on sleeping in the same bed with a school-fellow who had on a linseed-meal poultice, was affected in a like manner. I have not had any experience with regard to spasmodic asthma as a sequence. The effects to which I refer were first observed on an attack of severe cold with bronchitic symptoms.

THE GEOGRAPHY OF DISEASE.—We regret to hear from Mr. Haviland that the maps which he sent to the Temporary Museum at the Birmingham Meeting have been lost *in transitu*. Much disappointment and actual pecuniary loss have been thus occasioned, as the author was desirous of exhibiting his works not only for the sake of contributing to the museum, but with the view of increasing his subscription list, which the great expense of publication has rendered peremptory. The same untoward circumstance also prevented Mr. Haviland from reading a paper at Brighton at the late meeting of the British Association.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

IRON BUILDINGS.—Mr. J. H. Gornall (Warrington) asks for information about iron buildings used as surgeries; where they may be obtained, etc.

BALMFORTH *v.* BUCKLEY AND FLETCHER.

SIR,—Having read the two letters signed "J. and E. Whitworth" and "William H. Hewitt", published in the BRITISH MEDICAL JOURNAL of the 24th inst., may I ask you to insert the following reply?

Mr. Hewitt states his object to be to contradict a previous statement—namely, "that Mr. Southam strongly advised that the case should be submitted to arbitration, but that this was refused by the defendants". Mr. Whitworth writes with the same object, though he does not very clearly state it. The previous statement was quite true, as will be seen by the following facts.

On the 24th June last, the plaintiff called upon me and stated that he had seen Mr. Southam, to whom, after Mr. Beever's death, he applied; that Mr. Southam positively refused to examine him and give evidence, or have anything to do with the case, upon the ground that the professional reputation of brother surgeons was likely to be affected, unless he were first allowed to offer a reference to both defendants. By the plaintiff's instructions, I then wrote the following letter to Mr. Southam.

"61, Brown Street, Manchester, June 24th, 1872.

"*Balmforth* v. *Buckley and Another.*

"Dear Sir,—Mr Balmforth informs us that, before examining him, you have expressed a wish to suggest an arbitration to Messrs. Buckley and Fletcher. Mr. Balmforth instructs us to say that there is no objection to that step.

Yours truly, COBBETT, WHEELER, and COBBETT.

"G. A. Southam, Esq., Surgeon."

Upon receipt of this letter, Mr. Southam showed it to both the defendants, and strongly urged upon them the advisability of a reference; but that course was at once declined by Dr. Ogden Fletcher, and, after consideration, by Mr. Buckley, in the following letter.

"Ardwick Villa, 6, Hyde Road, June 27th, 1872.

"My dear Sir,—After leaving your rooms, I saw my solicitor, who advises me to decline the offer for an arbitration in Mr. Balmforth's affair.

"I remain, with thanks, yours very respectfully,

"To G. Southam, Esq." "J. BUCKLEY.

After the receipt of this letter the writ was issued, and Mr. Southam and the other surgeons who were subsequently witnesses for the plaintiff, first examined him. Shortly prior to the first examination of the plaintiff by the surgeons who were afterwards witnesses for the defendants, Mr. Whitworth and Mr. Hewitt called upon me for the purpose of obtaining my consent to that examination. That was the only object of their visit, and the main subject of the conversation. The subject of reference was, however, incidentally referred to, by my expressing my surprise that the overtures made had been refused. Both solicitors intimated that they were not authorised to accept a reference, Mr. Hewitt expressing strong disapprobation of such a course; and the subject dropped. A day or two before the examination just mentioned took place, Mr. Southam left a memorandum at my office inviting my attendance at the examination, as he hoped to be able to arrange a reference even then. I accordingly communicated to Messrs. Whitworth and Mr. Hewitt my intention to attend, and received from Mr. Hewitt, in reply, the following letter.

"8, Marsden Street, July 19th, 1872.

"*Fletcher* ats. *Balmforth.*

"Dear Sirs,—I understood that it was arranged between us that we should not attend upon these examinations. It will not be possible for me to be in attendance, as I shall be engaged upon a reference (in which, by the way, your office is concerned). My client will, I am quite sure, protest against your presence; and I do not think it at all likely that the medical gentlemen will consent to your being present. You must take it, also, that I decidedly object under the circumstances.

"Yours truly, "WM. HY. HEWITT.

"Messrs. Cobbett, Wheeler, and Cobbett, Brown Street."

From Mr. Whitworth, I believe, I did not hear. I then wrote to Mr. Southam the following letter, enclosing a copy of the letter from Mr. Hewitt.

"61, Brown Street, Manchester, July 19th, 1872.

"*Balmforth* v. *Buckley.—Same* v. *Fletcher.*

"Dear Sir,—We are sure your brother practitioners will appreciate the efforts you have made to end this matter peaceably and privately, but you will see by the enclosed letter that such a result appears to be impracticable. We, therefore, do not attend; and, should Mr. Whitworth appear, you will perhaps kindly intimate to him he had better withdraw.

"Yours truly, "COBBETT, WHEELER, and COBBETT.

"G. Southam, Esq."

A few days before the Assizes, Messrs. Hewitt and Whitworth met me accidentally in the street, and proposed to refer. To this I replied, that they had hitherto declined to listen to any such proposition, and had put the plaintiff to every possible expense; that to refer now would be to their client's advantage, and to my client's disadvantage, without any equivalent to him. Alluding to the strong pressure put upon me by Mr. Southam to refer, I added that even he would hardly now expect the plaintiff to do so, without an admission of liability or some other equivalent. There the matter ended.

Your readers will observe that Mr. Whitworth omits to state what answer Mr. Buckley (his client) returned to the offer which he admits was made before action, and that he states that no offer of reference was ever made to Dr. Fletcher (?), and that Mr. Hewitt says that no offer of arbitration had been made, and that the suggestion made was of a nature which Mr. Whitworth thought did not warrant him in taking any notice of it.

The terms imposed by Mr. Southam upon the plaintiff before examining him were considered by him and by me to be somewhat peremptory; but they were submitted to, because upon no other terms could his assistance, and that of his colleagues at the Manchester Infirmary, be obtained.

All the above circumstances were perfectly well known to the defendants and their solicitors: and I can only express my regret that the painful duty of stating the facts should have fallen upon me.

I am, Sir, your obedient servant, WM. COBBETT.
for Cobbett, Wheeler, and Cobbett, Plaintiff's Solicitors,
61, Brown Street, Manchester.

P.S. As Mr. Hewitt has thought proper to raise a question as to what Mr. Beever's report really was, I send you a copy of it.

"Mosley Street, Manchester, April 29th, 1872.

"Gentlemen,—The injury Mr. Balmforth has sustained is a dislocation of the head of the thigh-bone upwards, and has been caused by violence. The symptoms of this dislocation are so well marked by shortening and inversion of the limb that no degree of swelling about the joint, following the accident soon after its occurrence, ought to prevent easy detection of the displacement. It must, therefore, be a want of practical skill on the part of the surgical attendant which would cause such an injury to be overlooked.

"I am, gentlemen, yours faithfully, "W. W. BEEVER.

"Messrs. Cobbett, Wheeler, and Cobbett."

POST PARTUM EXPLOITS.

SIR,—In the JOURNAL of August 10th, I see a case of "Post Partum Exploits". The following being more extraordinary, I beg to send it for your information.

A young woman, a small farmer's daughter, came into Exeter by one of the branch lines to see some friends off to London, and also, I expect, to make arrangements for her confinement, unknown to her parents. Just as her friends were leaving, she felt rather poorly, and went upon Northernhay, and thence to the Castle Yard, where she was confined between ten and eleven A.M., on a seat in a retired part. No one was near, and she appears to have been unconscious for about an hour; when she recovered, she tied the umbilical cord with a piece of tape she had in her pocket, and leaving it behind, took off her jacket, wrapped the child in that, and started off to try to get lodgings. Not having brought much money with her, she was unsuccessful; and although she managed to get some food, no one would take her in; she therefore, about 9 P.M., went to the Guildhall, and the police at once sent her in a cab to the workhouse, where she arrived a little before ten P.M., and was at once placed in the Lying-in Ward, and properly attended to.

Although this woman had walked about for nine or ten hours without any attention to herself or child, no bad consequences ensued, except bad colds to both. I am, etc., JOHN WOODMAN, F.R.C.S.,

Exeter, August 10th, 1872. Medical Officer, City Workhouse.

THE HARVEY MEMORIAL.—Dr. Dobell writes that his name was omitted from the list of the Committee published in last week's JOURNAL. It was not, however, in the copy furnished to us.

THE PUBLIC HEALTH ACT: MEDICAL OFFICERS OF HEALTH.

SIR,—As a large number of Medical Officers of Health will have to be appointed shortly by the Town Councils of Boroughs, forming "Urban Sanitary Districts", it is of great importance to members of the profession to know what salary they should ask and receive as remuneration for the duties of the office. Perhaps those gentlemen who already hold the appointment of Officers of Health would not object to state the amount of the salary which they are receiving. The sum must necessarily vary in accordance with the size of each town.

August 27th, 1872. I am, etc., B. B. Z.

MR. PEMBERTON ON LITHOTOMY.

SIR,—Mr. Pemberton, in his address to the British Medical Association, published in your JOURNAL of August 10th, at page 156, states, in reference to the so-called dilatation of the prostate: "Now, I know that many believe that this dilatation means laceration. It has, indeed, not very long since been described as 'complete rupture and laceration' (Mr. Teevan, *Lancet*, vol. ii, page 237, 1870), and as 'unsurgical and dangerous.'" I answer this statement by a positive contradiction as to facts.

Mr. Pemberton's reference is inaccurate, for the words are not to be found at page 237, as stated by him; but they can be seen at page 891, where they appear in a very short abstract of a paper on lithotomy, which I read before the Medical Society in December 1870, and which was afterwards published in full in the *Lancet* for December 23rd, page 882, 1871.

Now Mr. Pemberton either has or has not read my paper. If he has not read it, he was not justified in characterising my statements as he has done, without troubling to make himself acquainted with the facts upon which they were founded. But if Mr. Pemberton has read my paper, he was in honour bound to refer your readers not to the abstract, as he has done, but to the paper itself, where they could have obtained a knowledge of the facts upon which my statements were based, and have judged for themselves which was the more entitled to be called "eminently reckless"—Mr. Pemberton's assertion of what he does in the dark in lithotomy, unsupported as it is by one single jot of evidence, or my enunciation of facts which, so far as I know, admit of no contradiction.

I am, etc., W. F. TEEVAN.

10, Portman Square, August 17th.

MR. LAWSON TAIT'S CASE OF VENTRAL PREGNANCY.

SIR,—I had the pleasure of being present at the meeting of the Midwifery Section of our Association when Mr. Lawson Tait related his very interesting case of ventral pregnancy, and which was called in the agenda "A Case of Retro-uterine Pregnancy diagnosed and operated on during Life." Now, sir, from the title of the paper, and also from Mr. Tait having stated that he had not, in his reading (but which, he admitted, was not on this head very extensive) found any record of a similar case, I infer that he considers his case to be unique. But, if he will refer to Dr. Tyler Smith's *Manual of Midwifery* (1st ed., p. 181), he will find the following.

"In the rare cases in which, in ventral pregnancy, the cyst presents low down in the pelvis, and the parts of the child, such as the head, hands, or feet, can be felt through the vagina, an incision through the vaginal walls into the cyst is a more favourable operation than simple gastrotomy. Dr. Campbell states that, of nine cases in which incision of the vagina was performed, in three both mothers and infants were saved; in two, the mother only recovered; in one, the child alone was preserved; while in three," as in Mr. Tait's case, "both mothers and children perished."

From this extract, it would appear that there are numerous instances of retro-uterine pregnancy which have been not only diagnosed and operated on during life, but even, in some cases, with success.

Tring, August 12th, 1872. I am, etc., EDWARD POPE, M.R.C.S.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, August 24th; The Manchester Guardian, August 28th; The Tewkesbury Record, August 24th; The North British Advertiser, August 24th; Saunders's News-Letter and Daily Advertiser, August 27th; The Bath Express, August 24th; The Jersey Express, August 22nd; The Homeward Mail, August 21st; etc.

ABSTRACT OF LECTURES
ON
THE USE OF THE LARYNGOSCOPE.

Delivered at the London Hospital.

BY MORELL MACKENZIE, M.D.Lond.,
Assistant-Physician to the Hospital.

LECTURE II.

THE art of laryngoscopy consists in the proper employment of the instruments already described. It may be practised by the physiologist for investigating the healthy appearance and normal action of the larynx, or by the physician for inspecting, and, if possible, improving, the condition of the parts when diseased. It is only with reference to the last purpose that it will be here considered.

The only principle concerned in the art of laryngoscopy is the optical law that, when rays of light fall on a plane surface, the angle of reflexion is equal to the angle of incidence. A small mirror is placed at the back of the throat, at such an angle that luminous rays falling on it are projected into the cavity of the larynx; at the same time the image of the interior of the larynx (lighted up by the luminous rays) is formed in the mirror, and seen by the observer. The mirror is held obliquely, so that it forms an angle of rather more than 45 deg. with the horizon. The plane of the laryngeal aperture (bounded by the epiglottis, the ary-epiglottic folds, and the arytenoid cartilages) is also oblique, the epiglottis being higher than the apex of the arytenoid cartilage. The annexed diagram (Fig. 5) shows the position of the different parts, and explains their reflexion. Let *m* represent the plane of the laryngeal mirror, *l* the plane of the upper opening of the larynx, and *o* the observer. In the plane of the larynx, *a* represents arytenoid



Fig. 5.—Diagram showing the Relative Positions of the Planes of the Mirror and Laryngeal Aperture.

cartilages, *a e* the ary-epiglottic folds, and *e* the epiglottis. The rays from these parts impinge on the mirror, as *a'*, *a e'*, and *e'*, and are thence reflected to the observer at *o*. Thus the epiglottis, which is really the highest in the throat, appears at the upper part of the mirror, the ary-epiglottic folds appear rather lower and at each side of the mirror, whilst at the lowest part of the mirror are the arytenoid cartilages. These remarks apply to the vertical reflexion. The only inversion which takes place in the formation of the image is in the antero-posterior direction. The part which in reality is nearest to the observer, the anterior commissure of the vocal cords, becomes furthest in the image; and the posterior, or interarytenoid commissure, which in reality is furthest from the observer, becomes nearest in the image.* The symmetrical character of the image, which makes it impossible to judge of right and left, and this antero-posterior inversion which actually takes place, often lead people to form erroneous opinions concerning the two sides of the larynx.

The lateral relation of parts in the image must now be considered. The mirror being placed above and behind the laryngeal aperture, the rays of light proceeding from the larynx pass directly upwards and backwards, and the patient's right vocal cord is seen on the left side of the mirror, and the left vocal cord on the right side of the mirror, just as the patient's right hand is opposite the observer's left and the left hand opposite the observer's right.

In the annexed cut (Fig. 6), a wart is seen on the left vocal cord of the larynx (B); this is opposite the observer's right hand, and it appears on the same side in the image (A). In consequence, however, of the antero-posterior inversion which takes place, as explained in the last paragraph, if the fact that the representation of the larynx (A) is an image be not borne in mind, it would lead to the deceptive idea that the wart was on the right vocal cord. In examining a laryngoscopic drawing, a person must make his own larynx the mental standard of comparison as regards right and left, but must recollect that the picture represents an image formed on a mirror held obliquely above and rather behind the larynx of another person.

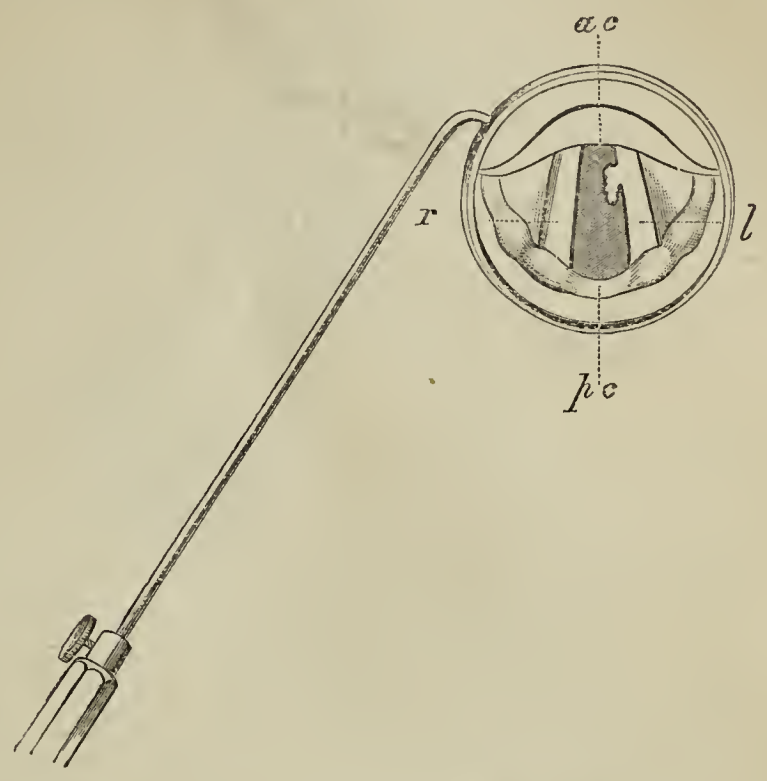


Fig. 6.—Drawing showing the Relation of Parts in the Larynx (*B*), and the Laryngeal Mirror (*A*). *a c*. Anterior Commissure of the Vocal Cords. *p c*. Posterior Commissure of the Vocal Cords. *r*. Right Vocal Cord. *l*. Left Vocal Cord, with a Wart on it.

In practising laryngoscopy, the patient should sit upright, facing the observer, with his head inclined very slightly backwards. The observer's eyes should be about one foot distant from the patient's mouth, and a lamp burning with a strong clear light should be placed on the table at the side of the patient, the flame of the lamp being on a level with the patient's eyes. The observer should now put on the spectacle-frame with the reflector attached, and, directing the patient to open his mouth widely, should endeavour to throw a disc of light on to the fauces, so that the centre of the disc corresponds with the base of the uvula. In throwing the light, the operator should steady the spectacle-frame with his left hand, whilst with his right hand he adjusts the reflector. When direct light is used, the first stage is much simplified, as the patient has simply to sit opposite the lens of the lamp. The patient should be directed to put out his tongue, and the observer should hold the protruded organ gently but firmly between the finger and thumb of his left hand, the thumb being above and the finger below. To prevent the tongue from slipping, the observer's hand should be previously enveloped in a small soft cloth or towel, and he should be careful to keep his finger rather above the level of the teeth, in order to prevent the frænum from being torn. In cases that are likely to require local treatment, the patient should be taught to hold out his own tongue, in order that the operator may be able to introduce the mirror with his left hand, whilst with the right he applies the remedy to the affected part.

When the observer has practised the first two stages, he should take a small laryngeal mirror, about half an inch in diameter, and, after warming its reflecting surface for a few seconds over the chimney of the lamp, to prevent the moisture of the expired air from being condensed on it, should introduce it to the back of the throat. In holding a mirror over

* This is in accordance with the fundamental optical law: That if a diverging pencil of light fall upon a plane reflecting surface, the focus of the reflected pencil will be at the same distance from the surface as that of the incident pencil, but on the opposite side of it.

a lamp, the little glass is first covered with a film of moisture, which quickly clears away. Directly the glass is clear, it is of the right temperature—neither too hot nor too cold—to be introduced. Before introducing the mirror, however, lest it should be accidentally too hot, the practitioner should test its temperature, by placing it on the back of his hand. To pass the mirror to the back of the throat with as



Fig. 7.—The position of the Hand and Mirror, when the latter has been properly introduced for obtaining a view of the Larynx.

little annoyance as possible to the patient, the following method should be adopted. The handle of the mirror should be held like a pen in the right hand, and quickly introduced to the back of the throat, its face being directed downwards, and kept as far as possible from the tongue. The posterior surface of the mirror should rest on the uvula, which should be pushed rather upwards and backwards, towards the posterior nares (Fig. 8). When the mirror has thus been introduced without irritating the fauces, the observer should raise his hand slightly and direct it outwards towards the corner of the mouth. This rotatory movement, which alters the inclination of the mirror and turns its face more towards the perpendicular (whilst the hand is thereby kept entirely out of the line of vision), should be effected rather slowly, so that it can be arrested directly the larynx comes into view. After introducing the mirror, the observer can, if he choose, steady it, by resting the third and fourth fingers against the patient's cheek. The exact angle which the mirror should bear to the laryngeal aperture must depend on a number of circumstances, such as the degree of flexion backwards of the patient's head, the particular angle which the plane of the laryngeal aperture bears to the horizon in the case undergoing inspection, and on the direction which the ray must take to reach the observer's eye—that is to say, on the position of the observer. The practitioner should learn to introduce the mirror with either hand, for by so doing any false ideas concerning a supposed asymmetrical condition will be at once corrected ; but, whilst for the purpose of diagnosis it is very desirable to be able to use either hand in the application of remedies to the larynx, ambidexterity is absolutely essential. Beginners, in their anxiety to get a good view, often give rise to faucial irritation, by keeping the mirror too long in the patient's mouth : the same condition is also often produced by moving the mirror too much about at the back of the throat after its introduction. The practitioner should recollect that, when an act of retching has once taken place, it is afterwards often impossible to get a good view of the larynx at the same sitting. Moreover, the act of retching always causes considerable temporary congestion of the laryngeal mucous membrane, and thus is apt to lead the inexperienced to very erroneous conclusions. It is, therefore, better to introduce the mirror any number of times, keeping it in the throat only for a few seconds each time, than to let it remain longer, and thus to limit the examination to one inspection. The novice must be careful to avoid touching the tongue with the mirror, for this procedure irritates the throat and spoils the reflecting surface of the mirror for the time. This can generally be avoided by keeping the back of the mirror in close proximity to, but not letting it touch, the palate. In some people, however, the uvula is in actual contact with the back of the tongue, and, as in inspiration or vocalisation the uvula is raised, such patients should be directed to inspire deeply, or to produce some vocal sound (such as "ah", "eh", "oh", etc.) ; the mirror can then be easily slipped in between the uvula and the tongue. All violence or even roughness must be carefully avoided, the tongue must be held out gently, and the laryngeal mirror placed very lightly on the uvula.

In addition to the difficulties solely dependent on the practitioner's want of dexterity, there remain a few accidental impediments. The obstacle to a satisfactory examination may be either undue irritability of the fauces, a peculiar action of the tongue, an abnormal size of the tonsils, or a pendent condition of the epiglottis. As regards faucial irritability, it is to be observed that, though this condition exists of itself, it is far more often caused by the clumsiness or inexperience of the

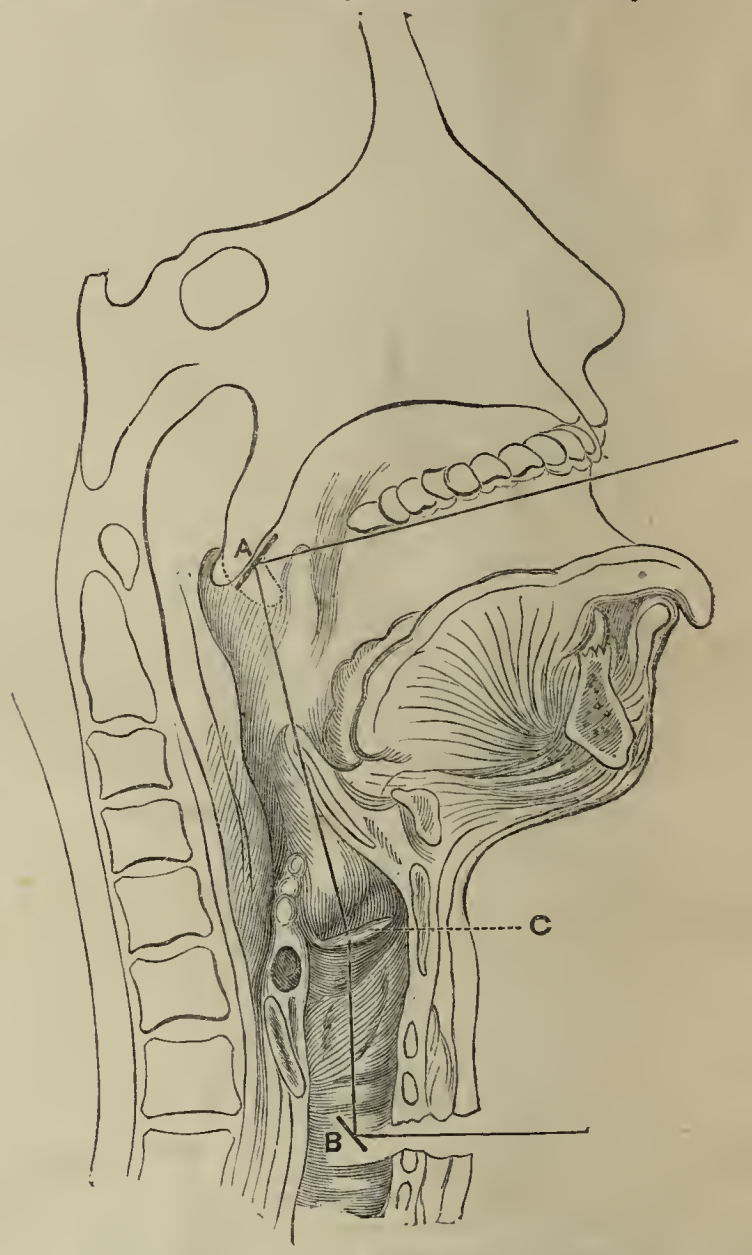


Fig. 8.—Diagram shewing the Angles of Incidence and Reflexion in Ordinary and Infraglottic Laryngoscopy. A. Side view of Mirror, when properly introduced. It is seen to push back the Uvula towards the Posterior Nares. B. Side view of Infraglottic Mirror. C. Vocal Cord.

practitioner. Most patients can be examined with facility at the first sitting, and only a small proportion require any training. With timid patients—especially women—on first using the laryngoscope, it is well to place the mirror for a second on the back of the palate, without being too particular about seeing anything. By introducing the mirror once or twice in this way the patient's confidence is secured, and a more fruitful examination may afterwards be made.

For reducing an unusually irritable condition of the fauces, the internal administration of the bromides of potassium and ammonium has been recommended, but my experience has proved the inutility of their employment. Some advise that the patient should be directed to inhale a few whiffs of chloroform ; but in those rare cases which present much difficulty, I have found the best effects result from sucking ice for about ten minutes before the mirror is to be introduced. The most irritable fauces cannot resist this plan. The conformation of parts sometimes causes some difficulty. Thus when the tongue is drawn out it sometimes forms an arched prominence behind, which causes trouble in introducing the mirror, and difficulty in seeing it when *in situ*. It is due to reflex action, and will be best avoided by pulling the tongue less out than usual, keeping it level with the mouth (that is to say, not holding it down towards the chin), and by cautioning the patient not to strain. Enlarged tonsils sometimes embarrass the operator. In this condition a small oval mirror should be used.

An unusually large or pendent epiglottis causes a more serious impement to laryngoscopy. When the valve is very large, it sometimes shuts out the view of the larynx; but the same result is more often caused by unusual length or relaxation of the glosso-epiglottidean ligaments. In the production of high (falsetto) notes, the epiglottis is generally raised; and this also happens when a person laughs. The observer will, therefore, do well to take advantage of these physiological facts. In a certain number of cases, however, the epiglottis remains obstinately pendent. In these cases the laryngeal mirror should be introduced lower in the fauces, and more perpendicularly than is usually suitable. In almost all cases the arytenoid cartilages, surmounted by the capitula Santorini, can be seen, and from them we can judge with tolerable certainty as to the mobility of the vocal cords; the state of the mucous membrane of the larynx in other parts cannot, however, be safely inferred from the condition of that which covers the arytenoid cartilages.

ABSTRACT OF LECTURES
ON
UTERINE HÆMORRHAGE.

Delivered at the Hospital for Women, Soho Square.

BY ARTHUR EDIS, M.D.,
Physician-Accoucheur to the British Lying-in Hospital, etc.

LECTURE II.

LOCAL CAUSES OF UTERINE HÆMORRHAGE.

THESE are, Uterine Congestion; Inflammatory Engorgement or Hypertrophy; Subinvolution; Uterine Displacements and Flexions; Ulceration of Cervix Uteri; Polypus; Fibroid Tumours; Fungous Degeneration of the Uterine Mucous Membrane; Hæmatocele; Retained Products of Conception; Moles and Hydatids; Inversion of the Uterus; Carcinoma and Epithelioma. In speaking of the local causes of uterine hæmorrhage, it must be remembered that it will be quite beyond the scope of this lecture to attempt entering into any systematic account of the various conditions that give rise to the symptom we are considering; time will only permit me briefly to allude to the principal points. I shall endeavour to make my remarks as practical as possible.

Uterine Congestion.—During menstrual life, for an average period of about thirty years, this is the normal condition about every fourth week, when the ordinary catamenial discharge occurs. It may, however, extend considerably beyond this, and then become pathological. It is often induced after delivery by too early exertion; it may arise also from abuse of coition, or from constipation and other conditions which we have already considered under the head of general causes. Dr. Henry Bennet speaks of profuse hæmorrhagic menstruation occasionally occurring, owing to mere congestion of the uterus, apart from inflammatory disease, as we occasionally see when menstruation is ceasing, when the catamenia will disappear for two or more months, and then return in excessive abundance. The application of a few leeches to the os uteri, heat to the spine over the lower dorsal and upper lumbar vertebræ, and a brisk aperient, will often relieve this condition; but care must be taken to anticipate the next period, and to obviate, if possible, the causes that have produced the state of congestion.

Inflammatory Engorgement or Hypertrophy though not a frequent, is an occasional cause of menorrhagia. The pain and extreme tenderness on pressure, with increased temperature of the vagina and other febrile symptoms, will enable you to form an opinion as to the nature of the affection, more especially if there be a history of previous abortion, vaginitis, use of an intrauterine stem, or some mechanical injury. Perfect rest, hot fomentations or poultices to the lower abdomen, the application of leeches to the os uteri, followed by the warm douche, together with local sedatives in the form of pessaries or suppositories, will best relieve this condition.

Subinvolution, where the retrograde metamorphosis, by which the uterus enlarged from pregnancy returns to its usual size, stops short of completion and leaves the organ larger than it should be, is a not unfrequent source of hæmorrhage during the early months of lactation. Uterine atony, by allowing the sinuses of the uterus to remain open after labour, favours a sluggish circulation, and tends to produce this condition. Ulceration of the cervix is a frequent concomitant, and explains in many cases the hæmorrhage and leucorrhœa which accompany the distressing pains in the pelvis, back, and thighs. Rest, ergot, with strychnia and iron, avoidance of undue lactation, and the local application of nitrate of silver to the os and cervix, generally succeed in affording relief. In these cases, the cold douche night and morning by means of a syringe is not only justifiable, but extremely beneficial. Take the precaution to give the medicine just after the infant has had the breast, so as to avoid any risk of disturbing the infant's bowels.

Uterine Displacements and Flexions.—Prolapsus, or falling of the womb, tends to keep up congestion and favours hæmorrhage. Some mechanical support in the form of a Hodge's pessary is frequently necessary, together with some astringent injection. *Retroflexion* is probably by far the most frequent, and, at the same time, most troublesome form producing menorrhagia. It generally occurs in those who have borne children, and is caused by getting about too soon after confinements or miscarriages, long walks just before the period is due, or from some fibroid growth in the uterine wall. Passing the uterine sound will enable you to distinguish retroflexion from fæcal impaction, fibroid tumours, and prolapsed and enlarged ovary. The usual symptoms are backache, pain down the back of the thigh, and also on defæcation, together with hæmorrhage, and frequently leucorrhœa. To relieve this condition, get your patient to lie as much as possible on her stomach, replace the uterus from time to time, apply a few leeches before the menstrual period, and, having lessened the congestion, insert a Hodge's pessary.

Ulceration of Cervix Uteri.—Granular erosion or abrasion is the more usual form met with. Time will not allow me to allude to the syphilitic, cancerous, and other varieties. The symptoms are generally profuse bloody and purulent leucorrhœa, pain and hæmorrhage after coitus and on locomotion, fixed pain in the back and loins, or menorrhagia. Regard the ulceration as a local manifestation of diseased action in the cervix, which is the lesion to be treated, and you will be far more successful than if you treat the ulceration alone. Scarification of the cervix or the application of a few leeches are generally necessary to relieve the congestion. The nitrate of silver will then assist materially in healing the sore by forming a coating, and so protecting it from the irritating discharge from the vagina that is often present. Vaginal injection of sulphate of zinc (a drachm to the pint of water) or of alum (two drachms) used night and morning, together with morphia pessaries to allay pain, will then probably complete the cure if properly persevered with. Menstruation during pregnancy is generally due to ulceration, the active process of ovulation being suspended during pregnancy and the early months of lactation. Great care must be exercised in these cases in employing local applications, but the risk of producing miscarriage is lessened rather than increased by the judicious use of nitrate of silver, and injection of borax or alum.

Polypus Uteri most frequently occurs during the period of life in which the uterus is in the highest degree functionally active, generally preventing impregnation, or producing abortion should this occur. The hæmorrhage is often very profuse and accompanied by clots, a copious watery discharge occurring during the intervals; pain is seldom complained of, unless the polypus have attained a large size, or from its position in the uterus act as a ball-valve, preventing the exit of the menstrual fluid. Supposing that it has not escaped from the uterus into the vagina, and we have reason to suspect its presence, the cervix must be dilated and ergot given to promote its expulsion; or, if this be not possible, its removal should be effected by the *écraseur*. Small polypi arising from the cervix may be snipped off with scissors, or twisted off by forceps; the ligature is now seldom employed. A polypus that has descended into the vagina, and grown larger there, has been mistaken for epithelioma.

Fibroid Tumours.—The presence of these may be suspected when menstruation becomes profuse in quantity and prolonged in its duration—more especially if accompanied by spasmodic pains similar to those of abortion. A careful examination will clear up the diagnosis. When the tumours are of large size, and situated either towards the interior of the uterus or within the uterine wall, the hæmorrhages are often very severe. Ergot and gallic acid, given internally, are two of the most reliable remedies in the early stage; but it may be necessary to inject iron within the uterus, or to make a deep incision through the tumour—remedies to which none would resort unless well acquainted with this speciality.

Fungous Degeneration of Uterine Mucous Membrane.—Récamier was the first to describe accurately this condition as causing profuse menstruation. In those instances where hæmorrhage continues in spite of all our treatment, and where no well ascertained cause for it can be detected, a sponge-tent should be inserted in the cervix uteri and a careful exploration made; the interior of the uterus may then be swabbed out with the perchloride of iron or tincture of iodine, and, if necessary, any excrescence removed with the curette. Passing a piece of solid nitrate of silver into the uterus and leaving it there has been employed successfully.

Hæmatocele.—In these cases, where menorrhagia is dependent upon extravasation of blood in the pelvis—generally in Douglas's pouch—the history of its coming on at a menstrual period, frequently from over-exertion, accompanied by severe pain and often great prostration, will assist us materially in the diagnosis. Absolute rest, with ice to the abdomen, opium internally, or in form of suppository, subcutaneous injection of morphia, brandy or champagne to counteract the exhaustion and prevent death from prostration, will generally succeed in affording relief. Puncturing the effused mass of blood is very seldom called for at first, and is more likely to induce further extravasation.

Retained Products of Conception.—Cases frequently occur in which you are sent for to a patient who is reported to have miscarried, and in whom the hæmorrhage is still severe. Unless the ovum have been saved, so that you are convinced it is all there, never content yourself with merely giving ergot. Examine at once and see if any portion of the placenta be retained, and if so, remove it ; then apply a binder, and give ergot and acid, with ice if necessary. Where miscarriage has been threatened and the vitality of the ovum arrested, but this latter has not been thrown off, it becomes degenerated as it were, and forms a fleshy mass, giving rise to symptoms of uterine hæmorrhage and tenesmus, hypogastric weight and uneasiness, and cessation of the signs of pregnancy, constituting what has been described as *moles*. Where you have reason to believe this is the case, it will be prudent to dilate the cervix by sponge or sea-tangle tents, and give ergot to induce uterine action, so as to get the mass expelled. Another condition occasionally met with is that of so-called *hydatids*, more correctly hydatidiform degeneration of the villi of the chorion. A discharge of clear blood or sero-sanguineous fluid coming on suddenly and recurring at indefinite intervals, together with uterine tenesmus, possibly discharge of little cysts, and some constitutional disturbance, in a patient who has missed two or three periods, and imagines herself pregnant, are the usual symptoms that would suggest the presence of such a condition. After the end of the third month no such degeneration can occur, as the placenta is then formed, and the villi of the chorion not engaged in its development become atrophied, while those existing at the site of the placenta become vascular. After the expulsion or death of the embryo, the chorion remaining attached to the uterine walls, the villi undergo a peculiar metamorphosis into botryoidal or grape-like clusters of cysts. The diagnosis between this condition and normal pregnancy is generally determined by the very rapid development of the uterus, more than could be accounted for by utero-gestation, absence of all fœtal or placental sounds, and ballottement. The treatment consists in dilating the cervix, giving ergot, and procuring expulsion of the mass.

Inversio Uteri.—The hæmorrhage in these cases is often profuse, depending upon whether it be partial or complete inversion. In the latter case, the diagnosis is more simple than in the former ; the great sensitiveness of the uterus distinguishes it readily from polypus uteri ; the large size of the pedicle and the absence of the fundus uteri, as determined by pressure over the pubes, still further assisting us. In partial inversion, the history of previous parturition—the cases being extremely rare in which inversion has occurred without previous pregnancy—sudden accession and diminished distance that the uterine sound passes, will generally serve to distinguish it from fibroid tumour. As regards treatment, local astringents may first be resorted to, but efforts should be made to return the uterus.

Carcinoma Uteri occurs most frequently between the age of 40 and 50. The loss of blood is often sudden and profuse, and may be the first symptom noticed, though generally pain through the pelvis, *malaise*, tenderness upon movement or coition, with more or less fœtid leucorrhœa, precede this symptom. The cervix is almost invariably first affected, though cases are occasionally met with where the fundus uteri seems to be the starting point. On examination, the uterus is generally found to be less mobile than normal, or fixed in the pelvis ; the cervix is hard and irregular, or ulcerated and covered with granulations or vegetations, breaking down readily under the finger. To restrain hæmorrhage when severe, it may be necessary to apply strong liquor ferri perchloridi on a plug of cotton-wool to the cervix, or even to plug the os uteri, supposing cold vaginal injections—ice, astringents, etc.—do not succeed in checking it. Plugging the vagina must be resorted to if other means fail.

Epithelioma consists in hypertrophy of the villi of the cervix, with great increase in their vascularity—a proliferation of the epithelial cells. The hæmorrhage consists generally of a discharge of bloody water, like the washings of beef; though occasionally from exertion, coition, etc., it is bright and florid. Epithelioma is at first a local evil, and, if removed by the *écraseur* or amputation, does not return as a rule. Its progress is slow, and at first there is no interstitial deposit ; the uterus is mobile, the cervix alone being converted into a cauliflower-like excrescence. Removal of the diseased mass is the best way to relieve the hæmorrhage ; but if it have advanced too far and removal be impossible, the application of the actual cautery, potassa cum calce, pernitrate of mercury, etc., will effectually restrain the hæmorrhage.

This completes our list of the more important causes, general and local, that produce uterine hæmorrhage. I have endeavoured briefly to direct your attention to the indications for treatment as we went along ; time will not allow me to enter as fully into them as I could wish. Always endeavour to ascertain the cause, and do not content yourself with giving some favourite remedy to control the effect merely. Warmth to the lower dorsal and upper lumbar region of the spine is far more serviceable than cold to the vulva ; and cold enemata often act well in those cases where the ordinary menstrual flow is simply profuse.

Leeches or scarification of the os and cervix uteri will often check hæmorrhage that resists the usual treatment, more especially in fibroids, ulceration of the cervix, and the congestion of the early months of gestation, where abortion has been frequent.

Sedatives are too often neglected, and prove very serviceable in many cases where astringents are uncalled for or quite inert.

But your main object should always be to ascertain, if possible, why the catamenia are profuse or hæmorrhage occurs—diagnosis, in fact, being the difficulty, treatment comparatively simple : and if I have succeeded in convincing you that hæmorrhage is a symptom and not a disease, the time occupied in listening to these lectures will not have been spent in vain.

CONTINUED PYREXIA IN PHTHISIS, ACCOMPANIED BY INCREASE OF WEIGHT.

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We are accustomed to regard continued pyrexia, in whatever disease it may occur, as naturally involving decrease in weight; the amount of such decrease depending on the degree of the temperature attained and the length of time the patient remains in this feverish condition. Niemeyer (*Text-book of Practical Medicine*, vol. i, p. 229) states very decidedly that he made out, by numberless examinations with the thermometer and the weighing-machine, that the decrease and increase in the weight of phthisical patients are respectively in relation to the height of the fever or to its disappearance. Any facts, therefore, which conflict with this beautifully rounded theory of the connexion of temperature and weight in phthisis, rather surprise us, and deserve careful attention. As examples of this kind, I furnish the two following cases, which occurred under my care at the Brompton Hospital ; the weights and temperatures being most carefully taken by Mr. Bartlett, the assistant medical officer, and Mr. Northey, my clinical assistant.

Case I.—G. M., an Irishman, aged 32, a clerk by profession, was admitted February 13th, 1872, with the following history. His mother and sister had died of phthisis. He had been subject to winter-cough for five years ; and in August last he caught a severe cold, followed by cough, dyspnœa on exertion, and loss of flesh and appetite, which symptoms had continued up to the present time. Two months ago, he spat up two ounces of blood ; and night-sweats came on, which ceased in the course of a month. On admission, his cough was very troublesome ; the expectoration muco-purulent. His appetite was bad ; the tongue slightly furred ; the bowels regular ; pulse 80; respirations 26 ; morning temperature 100 deg. Fahr. ; weight 8st. 13 lbs. *Physical Signs.* Coarse crepitation was heard over the upper half of the right chest, in front and behind ; and there was dulness over the first intercostal space. Crepitation of a finer kind was audible over the whole left chest. He was ordered the ordinary full diet* of the hospital, and, in addition, an egg for breakfast, a pint of milk for supper, and a pint of porter with dinner. Effervescing ammonia mixture was given three times a day. He remained in the hospital ten weeks, during which time he was weighed every fortnight ; and for six weeks of this time his temperature was registered night and morning, almost without interruption.—On February 20th, his appetite was better ; cough worse. The physical signs were the same. He was ordered five minims of tincture of veratrum viride in an ounce of peppermint-water three times a day.—February 24th. The temperature of the first week varied between 99.6 and 101 deg. Fahr.; the morning average being 100 deg. Fahr., and the evening average 100.7 deg. Fahr. Pulse 88 to 100 ; respirations generally about 20. He weighed 8 st. 12½ lbs., showing a

* This consists of meat and potatoes for dinner, bread and butter, coffee and tea, etc. ; the first four articles being supplied to the patients *ad libitum*, and not in allowances.

loss of half a pound in ten days.—March 8th. The veratrum had been taken regularly, and the dose increased to twelve minims three times a day. The pulse was rather less frequent, having only once reached 100. Respirations 20. In the fortnight, the temperature had risen twelve times above 101 deg. Fahr., and once to 102.2 deg. Fahr., having never fallen below 99.2 ; morning average, 100.5 deg. Fahr.; evening average, 100.8 deg. Fahr. He weighed 9 st., *showing a gain of 1½ lbs.* The cough was less. Crepitation was diminished. The veratrum, not having reduced the temperature, was omitted ; and cod-liver oil, in two-drachm doses, was prescribed, with dilute nitric acid and cascarilla, twice a day.—March 22nd. The temperature had somewhat fallen, only once reaching 101 deg. Fahr.; and once falling to 98.6 deg. Fahr ; morning average, 99 deg. Fahr.; evening, 99.8 deg. Fahr. The oil was taken regularly. The weight was 9 stone, there being no gain or loss.—In the next few days, his temperature fell to normal ; and at the end of the fortnight he had gained 1½ lbs.—April 25th. He had had slight diarrhœa, but had, on the whole, improved. His cough was still troublesome ; appetite good ; temperature normal. He weighed 9st. 1½ lbs., showing an increase of 2¼ lbs. since admission. The physical signs were improved. Dulness and bronchophony were detected under the right clavicle, but no crepitation. There were slight dulness under the left clavicle, and a little crepitation in the scapular region.

In this case, the temperature for a whole month was, on an average, above 100 deg. Fahr.; and yet the patient gained a pound and a half.

CASE II.—Mary A. C., aged 13, was admitted March 13th, 1872, with the following history. Two years ago, she had diabetes, and at the same time was attacked by sharp pain in the right side, severe cough with frothy expectoration, and wasting. The diabetic symptoms lasted eight months, and her medical attendant pronounced her cured of that disease. The cough and wasting continued up to the time of admission ; and hæmoptysis to the extent of several ounces occurred fifteen months ago, and again later. Her aspect was pale and very cachectic ; her cough very troublesome, and the expectoration muco-purulent. The tongue was red and slightly coated ; the appetite bad ; the bowels regular ; pulse 130 ; respirations hurried ; morning temperature, 100.8 deg. Fahr.; evening, 100 deg. Fahr. *Physical Signs:* There was dulness over the whole right chest, and moist cavernous sounds were audible in the upper half. Crepitation-sounds were heard throughout the left chest. She was ordered full diet, with an egg for breakfast, an extra half-pint of milk, and a rice-pudding. Mr. Northey prescribed, in my absence, a teaspoonful of cod-liver oil twice a day, with mistura ferri acida and a morphia and squill linctus. The temperature was taken night and morning for three weeks, and, after a week's interval, for three weeks more. Her weight, two days after admission, was 4 st. 8½ lbs.—March 18th. She appeared much exhausted. Pulse 136, very weak ; cough very troublesome. The oil to be continued, and the dose increased to a dessert-spoonful; the iron to be omitted. She was also ordered half an ounce of mistura vini gallici every four hours, and an effervescing ammonia mixture twice a day. Fish and rabbit were substituted for butcher's meat.—March 25th. She was very flushed. The tongue was thickly furred and the papillæ prominent. Pulse 124, stronger. There was crepitation throughout the right lung; cavernous gurgle in the upper half. There was less crepitation in the left lung. The urine contained a slight trace of sugar. Two grains of quinine were ordered three times a day ; and the mistura vini gallici was ordered three times a day. The oil was continued.—April 11th. The oil had been taken regularly, in two-drachm doses, since April 1st. The temperature for the first week after admission was generally over 100 deg. Fahr.; the morning average being 100.7 deg. Fahr., and the evening 100.2 deg. Fahr. In the second week, it rose slightly, and twice exceeded 102 deg. Fahr.; the morning average being 100.3 deg. Fahr., and the evening average 101.6 Fahr. In the third period (ten days), ending April 8th, it fell to some extent ; the morning average being 99.2 deg. Fahr., and the evening 99.6 deg. Fahr. The patient now weighed exactly the same as when she was admitted, nearly a month previously, though her temperature had been above 100 deg. Fahr. for more than a fortnight, and above 99 deg. Fahr. for two days since. From the 15th to the 24th of April, the morning temperature rose occasionally above 100 deg. Fahr., the average being 99.2 deg. Fahr.; the evening was generally high, and gave an average of 100.2 deg. Fahr. The patient gained three-fourths of a pound.—May 10th. The patient had for the last three weeks been eating a chop and having half a pint of ale daily. The oil was taken regularly, except during one week, when it was omitted on account of sickness. The urine was free from sugar. The average of both morning and evening temperatures still exceeded 99 deg. Fahr.; but the patient had gained three-fourths of a pound more. Her weight was 4 st. 10 lbs., making a total gain of a pound and a half since admission two months ago.

There was nothing special in the diet or treatment of these patients to account for their thus gaining flesh more than others similarly situated. In the first case, the appetite was tolerable, but no oil was taken, when the temperature was at its highest. In the second, the appetite was bad, but oil was taken nearly the whole time. These cases by no means stand alone, as similar ones have occurred in the wards of my colleague Dr. J. E. Pollock, who, like myself, was surprised at their not losing weight. Dr. Ringer (*Temperature in Phthisis and Tuberculosis*, p. 19) gives some instances in which increase of weight took place while the temperature was considerably above 100 deg. Fahr.; and he remarks, "that patients with a very considerable elevation of temperature, but who enjoy a good appetite, do not lose flesh, provided always that they are not employed in any active pursuit which entails much waste of tissue"—an opinion which my experience partly, but not entirely, confirms ; for I have known cases of pyrexial phthisis placed under all the favourable conditions of rest and good diet, and enjoying a ravenous appetite, yet lose flesh rapidly. It is nevertheless quite certain that, however high the temperature may be, the state of the appetite exercises great influence over the gain or loss of weight in phthisis ; and that, if Niemeyer's theory about the relation of temperature to waste is to be accepted, a saving clause to this effect must be inserted in it.

COLOTOMY FOR INTESTINAL OBSTRUCTION.*

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THE observations which I am about to make are based upon several cases which have come within my knowledge of patients suffering from intestinal obstruction sinking without operative interference ; and more particularly upon one which lately occurred in my practice, where a man was snatched from the jaws of death by the performance of colotomy. I am sure that surgeons of experience can, with me, recall to memory cases in which they regret to feel that timely surgical interference was not suggested, or, if suggested, was prohibited by relations of the sufferers ; whereas, had it been carried out, it would have added to the laurels of surgery by retaining in life some who otherwise were doomed to die—*post mortem* examination revealing in one, for instance, a simple contraction of the passage of the sigmoid flexure, in another a twist of intestine, which could easily have been rectified. I will proceed to narrate the leading points of the case to which I more particularly refer.

Mr. B., aged 52, though slightly built and not strong, was a man of active habits, and always enjoyed good health until lately, when he suffered from diarrhœa (but never from constipation), for which he obtained temporary relief from medical aid. He had never observed the fæces flattened or unnatural in shape, or accompanied by blood or mucus. On June 2nd, he experienced a feeling of need to have relief, but was unable to obtain it. A dose of castor-oil which he took produced no effect. The sensation increased ; pain in the right groin and slight pain in the left iliac region, with sense of fulness, were added, and increased steadily until, at four o'clock next morning, he felt it necessary to send for me. I found him suffering colicky pains in the situations named, with anxious countenance, yellow conjunctiva, irritable tongue, some tympanitis, and tenderness in the right groin. The finger introduced *per rectum* came into contact with an amount of moderately firm fæces. This, taken with the fact that diarrhœa frequently exists through a channel in impacted fæces, and the other symptoms being in favour of this being the impediment to action, led me to prescribe a full dose of castor-oil with ten drops of laudanum, and hot fomentations externally. He was soothed, but no defæcation occurred, though he took two more doses of castor-oil during the day. In the evening, I ordered a pint enema of soap and water with castor-oil in it. This returned coloured by fæces. He was slightly sick twice after the second dose of castor-oil, and brought up bile.

Next morning I found him in much the same state. He had not slept, but felt a strong desire to go to stool all night, and said he felt more likely to succeed in defæcation. The yellowness of the conjunctiva, tenderness in the right groin, and tympanitis were increased. I ordered a pill of a third of a grain of podophyllin, half a grain of extract of belladonna, and three grains of compound colocynth pill immediately, to be repeated after four hours ; also an enema of ox-gall in

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

soap and water. No action resulted. His condition was much the same through the day. During the night the symptoms increased, and the pulse lost in power. I ordered a pill of one-third of a grain each of podophyllin and extract of belladonna, and two grains of extract of aloes immediately, and another in three hours. I passed the O'Beirne tube up the bowel, and tried to wash out the fæces from the rectum with abundance of warm soapy water, but did not succeed. I then gave him chloroform, and with difficulty cleared out with a spoon-handle from the upper part of the rectum a good deal of firm fæces, and afterwards tried to pass the long tube higher, but found it stick in a fæculent mass in the bend of the upper end of the rectum. On coming to himself, he expressed much comfort from this dislodgment; and I tried galvanism, which produced strong hopes in the patient, but no actual effect. Later on in the day, he expressed so strongly his conviction that with a powerful dose he should obtain relief—which had been threatening ever since I had cleared the rectum in the morning--that I yielded to his solicitations, and ordered the aperient which succeeds, if a passage be possible, when all others fail; namely, croton oil, in two half-minim doses at four hours' interval. The bowels rumbled a good deal after these, and the patient felt very hopeful; but no relief followed. Peppermint lozenges, which he took throughout the attack, dispersed flatus freely by the mouth, and relieved the feeling of distension. I now determined to give rest to the intestines, and to suggest colotomy as the right and only remedy. In the afternoon the tympanitis was considerable; I should have punctured to relieve it, had I not had the major operation in early expectation. The tenderness in the right groin and left iliac fossa was greater, and was increased by pressure. The knees were slightly drawn up to relieve the distension, but could be put down without giving pain. The tongue was dry, red, and transversely cracked; the pulse feeble and intermittent. I ordered half a drachm of sulphuric ether and four minims of tincture of opium in mucilage and camphor water, to be taken every three hours, and promised to see the patient at ten o'clock at night. During the evening, I was asked to meet in consultation Dr. E. L. Fox, who, before this illness, had prescribed for Mr. B. for diarrhœa. We went together at ten o'clock, and found that from the first dose of mixture much comfort had been derived, followed by quiet sleep. The patient felt better, his pulse was not intermittent, and we agreed that we could not do better than continue the mixture, adding, at Dr. Fox's suggestion, a suppository of a grain of opium to allay the soreness of the rectum. I told Dr. Fox that, as at first there was nothing to contraindicate it, and much in favour of the cause of obstruction being accumulation of fæces, I had tried every means of obtaining relief by the natural channel, aperients increasing in strength, enemata, long tube, scooping the fæces from the upper portion of the rectum, and galvanism; that now I was convinced there was obstruction depending either on pressure from a tumour, or twist of the gut, and proposed, when the system was quieted, to perform Amussat's operation. We could not be sure which of these was the cause of obstruction; since, as regarded the former, there had never been sense of weight, pains, discharge of mucus or blood, occasional difficulty, or flattening of fæces, and though a swelling could be felt high up, *per rectum*, between the rectum and bladder, all present agreed that from its lobulated form, mobility, and boggy feeling, it seemed more like a coil of small intestine filled with fæces than a tumour pressing on the gut. The chronic diarrhœa experienced in this case was unlike that of scirrhus, stricture, or tumour, which usually is not persistent, but alternating with difficulty and some costiveness. With regard to the second case—twist of the gut—there could not be named by the patient any exertion, strain, sudden pain, or internal feeling pointing to such an event; and the principal pain during the illness was in the situation of the bowel clearly above the seat of obstruction, there having been no sickness throughout, save that at first naturally produced by castor-oil. Dr. Fox suggested distending the rectum with air before resorting to operation, in hope of thereby undoing a twist if one existed. This I did next morning until the rectum became like a distended bladder, but without good resulting.

The patient felt better in the morning, and his pulse was better. In this state, taking strong liquid nourishment, he passed the next day and night. The next morning, however, I was sent for early, as he felt suddenly worse; the tympanitis and distress were greater; the tongue red and dry; pulse feeble and intermitting; the feet were becoming cold. After prescribing for the relief of these symptoms, and persuading the patient and his friends to submit to it, I arranged for an early operation. Dr. Fox kindly administered chloroform, and Mr. Arthur Prichard, my senior dresser, assisted me. I performed Amussat's operation. After stitching the intestine to the skin and opening it, flatus freely escaped, and the abdomen became flatter; but though we could see liquefied fæces in the intestine, none came away. Mr. B. dozed quietly after the operation, under the influence of a little laudanum, and felt easier on awaking. Mr. A. Prichard remained with him for two hours, and gave me a favourable report of his condition on meeting me at the Infirmary at midday. Early in the afternoon, the nurse ran to me in great dismay to state that quantities of fæces were pouring from the wound in the side. I was happy to hear it, and allayed her fears by repeating what she had failed to comprehend before, that it was what we had expected to occur at the time of operation. Evidently the action was suspended while the effect of chloroform and of a subsequent dose of opium lasted. Liquid fæces and flatus continued to pass, and the patient was easy and took food well, and suffered no pain during the next thirty-six hours; only the wound and its immediate surrounding being tender. After this time he became rather feverish, drew up his left leg, and was extremely tender over a patch of the size of a hand immediately in front of the wound, where localised peritonitis existed. The skin above and below the wound became much swollen, red, and painful; but the inflammation ended in serous exudation only. I gave five grains of Dover's powder every four hours, which allayed these symptoms, and to some extent checked diarrhœa, which had now set in. The peritonitis did not spread, and in forty-eight hours ceased. The inflammation in the skin gradually subsided; but the diarrhœa, accompanied by bright red irritable tongue and extreme thirst two days afterwards, became worse. I prescribed five grains of Dover's powder, gum arabic and chalk mixture, rice, arrow-root, and rice-water. After three days, the diarrhœa merged into moderate semiliquid defæcation. Though it tried the strength, I purposely did not suddenly arrest the diarrhœa, as it depended greatly on accumulated fæces and aperient medicines. Afterwards, as a very irritable feeling in the stomach, with pyrosis and distress in the course of the œsophagus, troubled the patient a good deal, I gave ten grains of tris-nitrate of bismuth, forty minims of tincture of henbane, and gum in camphor-water, which afforded much relief. Some days afterwards, diarrhœa again occurred, and the two last named mixtures were continued, one or other, according to the state of the bowels, for three weeks, when tincture of perchloride of iron was substituted. The pulse, which during the peritonitis had been 120, reduced gradually during three weeks to 76 per minute. The tongue very slowly lost its brilliant redness and gained a slight coating; the thirst also subsided; the abdomen became soft, and lost all tenderness; the appetite returned; and the gradations through eggs, fish, fowl, to mutton chop, were duly observed: the strength was thus very slowly regained.

I had made the wound in the skin of the shortest prescribed length of four inches, as the patient was thin, which left an inch at each extremity of the bowel to heal. This was effected by granulation, dressed with chalk ointment, and touched with nitrate of silver. Four weeks after the operation, the intestine had partly united to the skin by first intention; but as some pus oozed up between them, and there was no tension on the sutures, I was glad to leave these (they being horse-hair) for three weeks, till all was firmly united. The result was a straight orifice, with bright pink lips of mucous membrane.

Though there was altogether steady improvement, for four weeks the patient's condition was truly precarious, owing to peritonitis, gastric and intestinal irritation, diarrhœa, intermittent pulse, want of appetite, depression, exhaustion, and œdema of the left foot and leg for a few days. This enabled me to understand the period of danger—namely, five weeks, specified by Mr. Cæsar Hawkins in his valuable summary of cases of this nature. From this time the patient rose from bed, moved about, drove out, took short walks, and gained a moderate amount of strength; all effect of the illness and operation being overcome, save some irritability of tongue, and an uncomfortable feeling from the false anus when walking, which was relieved by a long strip of plaster, taking its bearings from a distance, supporting the orifice. Sprinkling the pad with chloralum lotion has prevented unpleasantness when unexpected defæcation occurs. Since a few days after the operation, the main source of annoyance and of sense of weakness to the patient, has been the discharge of tenacious mucus *per rectum*, at first due probably to irritation of the rectum by manipulation. This was relieved by injections of cold water; four days after operation, it was tinged with fæces, but no fæces have ever passed since by the anus. When the soreness of the part had sufficiently subsided (it remained very tender to touch for six weeks), I made an examination, and found that the swelling before referred to between the bladder and rectum still existed, was larger, firmer, and had fallen lower, and was, in fact, a tumour, compressing the rectum against the sacrum, and obstructing its channel. Lately for a few days, more marked symptoms were manifested; pain over the sacrum, dragging weight, and once passage *per rectum* of a little bloody mucus—all caused by a temporary attack of digestive derangement, which, by producing flatus, pressed the tumour downwards and produced congestion in a portion of the gut: the cause being removed, these symptoms have subsided, and the patient is doing

well again. He has required to be very careful in diet, as beer and some other articles of diet directly produce diarrhœa; but this malady is not constant as before, being only produced by indiscretion in eating or drinking.

I fear I have already trespassed too long on your attention, but was anxious to describe the case clearly and simply. I will now briefly state the propositions which I wish to lay before you on this subject.

1. The real cause of obstruction in this case was extremely obscure, and for some time most resembled fæcal accumulation; even when the rectum was cleared, the boggy lobulated feeling of the mass felt by the tip of the finger *per rectum* seemed to all most like fæces in intestinal coils. Many may consider that aperient treatment was carried too far, and the opiate treatment not begun sufficiently early. But in a case where fæcal accumulation appears to be the cause of obstruction, we should make every legitimate endeavour to remove it: and what would be the position of a man who, where this happened to be the true cause, were to begin the opiate treatment too soon, and thereby lock the bowels, should he suggest and proceed to operation, when the straining stage of chloroform administration, overcoming the practitioner's opium barrier, should effect a free alvine relief *per rectum*, just as the scalpel was incising the abdominal parietes? The likeliest preventive for such disgrace would be a good dose of castor-oil given by the attendants without the surgeon's knowledge.

2. As soon as it is evident that there is mechanical obstruction, soothing treatment and operative interference cannot be too soon adopted. This I feel a matter of vital importance; and I am convinced that, just as with hernia, the earlier the operation the more probable is a happy termination—exhaustion, collapse, and gangrene, being thereby prevented.

3. In this case, and in similar cases, but for the operation, a fatal issue must have in a few days ensued; therefore, however long the patient may live afterwards is owing to this means—an immense satisfaction to the surgeon, and an immense credit to our art.

4. Presuming, for argument's sake, that the obstacle for the time were overcome, yet the patient's life for the remainder of his days will be infinitely easier, through having a free passage by an artificial anus, instead of the usual weary, wearing, suffering existence of those who perpetually need powerful medicines to carry on strained defæcation over a steadily growing intestine-contracting tumour.

5. In continuance of this idea, the growth of the tumour, be it benign or malignant, must be much slower, and its evil effects less felt, through its not being perpetually irritated and inflamed by the forcing over it of fæces, hard or softened, and flatus.

6. Operations for obstruction, when caused by tumour, be it simple or malignant, are the most likely to prove successful, since there is no sloughing to fear, as in twisting, internal hernia, and intussusception.

7. Only a few days ago I was consulted by an elderly lady for difficulty of defæcation, and from her history and complexion was led to make an examination, and found a scirrhous mass pressing into the rectum. I advised her using laxatives discreetly for some time, and suggested her ultimately submitting to this operation; for I strongly feel that we should not in all cases wait for absolute obstruction from tumour, but anticipate and prevent not only this extreme evil, but the distress, agony, and exhaustion, of severe impediment, by early formation of an artificial anus.

PROVIDENT DISPENSARIES OR INDEPENDENT SICK CLUBS FROM A PRACTICAL POINT OF VIEW.*

By D. TOLER T. MAUNSELL, M.B.T.C.D., Dublin.

In a letter addressed to Dr. J. Rogers, the President of the English Poor-law Medical Officers' Association, which appeared in the British Medical Journal of the 20th January last, I gave some account of the history of provident dispensaries and the difficulty that had ever been experienced in establishing them; and, while believing that provident dispensaries or independent sick-clubs would afford the most desirable means of alleviating sickness amongst the labouring classes, I expressed an opinion that practically it would be found to be almost impossible to establish them on such an universal scale as would enable them to include all that portion of the community who, in the event of sickness befalling them, are liable to come under the action of the Poor Law.

I do not think for this reason that the endeavour to establish provident dispensaries is the less desirable; but I believe that it is necessary to establish a dispensary system under the Poor Law as it exists in Ireland at present, for that class of the community above alluded to; and that, paradoxical as it may appear, the chaotic character of Poor-law medical relief in England, and more especially in London, has been one of the principal reasons of the want of success in establishing provident dispensaries.

The outdoor patient department of the various hospitals owes its origin to various causes. One is, that it acts as a feeder to the hospital, when a process of selection of the more interesting cases takes place. Another is the charitable purpose of alleviating the more trifling diseases of those unable to pay, or those diseases not likely to be benefited by indoor treatment. If an outdoor department be attached to a hospital, and no restriction be connected with application to it, as a matter of course it will be largely abused. Mr. Fairlie Clarke has stated that 1,156,016 persons, or more than one-fourth of the population of London, received gratuitous advice and assistance at the London hospitals during the last year. If we turn to the last Report of the Poor-law Board, we find that the average amount of out-door pauperism in the metropolitan district was 114,389. Of these, 70,532 were pauperised from sickness; and 36,669 was the average for the year of those destitute from temporary sickness (those to whom I have alluded as the class who, in the event of sickness befalling them, are liable to come under the action of the Poor Law). Mr. Fairlie Clarke does not give the average of outdoor hospital department relief for the year; and I should think that it would be difficult to do so with accuracy, whatever it may be. The difference between that average and 40,000, or, more correctly speaking, 36,669, will give the number of persons to whom provident dispensaries are applicable. For the 40,000 who either cannot or will not practise prudential virtue, an efficient system of Poor-law medical relief should be provided; and, until it is, outdoor hospital relief will be abused. Not having any well devised scheme in connexion with Poor-law medical relief, the hospitals must adopt the utmost latitude, as a matter of course; otherwise these institutions would be open to the charge of uncharitableness. And to use any effectual means of selection would require the attachment of a detective department to each. On the other hand, if a dispensary system under the Poor Law were established, and moderate care exercised in the distribution of tickets for medical relief, it would absorb all who could not pay, and it would act as the legitimate feeder for hospitals in other cases than accidents. It would also enable the hospitals to draw a hard and fast line, by which, if the patients were unable to pay, they might be sent to the district dispensary, if not actually requiring indoor treatment; and, if able to pay, and consequently unable to obtain a Poor-law medical relief ticket, they might be refused medical relief with propriety, when they would be obliged to avail themselves of the obvious alternative—either the provident dispensary or the general practitioner, who is the principal loser by the present system from a pecuniary point of view, whilst it leads to public demoralisation. I believe, therefore, that the first step towards establishing provident dispensaries will be the introduction of an efficient system of Poor-law medical relief. That class to whom these independent sick-clubs are applicable is intermediate between the poor and the professional classes; and, if we adopt Dr. Farr's classification, according to employment, we may arrive at an approximation of who they are and how many they are. Dr. Farr divides the people into the *Andrici*, the professional class, who number in England and Wales (in this classification, allusion is only made to persons aged twenty years and upwards) about 420,000, or 3.8 per cent. of the total, of whom 96,000 are resident in London, and who, we will assume, do not endeavour to obtain gratuitous medical advice. The *Oikici*, or domestic class, number over 4,000,000, or 37.4 per cent., 665,000 of whom are resident in London; many of these crowd the out-patient department of the hospitals, who, under moderate supervision, need not do so. The *Agorici*, or commercial class, number close upon 600,000, or 4.6 per cent., 136,000 of whom reside in London, and of whom, also, we will assume that none obtain gratuitous medical advice. The *Georgici*, or agricultural class, number over 1,600,000, or 14.6 per cent., 25,000 of whom are said to be residents of London; these also will furnish a quota. The *Technici*, or industrial class, number close upon 4,000,000, or 34.1 per cent., 600,000 of whom reside in London; and to this class principally may be attributed the great demand for gratuitous medical relief. Over and above all these, there is an indefinite and non-productive class, which includes persons of rank and property, not returned under any occupation; persons supported by the community, etc. This class numbers over 600,000, or 5.5 per cent., over 100,000 of whom reside in London. We have thus close upon 11,000,000 persons aged twenty and upwards, with their families; from these, if we deduct the professional and com-

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mercial classes, numbering about 1,000,000, we have over 9,000,000 aged twenty years and upwards, with their families, who may be, in the event of sickness, reduced to apply for the assistance of gratuitous medical relief; of these, 1,400,000 reside in London. Mr. Fairlie Clarke shows how largely those avail themselves of hospital relief, when 1,156,016 patients received gratuitous relief during the year. I have already mentioned that 70,000 was the average of destitute poor from sickness in the metropolis. The whole of England and Wales, exclusive of the metropolis, gives outdoor paupers, exclusive of insane and vagrants, 880,709; of these, over 406,000 were pauperised from sickness, and 168,000 destitute from temporary sickness. If we deduct 800,000 for the professional and commercial classes and their families in the metropolis, and 140,000 poor from the total, there will be considerably over 2,000,000 persons in the metropolis by whom provident dispensaries may be established and supported. A similar calculation for England and Wales, exclusive of the metropolis, will give somewhat over 2,000,000 for the professional and commercial classes and their families, and 1,037,360 paupers of all classes, leaving a balance of over 16,000,000 by whom provident dispensaries may be established and supported.

Thus amongst the three classes—domestic, agricultural, and industrial—there are over 2,000,000 in the metropolis, and 16,000,000 throughout the rest of England, to establish and support provident dispensaries. The total population of England and Wales is close upon 23,000,000; of these, 12,000,000 reside in cities. The number of medical men in England and Wales is a little over 14,000. The slightest calculation will show that there is, therefore, an average of 1,700 persons in England and Wales to each medical man. If each of these paid four shillings a year, or less than one penny a week, it would enable them to form 14,000 medical clubs, with an income of £350 a year to each. I take the number 14,000, as it happens to be the number of medical men at present, though the number is diminishing rapidly. This does not appear to be an extravagant amount to pay for medical attendance; and there are probably many members of the profession who would accept clubs on these terms. But medical clubs are not formed; and why? The fault rests principally amongst ourselves. We have squandered our skilled advice and assistance; we have almost thrust it on the public, in spite of themselves. It has come to that point, that it is not accepted as a compliment, but demanded as a right. A medical man now-a-days is expected to be the incarnation of charity. Who would ask a clergyman to undertake a cure of souls for nothing? Yet, in the establishment of a hospital, the treasurer, the secretary, matron, nurses, all are provided for; but the medical officer is honoured by being privileged to act gratuitously. His responsibility, however, is not diminished by non-payment. The legal profession, wise in their generation, have long since adopted the fiction of "travelling opinion" against any mistake in advice unpaid for. Amongst medical men, however, the term is "malapraxis"; and errors of judgment are dealt with in a summary and often arbitrary manner, without taking into account circumstances which would be looked upon as of the first importance in other professions. In legislation, it appears to be considered to be almost unnecessary to take any notice of the interests of the medical profession. This is due in great measure to the want of cohesion which marks the medical profession. Whilst such an *embarras des richesses* of medical assistance exists, it is, of course, foolish to expect that the public will contribute to, or join in, the provident medical clubs; "it would be mere money thrown away." The effect of this on the individual members of the profession is simply ruinous, and on the public demoralising. If Mr. Fairlie Clarke's figures be correct, the population of the metropolis may be thus accounted for from a medical point of view: Attending out-patient hospital departments, 1,156,016; Poor-law medical, 70,000; professional and commercial, 800,000; leaving, of the total 3,263,000 inhabitants of London, but 1,000,000 unaccounted for, of whom there was an average of 37,000 in the workhouses, a considerable number in the various hospitals; and it is to be hoped that very nearly the whole of the remainder were not sick during the year.

It is, then, to this catholicism of gratuitous practice of medicine, that the want of success in the establishing of provident dispensaries is mainly due. To put a stop to this, it will be necessary for the hospitals to draw a hard and fast line somewhere; and, to enable them to do so without being accused of uncharitableness, it will be necessary to establish a system of dispensaries in connexion with the Poor-law, to which persons will be admitted by tickets given by responsible persons, as the relieving officers, who shall adopt some principle of selection. It is only in some such way that the present abuse of medical relief can be abated; and, until this is effected, all endeavours of establishing independent sick-clubs, I fear, will be vain. Whether a Charity Organisation Society is the best adapted for establishing these clubs, leaves room for argument. They should be established by the members themselves; and it is probable that any attempt to thrust them upon them will be resented, rather than otherwise. These classes, many of whom are on the brink of pauperism, and who are liable at any time to be immersed in it, have a dislike even to the name of charity. Having a keen appreciation of its want of discrimination and its abuse, they do not believe in it. They know that professional pauperism is begotten of it; and, of all phases of pauperism, they hold that in the greatest abhorrence. Any one acquainted with the history of indiscriminate charity will not be surprised at the conclusion to which they have arrived.

THE USE OF ALCOHOL IN HEALTH AND IN DISEASE.*

By J. W. EASTWOOD, M.D.Edin., M.R.C.P.Lond., Dinsdale Park Retreat, Darlington.

AT no period within the present century has it been necessary to apologise for introducing such a subject as this to the consideration of medical men; for alcohol in its various forms has played a prominent part, whether for good or for evil, in our national habits as an article of diet, and in our systems of treatment as a medicinal agent. Some years ago, however, within our own recollection, there would have been less toleration for discussing this question than at the present time. A spirit of inquiry has arisen, and we can no longer take for granted the dicta and the practices of our fathers, whether it be on this or any other subject. Some of the very principles of medicine, once laid down so clearly and authoritatively, that it were heresy to disbelieve them, are in an unsettled state, and we must find our way out of this uncertainty as best we can. That the result will be satisfactory, and to the gain of medicine and science, I have not the least doubt, for nothing is more fatal to progress than indifference, or than *jurare in verba magistri*. To no subject are these remarks more applicable than to the one I have chosen to bring before you, in the hope that, if I can say nothing positively new, it may lead to useful discussion and careful observation for the future. At the present time, I am glad to see so large an amount of interest taken in this question throughout the country, not only by those who are professed total abstainers, but by scientific men and others who are in no way disposed to admit extreme views. Of the importance of the subject, it is only necessary to state that during each year about 1,000 millions of gallons of alcoholic beverages are drunk in this country. And in one of the annual reports of the Registrar-General, we find among the causes of death, under the head of alcoholism, the following numbers.

	Males	Females	Totals
Delirium tremens	390.....	49.....	439
Intemperance	247.....	102.....	349
	637	151	788

And this is only a small part of the mortality and disease produced by this cause.

Under the term alcoholics, I shall include all the varieties of drinks in which alcohol is the principal element. They may vary in strength, in colouring and other matters, but they owe their active effects to the quantity of alcohol they contain. There are undoubtedly good and bad articles; but we hear some people say that good wine or good brandy—and it must be really good, they tell us—never did any one harm; which means, when translated literally, that no amount of alcohol will do harm.

The subject is naturally divided into two parts: firstly, the dietetic use of alcoholics in ordinary health; and secondly, their medicinal use in feeble health and in disease. When used in health, they act as stimulants, especially to the nervous system, and, according to some persons, as nutritive agents. The different kinds of spirits, wines, and malt liquors owe so little of their use to the presence of anything except alcohol, that we may very briefly dismiss this part of the subject. The presence in gin of a diuretic, in champagne of an exhilarant, carbonic acid, or in beer of hops, does not materially alter the general effect produced.

At the present time, there is an extensive use of alcoholics as articles

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of diet in all classes of society, notwithstanding the efforts of total abstainers for many years past. The inquiry that is now taking place is not exclusively in connection with the so-called temperance movement; for many men have come to the conclusion, as I have myself, that teetotalism has failed to produce any serious impression upon the drinking habits of this country. On the social part of the question, it is not my intention to do more than mention that I read a paper on "Intemperance in its Medical and Social Aspects," in the Public Medicine Section of the British Medical Association at Newcastle, which is published in the JOURNAL for January 28th, 1871. The universality of alcoholic drinking—for there is scarcely a country where it does not exist—is certainly an argument in favour of its moderate and dietetic use, founded on gratifying a natural desire. The precise manner in which the alcohol acts has been, and still is, a most uncertain question. So important a matter cannot be settled by any man's private observation; and though I was for years a total abstainer, whilst now I am not, yet I cannot pretend to throw any light upon the subject from personal experience. The question must be decided by reference to larger numbers than have yet been brought systematically together. Whether alcohol acts as a useful nerve-stimulant, or as a nutritive, or as neither, is the great question to be solved. I have frequently found myself that moderate quantities of wine produced neuralgia of the scalp. The uncertainty of the whole subject, and the want of some general principles to go upon, is being felt seriously by many members of the profession.

We are concerned now with the dietetic and moderate use of alcohol, and in the *Practitioner* this is stated to be six drachms of absolute alcohol, or two glasses of wine for women, and twelve drachms or two ounces for men, equal to about four or five glasses of wine daily. Are these or any other quantities necessary to persons in health, and does their use in any way assist in the performance of healthy functions or in prolonging life? A statement was made some years ago, and signed by about two thousand medical men, some of them of great eminence, and not total abstainers personally, that persons in health required no alcoholics, and were better without them. Is this opinion as general now, and if not, why so? Can we give any reasons for the opinion that alcohol is necessary in health? Let us do away with mere individual statements, and trust to results obtained from the experience of larger numbers carefully compared. The fact exists, that many persons take moderate quantities of alcoholics and enjoy good health, and many other persons take none at all and likewise enjoy good health. It has, however, been observed that total abstainers of the second generation are not good examples of the truth of their practices; but then, again, the children of moderate drinkers are also sometimes unhealthy. We know that the children of drunkards are often imbeciie or insane, or in some way degenerate in health. What, then, becomes of the alcohol taken in dietetic quantities? Is it given off as alcohol, or is it consumed in the system, or is it partly given off, and partly oxidised? Perrin, Lallemand, Duroy, Percy, Edward Smith, and others believe that it is all given off; whilst Anstie, Thudichum, Dupré, and others believe that only a small part is given off, and the rest consumed. The experiments of Dr. Parkes and the late Count Wollowicz are amongst the most interesting which have been made, and they proved that even one ounce of alcohol taken daily caused increased action of the heart to the extent of four or five beats, which increase continued almost in proportion to the quantity taken; so that, with eight ounces of alcohol, the average pulsation was increased seventeen beats per minute. Thus a large amount of work was thrown upon the heart, and no corresponding good obtained. The fall of temperature under the use of alcoholics has been very distinctly ascertained by Dr. B. W. Richardson, who says: "So soon as the alcohol makes its way into the organism, and diffuses itself through the fluids, so soon there is depression, so soon respiration falls, carbonic gas from respiration decreases, and muscular strength, consciousness, and sensibility decline." Notwithstanding this, he is prepared to admit that a certain amount of oxidation of alcohol takes place, but only under certain circumstances. The last experiments of Dr. Dupré show that only a small portion of the daily quantity of alcohol is eliminated by the secretions. Dr. Subbolin states in a German journal that he has made a series of experiments on rabbits, and he found that about 7 per cent. of alcohol was eliminated. More recently, the amount has been as much as 12 to 16 per cent. He thinks alcohol cannot be considered as a food, as it diminishes the metamorphosis of the tissues, lessens the temperature and the amount of carbonic acid secreted, and diminishes the discharge of urea. The old notion that alcoholics keep the body warm is shown by actual experiment to be false. In the brandy and hot water taken to keep the cold out, there is some excitement and decrease of sensibility produced, with a temporary increase of heat; but this last result is owing simply to the hot water, whilst, after this effect has passed off, the temperature of the body is lower than it was before. The experience of all arctic voyagers leads to the same conclusion, and it is so well known, that the medical officers of northern expeditions forbid the men to take spirits in the extreme cold of the frozen regions. The decision, then, as to the precise value of the dietetic use of alcoholics, can only be made by a collection of a large number of facts carefully and scientifically observed, for which we have not as yet sufficient trustworthy materials.

Let us now examine the use of alcoholics in feeble health and in disease, in which they may be regarded as stimulants, tonics, depressants, anæsthetics, narcotics, and arresters of decomposition. The practice of the late Dr. Todd did much to make the use of large quantities of alcohol fashionable in the treatment of disease; for, though his plan was not to use them indiscriminately, yet he is generally considered as having done so. Of late there has been a considerable reaction against this plan of treatment, so that more moderate doses are now given. There is even at the present time a great difference of opinion amongst the profession as to the quantities used, especially at our public institutions. At St. Thomas's Hospital, the patients cost annually £826, or 1s. 7½d. per head weekly; at the Sheffield Infirmary, 1s. 4½d.; at Leeds, Newcastle-on-Tyne, and Manchester, 1s. 1d.; at Glasgow, 8¾d.; at Edinburgh, 8d.; and at Birmingham, 5½d. At the Newcastle Infirmary the amount has been diminished to the extent of £90 during the last year. In the county asylums for the insane poor there is a great diversity in the amount of wine, spirits, and porter consumed, beer being included amongst provisions. At the asylums for Lancaster, Dorset, Notts, and Warwick, the weekly cost is ½d. per head, at Worcester 4½d., at Durham 6d.; whilst at the borough asylums at Leicester and Norwich it is 7d. and 9¾d. respectively. The total cost for the maintenance of each patient varies only from 6s. 10d. in Dorset, to 10s. 6d. in Surrey, per week, but it is more in the borough asylums. From the official reports I cannot find that the recoveries or the deaths bear any reference to these expenses. At the Cumberland Asylum no beer is given as an article of diet, and the patients appear as well off as those in other asylums. To invalids, however, stimulants are given in the usual manner, as the cost per head appears to be 2⅜d. weekly. At the various workhouses the same irregularity prevails. The 825 inmates of the Whitechapel Workhouse cost £503, or 2¾d. per head weekly; Shoreditch and Bethnal Green pay 3½d. each, the City of London, 6d., Camberwell 7½d., whilst Paddington pays 9d. The comparison of the number of deaths with the supply of alcoholics affords no correct information as to their value, but it certainly does not prove anything in their favour. On what principle is there this difference in practice amongst the hospitals, asylums, and workhouses of this country? Surely none; and yet hundreds of pounds are spent every year, and no one can say to what good, if we look at the results. Almost every man will tell you that he is guided by experience; but when so many different experiences exist, who shall decide which is best?

The stimulating property of alcohol is well marked; and no one will deny its use in a depressed state of the system, when a sudden effect has to be produced. Its continuance requires care, for it produces depression of temperature, and for this reason it is thought to be useful in fevers. As a tonic, it is supposed to assist in promoting digestion and in giving strength to the system, but no one can say exactly how. If it be burnt in the body, it ought to keep up the animal heat; but its invariable effect is to lower the heat, and for this reason it is forbidden to be used by arctic voyagers. In larger doses than are required to produce stimulant effects, alcohol is an anæsthetic, diminishing sensibility; and for this purpose it is used for relief of pain, much more frequently being prescribed at home than by the medical man. As a narcotic, it is also chiefly a domestic remedy. Its power of arresting decomposition in the body is doubtful, though out of the body its effect is well known.

No class of diseases has experienced greater change of treatment than fevers, in relation to alcoholics. Not many years ago it was the custom to give alcohol indiscriminately in large doses. Twenty years ago, when suffering myself from a severe attack of typhus, I was dosed with large quantities of alcohol, to the extent of one bottle of port wine and one pint of brandy every twenty-four hours for at least a week, and smaller quantities for several more weeks. Whether owing to the alcohol, or in spite of it, I made a good recovery. The pulse became slower, and I can only come to the conclusion that the alcohol was taken up so eagerly by the system, that it was oxidised and supplied the elements necessary for life until food could be taken in sufficient quantities. There were no symptoms of intoxication produced, although at the time I was a total abstainer, and the coma came on before these large doses were given. I have never prescribed it in such large quantities myself—not even whilst I was physician to the Newcastle-on-Tyne Fever Hospital, when 400 cases were treated in one year. The practice which I followed then was, to give no alcohol in mild cases, and in

young persons under 20 or 21 years of age, unless there were special symptoms requiring it. In more severe cases, I gave four, six, or eight ounces of wine daily, and seldom more than that quantity, or its equivalent, in the form of spirit. On the whole the cases did well, and I had no reason to regret the treatment in comparison with that of other hospitals. Dr. Gairdner of Glasgow has carried out the moderate use of alcohol in fever, and found it to answer best after trying to do without it. The same was the case with Dr. Murchison at the London Fever Hospital, and with the same results.

The connection with insanity and nervous disorders, would require a paper itself. It is one of the most frequent causes of the breaking up of those delicate nerve-cells, on the integrity of which depends the *mens sana in corpore sano*. If the homœopathic doctrines were true, alcoholics ought to be largely used in insanity; for, having produced the disease, they ought also to cure it. This was at one time closely acted upon in the treatment of delirium tremens. To leave off the accustomed stimulant was sure to bring on the complaint, and when brought on it must be cured by the same means by which it had been caused. There is no greater fallacy than this; and I have treated many cases of delirium tremens without any stimulant, soothing the patient with a warm bath and an anodyne, allowing at the utmost a nightcap of hot spirit and water, where it was difficult to do without it. Even this is unnecessary, and chloral, judiciously used, will answer far better than any quantity of alcohol; besides, in such cases, moral treatment is of great importance, and it is best to begin by teaching the patient to do entirely without his accustomed stimulant. Total abstinence becomes the only practical way to cure the patient and keep him well. In other forms of nervous disorder, there is no special treatment required, except that many insane patients cannot bear much alcohol, being readily influenced by it.

At the present time many eminent surgeons dispense with the use of alcohol before a surgical operation, once a very common plan; and chloroform does duty far better. In diseases where there is much waste by suppuration, it has been the custom to give large quantities of porter and wine, when the same amount of milk would, at least on theoretical grounds, afford more support to the system.

The most important movement which has recently been made has been the "medical declaration respecting alcohol," which, in a very short time, obtained the signatures of 269 London and provincial physicians and surgeons of eminence. Though a step in the right direction, originating with leading members of the Association, it has not been generally approved of by the profession. The *Edinburgh Medical Journal*, the *Pall Mall Gazette*, and other papers and periodicals, were in favour of it, and it was speedily published in almost every newspaper in the kingdom. The medical men of Cheltenham supported it with some important verbal alterations. The North Staffordshire Medical Society considers the first paragraph of the declaration as being "an exaggeration and undeserved slur upon the whole profession," and does not approve of medical declarations issued to the public. The Islington Medical Society protests against the declaration, and does not agree with its censure upon the profession. The Northern Branch of the British Medical Association considers the first paragraph objectionable, but that the time had gone by for making any alteration. From the paragraph alluded to, it would appear that the prescriptions of medical men are to blame for a large amount of drunkenness. I propose, instead of the objectionable sentence, to substitute one which is not only more correct, but more in harmony with the opinion of the profession. In place of the preamble of the original declaration, which runs thus, "As it is believed that the inconsiderate prescription of large quantities of alcoholic liquids by medical men for their patients has given rise, in many instances, to the formation of intemperate habits, the undersigned, while unable to abandon the use of alcohol in the treatment of certain cases of disease, are yet of opinion that no medical practitioner should prescribe it without a sense of grave responsibility," I would substitute the following: "The undersigned have paid much attention to the use of alcohol in health and disease, and, whilst they admit its value as a remedial agent, they are satisfied that a large amount of mortality, disease, and suffering, is produced by the immoderate use of alcoholic liquors." With such an alteration, I believe larger numbers of our profession would have signed the declaration.

I cannot conclude this paper without expressing a hope that the scientific and rational elucidation of this important subject has really commenced. Both in the literature of the day, and in the action which is taking place on the part of the non-medical public, the use of alcohol has become a prominent question. The recent declaration has shown that leading members of the profession have thought it necessary to take some steps to vindicate themselves from the charge of indifference. The whole question would be a very desirable one for a committee of members of the Association to examine carefully. The important points for them to consider would be the following:

1. Is alcohol food or medicine, or both?
2. Is it necessary in ordinary health, or is it injurious?
3. For what definite objects can it be recommended in feeble health and disease?
4. What is its mode of action?

Let us not be led away by prejudice or custom, but manfully grapple with what is really the most important medical and social question of the day, and be true leaders in the scientific education and moral advancement of the people.

SANITARY STATISTICS OF CHELTENHAM FOR THE YEARS 1865-71 INCLUSIVE.*

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THE present paper is in continuation of one on the same subject read before the Statistical Section of the British Association in the year 1864. Instead, however, of relying on the figures published in the Reports of the Registrar-General, I have in this instance collated for myself, from the pages of the local register, the facts on which my conclusions are based. They apply to Cheltenham, the registration subdistrict—to Cheltenham proper; and I have prepared a map, on the plan first suggested, I believe, by Dr. W. Budd, which shows roughly the chief points to which I wish to draw attention.

I. The *Nature of the Soil*—an important item, as controlling to a large extent the source of water-supply and sewage-soakage—is indicated by the faint colouring: *yellow*, a porous sand, varying in depth, with clay below; *neutral tint*, an impervious clay; *reddish brown*, a mixed clay and sand.

II. The chief *Sewers* are marked in red and green lines; the former denoting the modern, the latter the older sewers. For valuable information on this and other matters, I am indebted to Mr. D. J. Humphris, borough surveyor to the town.

III. The supply of *Hill-Water* from the company's reservoir is marked in blue.

IV. The locality of each death occurring during the last seven years from small-pox, diphtheria, scarlatina, fever, and diarrhœa, is marked in distinct colours: *black star* for small-pox; *crimson cross* for diphtheria; *scarlet dot* for scarlatina; *blue* for diarrhœa; and *green* for fever (including typhus, enteric, and continued). In this, I have derived much assistance from the local knowledge of Mr. Bennett, the registrar of births and deaths.

I cannot pretend that the map is more than a rough indication of certain life-conditions and their results. It has been completed under some difficulties. The Water Company, for instance, not being identical in interests or aims with the sanitary authorities of the town, could scarcely be expected to afford full information on some points regarding the water-supply, nor can the sanitary authority demand it. I have reason to think, however, that, through the kindness of Mr. Swinnett and Mr. McLandesborough, all that relates to the poorer parts of the town has been fully entered on the map.

On the subject of *area* and *population*, it is important to notice that the parliamentary borough of Cheltenham, to which 270 acres were added by the Boundary Commission of 1867, is no longer conterminous with the registration subdistrict and sanitary jurisdiction which goes by the same name. The population of the latter, which was 39,693 in 1861, was 41,923 at the census of 1871, showing an annual increase of 223, against 464 in the previous decenniad. Any calculation of the mortality, therefore, based on the estimated population for the last five or six years, would be very wide of the mark; and the same observation will apply to nearly all the large towns in the kingdom. A biennial or at least a quinquennial census would be the only corrective to an error so misleading, yet so common in sanitary statistics. During the seven years, the natural increase by excess of births over deaths has averaged 281 yearly.

The *Sewers* of Cheltenham are of two kinds; those marked *red* on the map, constructed by the Town Commissioners since the year 1857; those marked *green*, by private individuals, or by a Sewer Company which existed before that date. And the importance of this distinction will be seen, when I come to deal with the water-supply and the mortality from certain kinds of disease. I would now merely draw attention to the fact that the red lines denoting the modern sewers are

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

most numerous in the poorer quarters of the town, and that want of sewer-accommodation is certainly not a special cause of mortality in these districts. These are exceptions, as will be seen; but they are exceptions which help to prove the rule. House-traps and drains may, indeed, be at fault; but these would not give rise to excessive mortality in *streets*. And cesspools, with which the town was formerly honeycombed, may still give trouble in some cases by contaminating the wells; but on this point no reliable information can now be obtained. The outfall for the sewage is good, and for the last two years irrigation has been carried on with the best results. A farm of 131 acres was purchased by the Town Commissioners; and over this, with some 200 acres in addition, the whole of the sewage of the town is allowed to flow, after simple settlement of the solids in tanks provided for the purpose. The soil is a heavy clay, but so throughly underdrained that no saturation is allowed at any time to take place; and the grass-crops are all that can be wished.

Passing to the *Water-Supply*: the sources of water in Cheltenham may be comprised under five heads—1. The hill-springs; 2. The springs proper to the town; 3. The river Chelt; 4. The rain; 5. The wells in the town.

1. The pure springs, which arise on the slopes of the Cotteswold Hills, have been in great part secured by the Waterworks Company, and the water is stored in reservoirs, from which it is distributed, on the intermittent system, to certain portions of the town. The supply of pure water is, therefore, practically monopolised by the Company; and the rate at which it (or rather a mixture of hill-water and water pumped into the reservoirs from the sand-bed) is sold is, as I shall presently show, prohibitory to its universal or even common use amongst the poorer classes.

2. The springs within the town, rising from vast depths through cranks and fissures in the lias clay, form the mineral waters of Cheltenham—once justly famed, now unjustly neglected. As a house-supply, these waters are, of course, useless; but it may well be asked whether springs so abundant, and containing so large a proportion of chlorides, could not be advantageously used for street-watering, in place of that purer hill-supply which, being beyond the purse of the poor, is now lavished upon the public streets.

3. The *Chelt* is a small stream flowing through the centre of the town, the water of which is monopolised by the rights of millowners, and is otherwise unused, except for washing purposes, at the lower end of the town.

4. The *Rain*, most valued in a hard-water district for washing purposes. In some of the poorest parts, however, on the clay, it forms, during seasons of drought, the sole available supply for all purposes.

5. The *Wells*. I have already alluded to the fact that Cheltenham is built partly upon a dense clay, in which little or no water is obtained, partly on a porous sand, well supplied with water from the rainfall (which averages twenty-seven inches *per annum*), and from the streams and the springs which traverse it on their course from the hills; partly on a wedge-shaped band of water-bearing soil running along the course of the Chelt, in which gravel-pits occur, covered with a yellow clay of diluvial origin. Where the clay comes directly to the surface, as it does in the upper parts of the town, a water-supply from a distance is essential; no other is available, except the rain. Where wells are already dug, and a water clear, sparkling, cool, and refreshing, lies literally under the feet of the people, to be had for the pumping, one cannot wonder at objections being raised, even by educated persons, to a compulsory water-rate, and to a supply which their senses tell them is less refreshing than the one they possess. There are thus two parties in the town, reminding one of the upper and lower proprietors on some of our great salmon rivers; and united action for the common good seems equally distant in the one case as in the other. Attempts have, indeed, been made to secure the rights of the Water Company for the town; but divided councils in the Board of Commissioners, and the very natural apathy of the well-owning part of the population, have allowed a monopoly to exist up to the present time, which cannot but be detrimental to the development and best interests of the town. Nothing short of a popular demand, arising from a conviction that wells in a porous soil traversed by sewers are dangerous to life and health, can now remove this serious bar to social and sanitary improvement.

The wells of course differ widely, according to their situation and surroundings. Under favourable circumstances, where they are removed from all danger of sewage-filtration, the water they contain may be simply hard, holding in solution some 30 to 60 grains of solid matter to the gallon, with a hardness before boiling of 29, and after boiling of 13 (Letheby). Practically, however, as they exist in the poorer parts of the town, the wells are exposed in more ways than one to those organic impurities which give rise to disease and to that lowered vitality which makes disease more fatal. Soakage from the surface into the shallow catchpits in the clay; leakage from closed cesspools, which are frequent in some parts of the town, or from sewers, which have become porous through age, into the deeper wells of the sand-bed, must inevitably result in a contaminated water-supply through large districts of the town. An additional source of deterioration in the well-water may be traced to the new sewers, which, by lowering the general level of water in the sand-bed, have materially increased the amount of solid matter, and probably of organic impurity also. A well near the hospital, for instance, which in 1855 yielded 39 grains of solid matter to the gallon, in 1862 gave 62 grains.

It can scarcely be wondered at, therefore, that Dr. Letheby found in one of these wells no less than 140.8 grains of solid matter per gallon, with a loss by ignition of 13.68 grains; oxidisable organic matter, 2.6; hardness, before boiling, 68, after boiling 33.

The effects of bad water are often insidious, and it is not easy to convince even those who suffer from them of their reality. Words are as idle tales; but mortality in colours, as seen on the map, may have a deeper effect.

> "Segnius irritant animos demissa per aurem,
> Quam quæ sunt oculis subjecta fidelibus."

Having considered some of the health-conditions under which the people live, I now pass to the statistics of mortality, and in particular to the three tests of sanitary condition specially relied upon by the Registrar-General (Quarterly Report, No. 92, p. 7); viz., proportion of deaths to population; deaths from the principal zymotic diseases; infant mortality.

Cheltenham has always held a high position in the sanitary list of English towns. More than once she has headed that list, and drawn forth the encomiums of the Registrar-General. Last year, the death-rate was but 17.57 per 1,000 living, reckoned on the actual census—that for the kingdom being 22.6; and at a time when the rest of England was suffering severely from small-pox and other epidemic disease, the death-rate from these causes in Cheltenham was but 1.14 per 1,000 living. In some quarters, as in July to September of last year, the whole mortality was but 13.7; Dover being next of the large town districts, with a mortality of 16.1.

The average mortality from all causes during the seven years 1865-1871, over which my inquiry extends, is 835, which, on the arithmetical mean of the population, reckoned for the middle year of the period (1868), gives an average annual mortality of 20.18 per 1,000 living, including the deaths in hospital and workhouse, which average 18 and 50 in each year respectively, and are to a large extent the product of parishes beyond the limits of the town. Exclusive of these, the mortality would be 18.54 only.

The deaths at 60 years and upwards are 32.95 per cent. of the total deaths from all causes. Those under 5 years give a percentage of 31.35; the average for England in 1869 being, according to Dr. Farr, 42.7. The deaths under one year were 20 per cent. of the total mortality; the percentage for England in 1869 being 26.1. The mean age at death—*i. e.*, the sum of the ages at death, divided by the number of deaths, varies from 28 years in 1868, when the mortality was 18 per 1,000, to 41 in 1870, when the mortality was 21; the average age at death for the seven years being 36 years. That for the kingdom was calculated by Dr. Farr in 1844 to be 29 years; but I believe some slight improvement is shown in Life Table No. 3, which I have not had the opportunity of consulting. The mean age at death, however, is an indication only, and no sure test, of the sanitary conditions of a people.

Passing to the *zymotic diseases*, there were in seven years but 33 deaths from croup, or an average of 4.7 *per annum*; from whooping-cough, 54, or 7.7 *per annum*; from measles, 74, or 10.5 yearly—numbers which, in a population of forty two thousand, are small indeed. Diphtheria shows 26 deaths in the seven years, or an average of 3.7 *per annum*.

Small-pox has rarely been epidemic in Cheltenham. In the year 1865, there were 28 deaths from this cause (in the whole seven years there were but 31), almost all in young and presumably unvaccinated children. Excluding the four eldest, who were over 25, the average age at death of the remaining 27 is only 4 years and 8 months. The disease is almost invariably introduced in the person of some tramp, who drags his weary limbs to one of the low lodging-houses at the Gloucester or Tewkesbury end of the town, and there becomes the focus whence the virus spreads like a fairy-ring in ever-widening circles; whilst the originator of the mischief has probably recovered, and carried his pest-laden rags to another unprotected locality. The first death (on December 15th, 1864) was of a child ten weeks old. Of the first case of the epidemic, nothing can ever be known. In the years 1866, 1867, and 1870, there were no deaths from this cause; and

in the years 1868, 1869, 1871, but one in each year—results which it seems only fair to connect with the thoroughness with which vaccination is performed among the poor, and the diligence with which the unvaccinated are sought out by the local registrar of births. I am thankful to add that, in this very month, it is proposed to lay the first stone of a building in Cheltenham in which not only small-pox cases, but scarlatina patients, of all ranks in society, may be isolated and tended with more than the comforts of home. Low as the mortality from these diseases now is, I confidently anticipate that our efforts in this direction will result in complete immunity from the one and a marked abatement of the other.

Scarlatina is fitful in its invasion. In the seven years, there were 171 deaths, chiefly in the last four years, as many as 81 of them having occurred in 1869, and 34 in 1868. In the year 1867 there were but 2, and 5 only in 1865, from this cause.

The worst kinds of *typhus* are seldom, if ever, seen in Cheltenham. There are, however, 19 deaths returned from typhus in the seven years. From typhoid or enteric fever there are 38, and from continued fever 62. Classified together, as they practically are by the profession at large, this gives an average from fever of 17 *per annum;* and here, perhaps, I may draw attention to discrepancies which would appear on a comparison between my figures and those given by the Registrar-General in the Quarterly Reports. The year 1871 is unfortunately the only one in which they can be compared. I have already alluded to this subject in a paper published in the BRITISH MEDICAL JOURNAL for July 23rd, 1870, and I am glad of another opportunity of indicating a widespread source of error which, seeing the uses to which the figures are put, may have very disastrous consequences. Cheltenham, for instance, has been ill-used as a watering-place by the Registrar-General. There were but four deaths from fever in 1871 (including typhus, enteric, and continued fever)—the Registrar-General gives fourteen; ten of these were from rheumatic, puerperal or hectic fever, at all events, they are not on the register as the "fever" of the Registrar-General. Other minor discrepancies need not be specially noticed in this place, but they have the effect of raising the mortality from zymotic disease in a single year from 60 to 77; an excess of 17, which, when dealing with numbers so small, is a serious handicap in the race for priority on the health-lists of England. Errors in detail are excusable and of slight moment, but fundamental errors, which must affect large totals, should be rectified without delay.

Lastly, the occurrence of *diarrhœa* seems simply dependent on temperature, whilst its fatality is undoubtedly governed by sanitary conditions. The deaths from this disease were—in 1865, 32; in 1867, 46; in 1868, 49; in 1869, 32; in 1870, 50; and in 1871, 20. In the year 1866, during which the summer months throughout the country were cold, the mortality from diarrhœa was only 9. [A chart was prepared showing at a glance the mortality during seven years from three of the zymotic diseases, and the seasons in which that mortality occurred. While fever is almost uninfluenced by temperature, diarrhœa is essentially a result of heat, being most markedly fatal in August and September. Scarlatina shows a decided autumnal crisis.]

Cholera is, I am happy to add, unknown in Cheltenham. During the year 1866 there was not a case, and the immunity in this respect is probably due to the remoteness and complete isolation of the town from the seaports and great river systems of the country.

The *amount* of mortality from zymotic disease is, as we have seen, exceedingly small for a town with the population of Cheltenham; still, small as it is, and low as the general death-rate may be in consequence, it is important to inquire where the mortality occurs, and the causes to which it is due. The average annual mortality of 19.9 for the last ten years might be materially reduced if the fatality of certain preventable diseases could be explained, and the causes rectified. Why do children die from scarlatina in one street, and recover in a neighbouring one with a similar population? Why are there streets in which children die almost, as a rule, before they reach the age of five years? Epidemics differ in severity, it is true, and are often localised. Poverty, too, has its attendant risks; but density of population, food, drainage, and water-supply are in such cases the usual arbiters of life and death.

In the map which I have prepared, the crowding of deaths in certain localities is very marked, and no one can doubt that some cause is there in force which is absent from other localities—a cause which adds terrors to disease and gives it power to kill.

The population of Cheltenham is not densely packed even in the poorest quarters; and green fields with fresh air are within the reach of all who choose to seek them. This, therefore, cannot be *the* cause of which we are in search; nor is insufficient or unwholesome food a distinctive feature of the districts in question. There remain the sewerage and the water-supply; and the relations which these bear to the centres of mortality leave little doubt as to the direction in which change and improvement are required. It cannot be expected, however, that sanitary questions can be settled with the neat precision of a mathematical problem; the exact conditions under which people are living can seldom be ascertained with certainty; an old brick sewer, for instance, may be sound or it may be defective; an old sewer may still be in use where a new one is shown on the map; the Water Company's mains may be marked as traversing a street, yet few of the people may drink of the water; a poor population is constantly on the move, and the history of a death is often lost within a year of its occurrence; former tenants may have used a pump, while the present occupiers are supplied from the hills. It will be manifest, therefore, that any conclusions which may be formed will be liable to striking, and often puzzling, exceptions; but they are not on that account less valuable. The state of the sewerage in the poorer parts of the town has been already mentioned as generally good, superior even to that in the more fashionable quarters; still the old sewers and cesspools do remain, many of them in use even where the more modern sewers run beside them; and the contamination of wells in their vicinity is a consequence which cannot admit of doubt. Analysis has shown the water in some of these wells in the sand-bed to be as bad as it can be. I venture to think that the evidence of my map points to the same conclusion, and indicates in the centres of excessive mortality above ground the deadly influences which are being bred below. On looking at the map generally, one cannot fail to be struck with the large districts in which scarcely a death from zymotic disease has occurred in seven years. Numerous streets, also, are observed to have enjoyed the same immunity. Houses on the clay with a hill water-supply, whether the sewers are old or new, seem peculiarly free from the marks of death. I would instance specially the small streets in the Tivoli district—Lansdown and the upper parts of Bays Hill.

On the sand-bed, deaths will be found frequent where the Company's water is absent or but partially distributed. The streets—at the lower end of the High Street, for instance—though well supplied with the newest sewers, are marked by considerable mortality from diarrhœa, fever, and scarlatina. The conjunction, however, of wells with the older sewers, as in Sherborne Street, Fair View Street, St. Paul's Street North, and Rutland Street, affords, as might be expected, the worst chance of recovery. There the deaths are thickest from the three test diseases; and I have good reason for believing that the same would hold good for the deaths of young children below the age of five.

In Exmouth Street, Commercial Street, Bath Terrace, and some other parts of the neighbourhood marked by a large mortality, it is almost impossible, even by a house-to-house inquiry, to ascertain the facts as to water-supply. The Company's mains run wholly or in part through these streets, but I am officially informed that a small proportion only of the houses are supplied. In Exmouth Court, however, where the mortality from scarlatina without fever or diarrhœa is most marked, the people consume hill-water from a common butt—at the same time, accounts differed as to the frequency with which it was cleaned. In the New Street district, again, the total absence or very partial supply of hill-water with old sewers shows the same excess of deaths. To carry this analysis, however, into separate streets and courts, would require more minute information on some points than I have been able to obtain.

For one year, 1865, an analysis was made of the proportionate mortality from all causes to the members living in each ward of the town with the following results. The middle ward, consisting almost entirely of the better class of houses, shops, and respectable lodgings, with few poor, these generally supplied with hill-water, had a mortality of 11.7 only per 1000 living. The south ward came next, with a mortality of 16.2; the two centres of zymotic mortality which it contains, viz., Exmouth Street, with Bath Terrace and Commercial Street, and Sandford Street, accounting for the increase. Close upon the south came the east ward, with a mortality of 16.8. With a centre of mortality, such as is comprised between Sherborne Street and Fairview Street, the wonder is that the total death-rate is not greater.

The mortality of the north ward was 17.7, scattered over the poor districts to the north of the High Street, and centred at one or two points, such as Russell Place, and St. Paul's Street North.

Lastly, the west ward showed a mortality of 23.6, which, considering the very large proportion of better class houses in the Lansdown and Bays Hill districts, must leave a very large mortality to be accounted for in the poorer parts around New Street, in the neighbourhood of Coach Road and Millbrook Street, where the most utter destitution of water prevails.

It is far from my wish to dogmatise or to say that well-water in a thickly populated district and in a porous soil is the sole cause of an excessive mortality—other agencies are at work in Cheltenham as elsewhere; but the facts which I have brought forward are at least suggestive, or well worth the serious consideration, not only of the sanitary authori-

ties of the town, but of individuals among the educated classes who are now but too content with their wells.

Efforts have been made to obtain a supply of hill-water for the poorest and most destitute districts, but they proved unsuccessful. The circumstances are worth noting, as illustrating one of those sanitary deadlocks for which we had fondly hoped that Mr. Stansfeld would find a remedy. It appears that the town commissioners have the power to *compel* owners of houses to pay at the rate of 2d. per week, or 8s 8d. per annum, but not more, for a supply of hill-water. The Water Company, on the other hand, *cannot* be compelled to supply at a less rate than 12s. per annum (5 George IV, chap. 132, p. 56). Houses, therefore, of the poorest class, may be left absolutely destitute of one of the essentials of life. A block of thirty houses for instance, with nothing but catchpools for wells, were almost destitute of water at the close of a long period of drought. The attention of the town commissioners was drawn to the facts, and they were willing to do all in their power. The Water Company offered to supply at 4½ per cent. on the rental, with 5s. per closet, amounting to less than 12s., the lowest at which they would be compelled to supply—it came to some £17 : 13 : 8 for the lot; but, as the rate of 2d. per week per house, which the town authorities had power to levy, and which the tenants were willing to pay, amounted to £13 : 17 : 5 only, nothing could be done beyond an appeal *ad misericordiam* to the owners, and I fear the poor people are still dependent on such wells as they have.

It would appear, then, from the tables of the Registrar-General, and also from the testimony of the seven years which I have more minutely analysed, that the annual mortality in Cheltenham, with its 42,000 inhabitants, is excessively low. Hovering between 17 and 22, it shows an average of barely 20 deaths per 1000 living, without excluding the deaths occurring in a large workhouse and hospital. The town, also, enjoys a remarkable immunity from the chief zymotic diseases, and a mean age at death which compares favourably even with that of some of our healthier counties.

A minute examination, however, shows that the mortality from three at least of the zymotic class, small though it be, is not spread evenly over the town or even over the poorer parts; that there are whole districts and well-defined centres marked out by the fatality of scarlatina, diarrhœa, and fever; and good reason has been given for believing that the distinctive characteristics common to these districts are, speaking generally, a porous soil, well-water for drink, and in the worst cases an old brick sewer with undoubted contamination of the water.

Should a more extended and searching investigation, at the hands of our future health-officer, confirm the conclusions at which I have arrived, it is clear that by abolishing the older sewers (a matter, of course, requiring time), by giving a plentiful and wholesome supply of water to the whole town, especially to the poorer districts on the sand-bed, and by isolating the first cases of infectious disease, the sanitary authorities of the town have it in their power to secure for Cheltenham —not once in a decenniad only, but permanently and in reality—the proud position of being the healthiest among English watering-places.

ON THE MODERN ART OF TINTING OPACITIES OF THE CORNEA.*

By CHARLES BELL TAYLOR, M.D., F.R.C.S.E., Nottingham.

EXTENSIVE leucomata and dense opacities of the cornea have long been considered among the opprobria of surgery; we could not remove them, they were always a source of embarrassment to the surgeon, and, especially in the case of women and young persons, a serious trouble to the patient, so much so that I am convinced that patients suffering from this cosmetic defect and applying for relief cared more for the removal of the deformity than for the restoration of the partially intercepted sight. Such being the case, we hail with gratitude, as a most important addition to modern ophthalmic surgery, M. Wecker's reintroduction and perfection of an ancient method of tinting away these unsightly defects.

The operation, which, as a rule, causes very little pain or irritation, is best performed with a number of the finest needles firmly bound with the points on a level around a handle such as a penholder, or a large needle which has been grooved for the purpose by Messrs. Weiss may be substituted with advantage in certain cases. The substance which M. Wecker recommends for tinting is Indian ink; but I have also employed sepia, ultramarine, and other colours with advantage, and when an immediate and deeply coloured effect has been desirable, a combination of lamp-black with Indian ink, and a solution of nitrate of silver. The patient may either recline or be seated in a chair, and it is well to separate the iris with a speculum and steady the globe with a pair of ordinary forceps, taking a firm grasp of the conjunctiva. The needles are then dipped in one or other of the solutions in question, which should be made as thick as possible, and the superficial layers of the cicatrix are rapidly punctured in an oblique direction, and layers of the solution applied just as in ordinary tatooing, until the white speck is changed from a most apparent deformity into a black surface scarcely visible; a fresh layer of the substance is then applied over the tatooed cicatrix, the patient is directed to keep his eyes open, so as to let it dry on and remain as long as possible, and he may at once go about his usual avocations.

It is important not to close the eye, and to prevent, as far as possible, the washing away of the pigment by the tears; this is best accomplished by enveloping the operator's fingers with a silk handkerchief, so as to mop up the secretion, and afterwards by the avoidance of winking on the part of the patient. M. Wecker is content with ten or fifteen punctures a time, and requires from his patients four or five sittings. I have, however, usually completed the operation at once, and made any little addition that might appear necessary some weeks later; the slightest specks, such as are left after phlyctenular conjunctivitis and small ulcers of the cornea, are easily banished by one or two pricks of the needle; and when the whole eye has been opaque, very unsightly, and sight completely abolished, I have very advantageously substituted extirpation of the globe, or the superimposition of an artificial eye, by tatoooing a round central pupil so as to restore to a remarkable and most charming degree the natural appearance of the globe. Not only is deformity removed by this slight operation, but patients generally tell us their sight is improved, a fact due, no doubt, to the circumstance that a black speck is much less dazzling than a white one.

In cases of large cicatrices, I generally make an artificial pupil first, and tint the opacity afterwards; and when this is carefully done, it is difficult to distinguish the black speck from the neighbouring artificial pupil. I have no doubt that this little operation will also be found of service in cases where considerable dazzling follows the removal of a portion of iris, either *per se*, or when the operation has constituted a part of the operation of extraction for cataract; as by tatooing the cornea an invisible opacity may be occasioned which will constitute a permanent shade, and shut out the light to any required extent; soft cicatrices are readily coloured, but old, hard, and incrusted ones are more difficult of treatment. In these cases, the nitrate of silver and lamp-black are of service; no doubt, also, lead, sulphur, charcoal, gunpowder, and other ingredients will come to be employed in time. In some cases, the coloration is not very permanent, but it may always be repeated; and even if the perfect blackness do not remain, a greyish semitransparent coloration takes its place, which looks very like cornea, and it is infinitely preferable to the original deformity.

It is well to commence the tatoo at the lowest surface to be operated on, in order that the operator's sight may not be obscured by an overflow of the liquid. I shall conclude by quoting a case in which this addition to our armamentarium enabled me to render a real service to a young lady who was suffering not only from loss of sight, but also from a most embarrassing deformity.

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

HIP AND SHOULDER DISLOCATIONS, AND THEIR REDUCTION WITHOUT TRACTION.

By RUSHTON PARKER, M.B. and B.S. Lond., M.R.C.S.,
Demonstrator of Physiology and Histology at the Liverpool School of Medicine; late House-Surgeon and Demonstrator of Anatomy at University College, London; etc.

IN the communication of my friend, Mr. Henry Arnott, published in the JOURNAL of 24th February, 1872, he quotes some sentences from Mr. Hutchinson's abridged comment on the work of Dr. Bigelow, and further states the undoubted fact that in some London medical schools, University College and Guy's being named, it is taught that in the easiest method by which dorsal dislocations of the hip can be reduced, flexion of the hip is required. Now, Mr. Hutchinson's remarks, as quoted by Mr. Arnott, do not necessarily ascribe to Dr. Bigelow any *priority* in his advocacy of the flexion method of reduction; still less does Dr. Bigelow claim it for himself.

Mr. Hutchinson expresses the opinion, and I think with reason, that "the researches of Dr. Bigelow in respect to our subject" are "amongst the most valuable of recent additions to the science of surgery". Mr. Hutchinson's further assertion that "Amongst the special services which

Dr. Bigelow has done, is that of explaining the peculiarity of 'the dislocations into the ischiatic notch', and of teaching us how to reduce them" is perfectly true, for Dr. Bigelow tells us far more about this form of dislocation than any one else does, and he shows why it is not, and cannot be, a dislocation into the sciatic notch.

Dr. Bigelow fully acknowledges the work of other men on the same subject, and, on pages 27-30, he makes a brief historical allusion to the flexion method; citing, among others, Nathan Smith as far back as 1831, but distinctly mentioning the practice and advocacy of this method by Hippocrates. In France, M. Dolbeau is said to have advocated flexion in 1867, attributing its introduction to M. Desprès, in 1835. It is well-known that cases of hip-dislocation reduced, some by flexion and rotation, others by flexion and traction, have from time to time been reported by British and French surgeons in recent years; but Dr. Bigelow has undoubtedly demonstrated how *all* recent dislocations of the hip may be reduced by flexion and other manœuvres without traction.

I do not purpose going more fully into Dr. Bigelow's work, which has less than 150 pages of large print, and is really a charming book, fully warranting encomiums even higher than those of Mr. Hutchinson; but I will now state the practical grounds upon which I ask its due for a set of principles which constitute a true "theory of hip-dislocations and of their replacement."

1. I have, on the dead body, repeatedly practised that part of the demonstration of this subject which can be done when the soft structures around the hip-joint have been removed. With the femur connected to the pelvis by only the Y-ligament and the internal obturator tendon, all the four classical dislocations were made—the position of the limb in every case being exactly that described and figured in text-books as occurring in the living body. The reduction of these (and of others) was in every case done by flexion and rotation, with adduction and abduction as required; the course taken by the head of the femur, and the part played by the Y-ligament, being *seen*.

2. One afternoon in July or August, 1869, there was brought to University College Hospital a little girl eight or nine years old, who said that, while riding behind a carriage in the Hampstead Road, she had had a fall which immediately resulted in the injury to be described. I saw her about half an hour after the accident, and found the right thigh fixed in a state of extreme flexion, the knee being bent and the leg rotated out. A dislocation of the hip was vaguely suspected, but the child would not permit the least tactile examination, any movement of the affected hip causing her to scream out. Chloroform was given to full anæsthesia, during the production of which Dr. Poore, then resident medical officer, brought a dried pelvis to assist the diagnosis. The head of the femur, on careful examination and slight rotation, could now be felt near the tuber ischii. Our concurrent diagnosis was "dislocation on to, or near, the tuber ischii." When the child was fully under chloroform, by suggestion a few circumductions of the thigh were gone through—in the order of flexion, abduction, and extension. As this did not remove the deformity, I did what I had at first intended to do. The ankle and knee were grasped, the knee and hip being flexed; and the femur was rotated in; the head of the bone immediately slipped backwards an inch or two (as I thought, towards the sciatic notch). At once the femur was rotated out, and then the head slipped into the acetabulum, not with a loud snap, which I have never heard in reducing dislocations, but with a sort of "crunch." The actual process of reduction took about five seconds. A starched bandage was applied, and the child was well in two or three weeks, all deformity being absent. At this time I knew nothing of Dr. Bigelow's classical work, nor of the part played by the Y-ligament; or I might have caused the head of the femur to enter the acetabulum by the first manœuvre. I now believe the dislocation to have been "vertically downward."

3. Cases have been from time to time published during recent years, of hip-dislocations reduced by flexion with traction, and by flexion without traction but with rotation and other manœuvres. To the former class belong Mr. Quain's case quoted by Mr. Arnott; a case of Mr. Hulke's; and that of Mr. J. W. Macdonald, and others. To the latter belong the following:—a case of Dr. Hector C. Cameron (*Glasgow Medical Journal*, July 1867), who reduced a so-called sciatic dislocation in a boy of 14, by flexion and rotation, traction having failed; a case of Mr. Annandale (BRITISH MEDICAL JOURNAL, 29 January, 1870), who reduced by flexion and rotation, and afterwards dissected, a thyroid dislocation in a man aged 19; a case of Mr. Lister's, the reference to which is not at present within my reach, but which was, as far as I remember, one of the downward dislocations, closely resembling my own case, and reduced by the same method.

I would add that the Y-ligament includes the ilio-femoral and ilio-trochanteric ligaments described in Ellis's *Anatomy*, which are one at their upper attachment, rather below the anterior inferior iliac spine.

Dr. Bigelow, then, fully recognising the efforts of others in this direction, has elaborated the great principle which places this department of surgery upon a scientific basis. His book should be read by every practitioner; after which, the physical error and barbarous act of approaching a recent dislocation of the hip with pulleys should be for ever scouted.

There are still barbarities practised on the shoulder-joint when it is "out." I know that cases have been published in which luxations of the humerus have been replaced by manœuvring; further, at University College, Mr. Marshall advises it in his lectures on the subject, and describes the process. But the method is not yet largely practised, as far as I know, by house-surgeons, and they are the men who probably come across most of the cases; besides, the ordinary methods generally succeed so well, that it has not become urgent to use this. I did not attempt it properly in a single case when I was a house-surgeon. The following are my grounds for advocating the primary adoption of this method (described with the cases) in shoulder-dislocations, recent and moderately old.

1. I saw a case at University College Hospital in which one of the house-surgeons failed, with chloroform and the heel in the axilla, to reduce a forward and inward shoulder-dislocation, though much force was used. He then elevated the elbow to a level with the shoulder, rotated the arm, and at once reduced the dislocation.

2. My friend and fellow house-surgeon, Mr. R. T. Smith, tells me that he had nine cases, in none of which he used chloroform, and in eight of which he reduced the luxation by this method with little or no pain to the patient, and in an exceedingly short space of time. In one case this method was not tried.

3. I have since had a case myself in which this method was practised. A man, aged 31, fell in getting off the top of an omnibus in Liverpool on October 19th, 1871, dislocating the head of his right humerus inwards and forwards. My father and I were with him soon after the accident, when he was rather "screwed", and his muscles were relaxed. After stripping his shoulders, I raised the elbow on the dislocated side till it was level with the shoulder, then pulled back the elbow in the horizontal plane, by which the head of the humerus was brought outwards by levcrage—the glenoid fossa of the scapula, I imagine, being a support for the neck of the humerus to rest on as a fulcrum. Rotation was followed in a few seconds, with but little effort and no pain, by reduction. I believe, but am not quite sure, that rotation *in* was the last reducing manœuvre.

This is the method which I should employ again in subcoracoid and subclavicular luxations. For downward dislocation, probably great elevation of the elbow would be enough; and for the backward dislocation, elevation of the elbow to the level of the shoulder, leverage of the head of the humerus by drawing forwards the elbow, and, if necessary, rotation. Concerning the two latter luxations, I only say what seems to me the requisite action; but I have never tried it.

This communication contains nothing new that I am aware of, but it deals with matter of fact throughout, except in the speculations about shoulder-dislocations.

THERAPEUTIC MEMORANDA.

TREATMENT OF ENTROPION.

IF there be any ailment more annoying to the dispensary surgeon than another, it is bad entropion of old standing. It is a disease very frequent in Ireland. My son, Dr. John W. Martin, has brought under my notice a plan which he saw adopted in such cases by Dr. De Wecker of Paris, and from which I have had exceedingly good results. It is easily performed, gives little trouble to the patient, and leaves, to my mind, a better looking eye than that from which the tarsus has been removed.

The point where the inversion is worst, and doing most mischief, is noticed; and, as near to the edge of the tarsus as possible, the point of a small curved needle, armed with a flaxen thread waxed, is inserted, and carried beneath the loose textures of the eyelid as near to the supraorbital ridge as tact and judgment show to be desirable. The needle being brought out, the ends of the suture are tied firmly with a double knot over the intervening skin; the ends are cut off; and the ligature is left to ulcerate out, which it will do in six or eight days. A wet compress may be applied. When all irritation in the lid has subsided, an examination should be made to find out if there be another point requiring a repetition of the stitch. Many cases require three or four stitches, but two generally answer.

JAMES MARTIN, Portlaw.

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MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. MARY'S HOSPITAL.

NOTES OF CASES UNDER THE CARE OF DR. BROADBENT, WITH CLINICAL REMARKS.

THIS hospital ministers to the medical and surgical wants of a large district. The chief difficulty of the staff must be in the selection of the best cases for admission. This duty seems to be well performed. There was scarcely a case that did not present some points of clinical interest to the physician, or of importance to the student. We subjoin a few notes of some of Dr. Broadbent's patients. The following was an interesting case from the beginning, and was rendered still more so by a curious chapter of accidents.

Enlarged Liver: Jaundice: Saccharine Urine.—A well-built man of middle age was admitted with enlargement of the liver and jaundice. On examination, his urine was found to have a specific gravity of 1045, and to contain, in addition to bile, a considerable amount of sugar; the quantity passed was not very large—under five pints a day. Under treatment, the jaundice was passing off and the sugar diminishing *pari passu*, when, unfortunately, a case of diphtheria was admitted, and this patient caught it. The attack began with obstinate vomiting and retching, so severe as to cause a scrotal hernia—of omentum only. His next misfortune was the formation of an abscess in the scrotum; this was opened, healed, and the man was once more convalescent. The amount of sugar in the urine, which had not entirely disappeared when the diphtheria supervened, remained stationary until the formation of the abscess in the scrotum, when it rapidly increased, but diminished again as this healed. The liver-dulness is now of normal extent; the jaundice has disappeared, and the man is gaining strength, but the amount of sugar in the urine is still considerable.

The Ophthalmoscope in Diagnosis.—We saw several cases illustrating the value of the ophthalmoscope as an aid to diagnosis. One was that of a man who had suffered for two years and a half from severe pain in the right temporal region; it was supposed to be ordinary brow-ague, but did not exhibit any regular periodicity, nor was it influenced by the usual treatment. When he was admitted, the ophthalmoscope showed well marked optic neuritis of both eyes, and the sight of the right eye was found to be very defective. Under a mild mercurial course and the local application of belladonna, the pain and the optic neuritis have been steadily diminishing. This man also exhibits a curious example of local atrophy, which has come on in the course of the nervous affection. The skin of the forehead is marked by a vertical bluish-black band, nearly half an inch wide, exactly in the middle line of the face. The integuments here are decidedly thinner than elsewhere, and the band-like appearance is due to the transparency of the skin, and to the absence of subcutaneous fat. What the cause of this unusual combination of symptoms may be, cannot as yet be determined.

Another good ophthalmoscopic case was the following. A girl, about 18 years of age, was admitted for debility. She had scarlet fever badly some years ago, and has never been strong since. She is very deaf; both membranæ tympani are perforated, so that by holding her nose she can "whistle" through her ears. There was, on admission, a purulent discharge from the right meatus. After a short stay in hospital, she was about to be discharged as an incurable case, when it was noticed that she had slight paralysis of the left side of the face, and involuntary twitchings of the weakened muscles. The ophthalmoscope showed distinct double optic neuritis, though the sight was not at all impaired. Soon afterwards she began to suffer from headache, irregular attacks of vomiting, photophobia, etc. These symptoms of meningitis passed off, but the facial paralysis has become more marked, and lately the left orbicularis oculi has become affected.

Dr. Broadbent has great faith in the efficacy of small doses of mercury in intracranial inflammations; in this case, as in others now under his care, it seemed immediately to relieve the more acute symptoms.

A little girl of very tubercular aspect was brought in quite unconscious. She recovered next day, and seemed quite well; temperature was normal; no lung-disease could be detected; she was very intelligent, and made no complaints. The ophthalmoscope, however, showed advanced optic neuritis. She was discharged, but was readmitted in a few days in a comatose state. This time the attack was preceded by headache and some vomiting in the morning, and was accompanied by slight clonic spasms of the limbs. She recovered from this in a few hours, and except that the headaches are more troublesome, seems again quite well; but the ophthalmoscope indicates a very cautious prognosis.

An anæmic-looking woman, aged 23, was brought in unconscious. There was no paralysis, no change in the optic discs, and her temperature was normal. She had miscarried a short time previously, and had been in delicate health, but no satisfactory explanation of the attack could be arrived at. Next day she recovered her senses, and on the third day seemed pretty well. On the fourth, her temperature rapidly rose to 104 deg., but no cause could be found for this sudden pyrexia. Next day she complained of pain in one foot, and phlegmasia dolens set in. When we saw her she was nearly convalescent, and had had no return of cerebral symptoms.

Empyema: Dangerous Results of Carbolic Acid.—There was a man with empyema, whose case was interesting from the fact that he had narrowly escaped being poisoned with carbolic acid. The pleura had been opened, a considerable amount of hectic, etc., followed, but the symptoms were much relieved by occasionally washing out the cavity with a lotion containing one per cent. of carbolic acid. One day this was done, as usual, about 10 A.M. About 1 P.M. the patient was found comatose, sweating profusely; the pulse was imperceptible; the patient seemed rapidly dying of syncope. The India-rubber tube was found to have slipped out of the opening in the chest, and, instead of the usual abundant discharge, there was only a slight oozing, which smelt strongly of carbolic acid. The tube was reintroduced, and a considerable amount of the carbolic acid solution at once escaped through it. The patient made a good recovery. The case is certainly instructive; in the present rage for carbolic acid, its poisonous properties seem in some danger of being underrated.

ST. THOMAS'S HOSPITAL.

SEVERE CONTUSION OF FOOT: EXTENSIVE SLOUGHING ON THE DORSUM AND INTO THE ANKLE-JOINT: RECOVERY.

(Under the care of Mr. SYDNEY JONES.)

J. B., aged 15, was admitted, under the care of Mr. Sydney Jones, on October 31st, 1871. Five days previously, whilst he was at work on an engine, it suddenly moved on, and his foot was caught in the "splasher," the heavy clog which he was wearing being cut to pieces. On admission, there were great swelling and inflammation on the dorsum and outside of the right foot. Over the second, third, and fourth metatarsal bones the skin was black and cold, as was also that over the lower end of the fibula. Above this there was much discoloration, indicative of severe contusion. A linseed-meal poultice was ordered.—November 5th. The slough was separating, much more deeply than was anticipated. The surrounding parts were looking healthy. A short inside splint was applied.—November 10th. The slough separated, leaving a very deep wound. The lower end of the fibula was bare, comminuted, with loose spicula. The ankle-joint was extensively laid open, so that the finger could easily explore the articular surfaces. The boy suffered very much pain, so that the question of amputation was mooted; but, as very little constitutional disturbance had been occasioned, operative influence was delayed. The antiseptic dressing was applied.—November 17th. The pain had been diminishing, and the wound had a more healthy appearance. A piece of dead fibula was removed.—November 27th. The wound had been filling up rapidly, although the granulations were large and flabby. A collection of pus was evacuated above the back of the os calcis. A lotion of chloride of zinc was used beneath the antiseptic dressing. He went on gradually improving until, on January 23rd, 1872, the wound was entirely healed; slight movement existed between the astragalus and tibia, and passive movement of the ankle was ordered. He was able to bear his weight upon the foot. Later on, the somewhat tight cicatrix yielded, and there was inclination for the ulceration to spread. Three or four points of grafting were used; and the result has been a perfect cicatrix and a foot as serviceable as before the injury.

EXCISION OF ANKLE-JOINT: CURE.

(Under the care of Mr. SYDNEY JONES.)

JAMES A. CANNON, aged 15, page-boy, was admitted on November 27th, 1871. He stated that in the previous spring a swelling appeared on the outer side of his right ankle, not attended at first with much pain. This swelling increased, so as to involve the whole circumference of the ankle, and subsequently abscesses formed, leaving sinuses on the inner and outer sides of the joint. When admitted, these sores were in an unhealthy, sloughy state; there was much synovial thickening;

the foot was in an extended position; and much pain was complained of on the least jar or movement. The boy had a scrofulous cachectic appearance. Four days later he had an attack of acute erysipelas, in the course of which there was profuse suppuration, and to relieve this free incisions were made. On January 23rd, 1872, the swelling of the joint was very much diminished, the diseased synovial membrane having apparently all sloughed away. The boy suffered much pain and was losing flesh fast; the least movement caused much suffering and elicited a grating sensation from the opposed bare bones; and a probe passed from the outer to the inner side of the foot through the ankle-joint. Mr. Sydney Jones determined on excision, looking upon the mischief as most likely primarily synovial, the profuse suppuration resulting from erysipelas having subsequently caused necrosis of cartilages and baring of the articular surface. On January 24th, Mr. Jones performed excision by longitudinal incisions on the outer and inner sides: about an inch or more of fibula was removed; the soft parts were carefully raised from the front of the ankle and from behind the internal malleolus; the foot having been dislocated outwards, and the tibia thus protruded through the inner wound, a thin slice of tibia was removed; and, lastly, by a narrow saw introduced through the outer wound, the astragalus was resected: very little hæmorrhage occurred. The parts were accurately brought together and fixed on a back splint with a vertical foot-piece, the whole being placed in a swing-cradle. About 7 P.M., some collection of clot and oozing near necessitated opening the inner wound: the hæmorrhage was found to arise from some periosteal vessels and from a branch of the internal saphenous divided longitudinally; it was arrested by the use of a red-hot fine wire. The bone-surfaces removed were quite denuded of cartilage; there was no articular lamella; the bone structure was firm, and resembled the surface of loaf-sugar. There was no recurrence of bleeding. The operation relieved the patient wonderfully; he was free from pain; his pulse and general condition improved, and he gained materially in flesh; the wounds progressed rapidly. Mr. S. Jones took the limb out of splint for the first time on the 26th of March, two months after resection. There was then firm bony union, and the line of foot with the leg was very good; one or two points of discharge still remained, and were treated with sulphate of zinc lotion.

DISEASE OF THE ASTRAGALO-CALCANEAN, ASTRAGALO-SCAPHOID, AND ANKLE JOINTS: MODIFIED SYME'S AMPUTATION.

(Under the care of Mr. SYDNEY JONES.)

E. R., aged 11, was admitted on May 4th, 1872. No very clear history could be obtained as to the length of time the disease had been in existence; but it seemed that there had been some strumous enlargement, without pain, for some time, and that this mischief had been rendered acute from two severe sprains of the foot about two months before admission. When admitted, the foot and ankle were much swollen, and fluctuation was detected on the outer side. A free incision was made in this situation, and pus evacuated; and a few days later an incision was necessitated on the inner side. Pain was complained of on any movement, on pressure upwards, and on direct pressure over the inner and outer sides. An examination under chloroform enabled one to diagnose disease of the astragalo-scaphoid and astragalo-calcanean articulations; there was also much effusion into the ankle-joint. There was profuse purulent discharge from the wounds. The patient was suffering great constitutional disturbance: her nights were bad; the temperature was high; and she was losing strength rapidly. On the 12th June, Mr. Sydney Jones proceeded to perform a Syme's amputation. On making the incision across the front of the ankle-joint and forcibly extending the foot, the epiphysis of the os calcis was easily detached with the tendo Achillis, and, being found healthy, was brought into apposition with the sawn surface of the tibia. Since the amputation, she has gone on uninterruptedly well; the flap has healed kindly, without any sloughing, and the patient's health has improved.

ST. BARTHOLOMEW'S HOSPITAL.

OPERATIONS, SATURDAY, AUGUST 31ST, 1872.

Ossco-Cartilaginous Tumour on Back of Hand.—This grew from the centre of the middle metacarpal bone, forming in it a boat-shaped cavity, and leaving it a mere shell. Mr. Holden scooped it well out, in the hope that no further tumour would form, and then he snipped away its rough and angular edges, and stuffed it with carbolised oiled lint. The tumour was afterwards cut through, and found to be nearly cartilaginous, but with various spicula of bone running through its structure, branching from the root.

Scrofulous Caries of Head of Humerus.—This was the case of a boy who had long suffered from fistulous openings about the shoulder-joint, leading into the head of the humerus. Some of these openings had healed, while others had suppurated. Mr. Holden made a free incision through one of these over the deltoid muscle, and extracted some pieces of dead bone, one of which in particular seemed to give rise to the mischief. The boy for a long time had lost the use of his arm and hand, and all their muscles were rapidly becoming atrophied in consequence. He had been vaccinated on the right arm unsuccessfully—the arm now diseased.

Abscess in Left Antrum.—Mr. Thomas Smith operated in a case of abscess in the left antrum, causing considerable protrusion of the eyeball and cheek. The patient was a female, aged 65, and had suffered the most agonising pain rather than undergo any operation. The pain forced her at last to submit, however, but with great dread. Mr. Smith first made an exploratory search in the nose, and through the front of the bone under the lip; and, finding pus, he drilled a free opening where he had last made his search.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

CASE OF PELIOSIS RHEUMATICA.

(Under the care of Dr. BRADBURY.)

A. K., AGED 16, single, servant girl, living at Great Gransden, was admitted into the Hospital on April 17th, 1872. She was a tolerably well developed, light haired, and fair complexioned young woman, and had never menstruated. She said that she was troubled with shortness of breath when ten or eleven years of age, but had no serious illness till nearly two years ago, when she had rheumatic fever. This lasted eight weeks, during three of which she was in bed. The pain was confined to the knees. She got quite well, and has had no dyspnœa since. Eleven weeks before her admittance a rash came out on her arms and legs. It did not itch nor discharge. The next day pain came in her left knee, and her legs swelled. The pain in the knee lasted about three weeks, then it went into the ankle, and is there occasionally now. She was in bed five weeks. According to her account, the legs were swollen more at night, and also after sitting with them hanging down.

On admission, dusky red round spots of about the size of a hempseed or a little larger were seen on the legs and arms, being the most numerous on the former. There were also a few on the chest. The spots were not raised, and did not disappear on pressure. Those on the legs had a brownish tinge. When she remained in bed, the legs were not swelled. The urine was acid, its specific gravity was 1019, and it contained a slight excess of phosphates, but no albumen. The temperature of the body was normal.

The patient remained in the hospital a considerable time, and was treated with various remedies, including tincture of the perchloride of iron, the ammonio-citrate of iron, and tincture of larch-bark. She had numerous relapses whatever medicinal treatment was adopted, so long as she was allowed to get up for an hour or two; for instance, on April 25th, it is noted that the rash had all disappeared, and she was allowed to remain up from 2 to 5 P.M., when, at the latter hour, the eruption had returned both upon the arms and legs, the spots on the legs being more purpurous-looking than before. After being up, she also complained of pain in the right knee. Again, on May 1st, the the spots, owing to her having remained in bed, had disappeared with one exception, and she was again allowed to be up from 2 to 5 P.M., when a little before the latter hour the spots came out suddenly and abundantly on the legs, but not so purpurous-looking as before. Dr. Bradbury now determined to keep her in bed for some weeks after the spots had all disappeared, and the result has been most satisfactory, as there has been no relapse, although the patient has been about on her legs for some weeks. She presented herself at the hospital on August 17th, feeling quite well, although the catamenia had not yet appeared.

Dr. Bradbury, in a clinical lecture, remarked that this case was interesting in several respects. In the first place, this form of purpura was, in his experience, rare, for he did not remember having previously met with a similar case. He stated that the disease was not well described by English authors, although the Germans, and especially Hebra and Niemeyer, had given good descriptions of it. If the patient's account could be trusted, it appeared that the spots in her case appeared before the pains in the legs; whereas the reverse is said to be usually the case. Dr. Bradbury found keeping the patient in the horizontal position for a considerable time the only treatment of any avail in this case. Niemeyer says that this form of purpura is met with only upon the lower extremities; but the above case agrees better with Hebra's account, which describes the spots as also occurring on the abdomen and breast.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 7TH, 1872.

THE CASE OF THE JOURNEYMEN BAKERS.

WE shall remain true to our functions as medical journalists and guardians of the public health, if we limit what we have to say on this important subject to a statement of the facts as they have been ascertained by the reliable and independent investigations of a physician of known caution, and of eminence and authority in such matters. The authority on whom we shall mainly rely is Dr. William Guy, F.R.S., of King's College.

In the course of his researches upon the influence of employment on health, he was led to investigate the whole case of the bakers. He found in the first instance the fact that, as a general rule, the journeymen bakers begin their work at eleven o'clock at night, and continue their labour until five, six, or seven, the following afternoon—a period of from eighteen to twenty hours; and that, in many cases (more particularly amongst the underpriced portion of the trade), they have to commence labour at eleven o'clock of a Thursday night, and continue the same until Saturday night, and occasionally Sunday morning—nearly two entire days in succession; and that this statement is no false pretence of selfish agitators, but a sad and sober reality. This work is carried on, not in a pure air, but in underground and commonly unventilated basements, in which the air, hot and sulphurous, is often contaminated with the foulest smells, and rendered unhealthy by the vapours from gas and suffocating gusts from the oven's mouth. It is not surprising that excessive sickness and mortality should fall to the lot of men subject to this catalogue of unwholesome influences—"long hours of work, extending through the whole night and great part of the day, and in many instances, towards the end of the week, prolonged through four-and-twenty or eight-and-forty hours consecutively, or even more; this work carried on, not in a pure air, but in a heated atmosphere, contaminated in so many ways, and loaded with dust; the short hours of rest often spent in an atmosphere equally impure; and, added to all this, strong exertions of the body, ill suited to men exhausted by so many debilitating causes."

The proverbial sickliness of bakers speaks for itself, but exact investigations are more satisfactory than general investigations. Making, then, a careful examination and comparison of unhealthy trades, Dr. Guy found that "while ten in the hundred among the scavengers, eleven in the hundred among the bricklayers' labourers, and twelve in the hundred among the silk printers, had had severe attacks of illness; forty-eight in the hundred, or very nearly half the entire number of the journeymen bakers, had suffered in the same way". The diseases, however, to which bakers are peculiarly subject, and which form the true test of the influence of their employment upon their health, are diseases of the lungs. Among the trades which most predispose to these diseases is that of the compositor, whose work lies very much in small close heated apartments, and extends through the night. The poor bakers Dr. Guy found to be numerically four times as subject to these diseases as the compositors.

In discussing the remedies, Dr. Guy observes that though the system of night-work, and of long hours of labour, is the giant evil, compared with which all others sink into insignificance, yet it is by no means the only evil of which the men have to complain. He does not speak of irremediable evils, but of those which admit of abatement or removal. He assumes that, in the majority of cases, it is absolutely necessary that the bakehouse should be in the basement—that there is no space to put it anywhere else—but contends that it is not necessary that the places in which the bakers pass so large a portion of their time should be, as they too often are, dark, damp, dirty, dismal dungeons, reeking with foul air. The drainage, where it is defective, ought to be put to rights; more light and more air ought to be admitted, and cleanliness should be scrupulously attended to. The public have nearly as much right to claim this as the bakers have; and the master-baker, when the evil is brought properly under his notice, ought not to refuse to remedy it. Dr. Guy does some of the master-bakers the justice to say, that they have not waited to be taught their duty. They have found it out for themselves, and, like just and humane men, have cheerfully performed it. The remarks which apply to the bakehouses apply equally, and, indeed, still more strongly, to those dark cupboards in the basement, at the foot of the stairs, in which many of the journeymen are obliged to sleep. Such places are very unhealthy; and one cannot too strongly insist on the importance of providing a sleeping apartment in the upper part of the house, as is now generally done by the more respectable employers. The substitution of the hand-cart for the breadbasket, out of doors, is the only other beneficial alteration which it occurs to him to suggest to the master-baker, excepting always the abolition of night-work and the shortening of the hours of labour.

The grievances of the bakers are undoubtedly, then, such as have long called for redress. Nor is it a subject of small dimensions: the journeymen bakers of London alone are estimated at twelve thousand, and, with their families, make up an aggregate of at least 25,000 men, women, and children, deeply interested in the result of the present movement, which aims most mercifully and justly, as we think, at putting an end to that cruel system of over-work which Dr. Guy describes as destructive of domestic comfort; which makes the very idea of domestic life a mockery to so many; which places such serious obstacles in the way of intellectual culture, wholesome recreation, moral improvement, and religious exercises, which is injurious to health and fatal to life.

THE GLYCOGENIC FUNCTION OF THE LIVER, AND ITS RELATION TO DIABETES.

THE glycogenic function of the liver in its relation to the assimilative processes of the organism, and more particularly in its relation to the pathology of diabetes, is a subject which, notwithstanding the numerous investigations that have been made regarding it, yet requires much elucidation; and therefore any research which may serve to confirm doubtful facts or establish new ones must be looked upon as of the utmost value. We would call attention to a very interesting research on this subject by F. W. Dock, made under the able direction of Dr. Hermann of Zurich, which has just been published in Pfluger's *Archiv* (v, pp. 571-583). If we consider what is accepted as certain in regard to the physiology of the glycogenic function of the liver, and what, on the other hand, is the subject of diverse opinion, we find that it is an established fact that the liver, in the normal living condition, contains a substance called glycogen, which is increased in amount by a diet of carbohydrates, and which is readily convertible into sugar. Opinions, however, are not agreed as to whether the conversion of glycogen into sugar is a thing normally occurring in the body, or whether it is not rather a *post mortem* phenomenon. Researches on this subject, consisting generally in the examination of the fresh living liver for sugar, or of the comparative analysis of the portal and hepatic blood, have led to different results in the hands of different experimenters. It is also a matter of discussion, whether the glycogen of the liver is formed solely from sugar and its allies, or also from other sources, such as albuminoids; and, lastly, definite knowledge is still desired regarding the ultimate fate of glycogen, once formed. Bernard, from his experiments with different kinds of food, attributed the forma-

tion of glycogen in the liver to albuminoids in the last instance, as he found it in the liver when no carbohydrates were given in the food; and the researches of Fick in regard to peptones and their destiny in the organism would seem to support this view. On the other hand, it is an undoubted fact, as shown by Pavy, Macdonnell, and Tscherinow, that the largest amount of glycogen in the liver is associated with a diet exclusively formed of carbohydrates. Perhaps much of the difference of opinion may be explained by the imperfection of the methods previously adopted for the qualitative and quantitative determination of this substance. Recently, however, we have been indebted to Brücke for an admirable method by which glycogen can be separated free from all nitrogenous compounds; and therefore the application of this method renders glycogen-analyses more trustworthy than previous analyses on other principles. Brücke's method of precipitating the nitrogenous compounds by potassio-mercuric iodide before the extraction of the glycogen, has been followed by Dock in his investigations. He establishes, by numerous experiments on rabbits, that, after a period of starvation for several days, the liver becomes entirely or almost entirely devoid of glycogen; but that, after a few injections of sugar into the stomach, the liver of animals so starved becomes rich in this substance. On the other hand, injections of albumen or water fail to cause the appearance of glycogen in the liver. That fat does not cause a formation of liver-glycogen, is a fact which has been already satisfactorily determined. These results would agree with the views of Pavy and Tscherinow, that the glycogen of the liver is produced only from carbohydrates directly carried to the liver from the food, or formed during the process of digestion. Dock, however, objects to the use of such hypothetical terms as "hepatin" (Pavy) and "glycophthisicum" (Tscherinow), as we have yet no sufficient grounds for stating dogmatically what ultimately comes of the glycogen.

If the formation of the glycogen in the liver exclusively from the sugar of the food is established beyond doubt, then the pathology of diabetes must be looked at in a different light than from the experiments of Bernard. So long as we know no possible source of the formation of sugar in the organism except glycogen, and if, moreover, the formation of this substance is dependent on the sugar ingested, we are compelled to look on any excretion of sugar from the organism as due either directly or in the last instance to the carbohydrates of the food. The intimate relation between the amount of sugar excreted in the urine and the amount of carbohydrates ingested has been shown by numerous observers—Stokvis, Rosenstein, Pavy, Seegen, etc. The question comes to be, whether in diabetes the sugar ingested passes directly into the urine without undergoing previous transformation into glycogen, or whether an increased amount of transformation of glycogen into sugar takes place. A third supposition which has been made is, that diabetes is due to the diminished combustion of the normal amount of sugar formed by the liver. Pavy's researches discountenance this view, as well as the recent experiments of Ludwig and Scheremetjewski, which show that sugar directly introduced into the blood does not become oxidised. The evidence on which both Pavy and Tscherinow rely in support of the first theory, consisting as it does chiefly in the supposed absence of proof of a normal process of transformation of glycogen into sugar, is not altogether satisfactory, and stands in direct contradiction to the experiments of Bernard and others. And even though sugar were not normally formed in the liver, we are not necessarily bound to suppose that the sugar excreted in the urine is only what has passed through the body without having undergone transformation into glycogen, for it is quite possible that in pathological conditions of the liver, such as dilatation of its vessels, this transformation may go on. Such being the case, it was natural to suppose that some light would be thrown on the subject by experiments made with a view to determine in what relation the glycogenic function of the liver stood to diabetes artificially induced by puncture of the floor of the fourth ventricle (sugar-puncture) or by curara. By carefully devised experiments, which need not be detailed, it was found as a uniform result that, after the "sugar-puncture," injections of sugar into the stomach of rabbits, starved for a period sufficient to cause the entire disappearance of glycogen from the liver, failed to cause the appearance of glycogen in the liver, or if so, only the faintest trace—a remarkable result when compared with the invariable appearance of glycogen in the liver after similar injections into the stomach of animals not subjected to the sugar-puncture.

These experiments brought to light another fact which at first seemed difficult to explain; viz., that after injections of large quantities of sugar, not only did no glycogen appear in the liver, but no appreciable amount of sugar could be detected in the urine. The question was, what had become of the large quantity of sugar injected? Diabetes caused by curara served to solve this question in some measure. In these experiments, the animals were curarised and kept alive by artificial respiration, during which the necessary injections of sugar were made and the urine examined from time to time. The uniform result was, that in curara-diabetes injections of sugar caused no formation of glycogen in the liver, while sugar appeared in the urine in copious amount. This would agree with the theory that diabetes is caused by the passage of sugar through the organism without first being stored up as glycogen in the liver. But, on the other hand, it was found that sugar was likewise exuded by the urine in large amount not only where no injections of sugar had been made into the stomach, but even after the animals had been starved sufficiently long to cause the entire disappearance of glycogen from the liver. This seems to be the most interesting point in the whole research, and it is one which Dock proposes to resolve experimentally, though he makes some suggestions which seem to be fully warranted by his own experiments, and by recent physiological researches.

The question to be answered is, whence comes the sugar after the whole of the glycogen has disappeared from the liver? This question and the previous one as to what had become of the sugar, which had neither appeared as glycogen in the liver, nor in the urine as such, lead us to look to some other region in the body, where, on the one hand, sugar can be stored up, and where, on the other hand, it can, under certain conditions, again appear as sugar in the urine. That it is to the muscles to which we must refer this is the most probable supposition. If it could be shown that the muscles retain glycogen more tenaciously than the liver during starvation, and that they assimilate sugar or glycogen more readily, we should have a probable explanation of the occurrence of curara diabetes even in starved animals, and of the storing up of the sugar, which, in the sugar-puncture experiments, neither appeared in the urine, nor as glycogen in the liver. That such is the fact in regard to the muscles, we may adduce in proof the recent experiments of Weiss on the relations between glycogen and muscular work and starvation (*Wien. Acad. Sitz. Bericht*, 2 *Abtheil*, July 1871). Weiss found in his experiments, made with a view to ascertain the extent to which the amount of glycogen in muscle varied with insufficient nourishment, that the muscle-glycogen does not become so much affected as the liver-glycogen. Insufficient food or the absence of carbohydrates diminishes the liver-glycogen to a much greater extent than the muscle-glycogen. In one case, he found that when carbohydrates had been withdrawn from the food for a period of three days, the glycogen had almost entirely disappeared from the liver, while that of the muscles was scarcely affected. To this he attributes the retention of muscular energy even during starvation. These experiments, so strongly confirmatory of each other, taken with the recent valuable researches of Lyon on the innervation of the liver, afford a strong hope that we are on the way to arriving at a solution of at least some of the difficulties that surround the physiological pathology of natural and artificial diabetes.

RESEARCHES ON QUININE AND IRON.

We are indebted to *L'Union Médicale* for the knowledge of a communication lately made by M. C. Robin, in the name of M. Rabuteau, to the Academy of Sciences. It treats of the investigations of the physiological properties of quinic acid, and the reduction of perchloride of

iron in the organism. Quinic acid, which is solid, and tastes like vegetable acids, such as tartaric and citric, exists in a remarkable quantity in bark, in which it is said to be combined with quinine, cinchonine, and lime. The author has prepared quinate of soda and quinate of potassa by dissolving quinic acid in the bicarbonates of these two bases, and he has made many experiments with these two salts, which are neutral in reaction, deliquescent, and tasteless. He injected into the veins of a dog five *grammes* of quinate of soda dissolved in 40 *grammes* of water. The only result of this operation was marked constipation. The urine became neutral, and even slightly alkaline, although previously acid. M. Rabuteau took himself two *grammes* of the quinate of potassa in 50 *grammes* of water. The urine did not become alkaline, doubtless because the salt was too much diluted, but its acidity was diminished. A watery solution of quinic acid introduced into the stomach does not produce any particular result. From this acid can be prepared a lemonade as agreeable as the tartaric and citric lemonades. These researches show that quinic acid is harmless, and also that it acts almost like all the ordinary vegetable acids ; that is to say, it is consumed in the organism, the alkaline quinates being transformed into bicarbonates, which render the urine alkaline when administered in sufficient doses ; for example, five or six *grammes* at least in the day. From the quinate of soda producing constipation after its injection into the blood, it is concluded that, if introduced into the digestive tube in sufficient quantity, it would produce purgative effects, according to the general rule that saline purgatives constipate when they are injected into the blood. The alkaline quinates being destitute of taste, it might be thought that the quinate of quinine would be less sapid than the sulphates. This salt, however, is bitter, like all the other salts of quinine. According to the experiments of M. Rabuteau, the perchloride of iron is reduced by contact with albuminous and various organic substances. It follows from this that, when ferruginous waters containing sesquioxide of iron are taken, for example, in water in which a red-hot iron has been cooled, perchloride of iron is formed by the hydrochloric acid of the gastric juice, and is transformed into protochloride of iron. When perchloride of iron is injected into a varicose vein to obliterate it, it forms a cord, owing to the coagulation of blood produced by this salt ; but this cord disappears gradually, for the perchloride is changed into the protochloride, which has not the power of coagulating the blood, but even prevents coagulation, as has been shown by direct injection of it into the veins of animals.

LENTIL-MEAL.

AT a time when cheap and efficient substitutes for animal food and for bread are being much sought, we shall render a service in directing attention once more to the highly valuable qualities of lentil-meal, properly prepared and ground to a fine powder, and mixed with some other impalpable nitrogenous meal, such as rye-meal. The value of this combination has been recently tested anew by Dr. F. W. Beneke, of Marburg, who is led very earnestly to recommend its use as a substitute for animal food for poor people, in convalescence from sickness, for invalids generally, and for many forms of indigestion. For the latter purposes, sold at a most scandalous price as "revalenta," and accompanied by flaming testimonials, it has long enjoyed a considerable reputation amongst wealthy dyspeptics, and Dr. Beneke records his gratiude for the saving of the life of one of his children by its use.

His observations as to the best mode of preparing it for general use are very interesting. He points out that "the leguminosæ contain nitrogenous and non-nitrogenous substances in the proportion of nearly 1 : 2.0—2.2 ; they contain a sufficient amount of phosphates, and a small quantity of fatty matter, part of which resembles the fat contained in yolk of egg, and part is cholesterine. Such a meal is quite capable of replacing animal food, apart from its kreatinin ; and with this view he experimented upon these meals, but found that, as ordinarily prepared, they were much too coarse to be easily digested. At last, however, he found a lentil-meal and also a rye-meal both equally carefully prepared, which, when mixed together in equal proportions, produced a most admirable nutriment for convalescents from acute disorders, for those labouring under certain gastric ailments, and as a substitute for animal food for poor people. A healthy adult uses nitrogenous and non-nitrogenous elements, the latter reckoned as starch, in the proportion of 1 : 5. Human milk contains the same ingredients in the proportion of 1 : 3.8—4. Lentil-meal contains them as 1 : 2, and rye-meal as 1 : 5.7, while a mixture of the two in equal quantities contains those components in the proportion of 1 : 4, a proportion which may of course be varied according to desire, or the needs of the case. These impalpable meals Dr. Beneke has been in the habit of procuring from W. J. von Coppenaal, 556 Reguliers-Breeskaat, Amsterdam, at 40 cents. per kilogramme for the rye-meal, and 60 cents. per kilogramme for the lentil-meal (about 8d. for the one and 1s. for the other for 2¼ lbs., the price of the same quantity of revalenta being 6s.). These meals, from containing little water, have four times the nutrient power of beef, weight for weight, so that their relative values as articles of diet may be readily calculated. The digestibility of these meals, and the consequent absence of flatulence during the process, depends primarily upon the impalpability of the powder to which they are reduced ; and, second, on the mode of preparation. The meal should have a little salt added, then be mixed with cold water, and boiled for half an hour or an hour. The addition of a little extract of beef makes the preparation quite tasty, without adding greatly to its expense.

THE celebrated French physician Louis has lately died, at the age of eighty-six.

THE Annual General Meeting of the Association of Certifying Medical Officers is announced to take place at Clifton on September 13th.

CHOLERA is reported to have broken out in the Austrian provinces of Galicia and Bukovina, and to be prevalent in Moldavia. It is said also to have broken out in the Russian town of Grodno.

THE Twickenham local authorities, with the £100 daily fine hanging over their heads, are showing a little more energy. They have adopted the plans prepared by their surveyor for the drainage of the parish, subject to the approval of their engineer, and have also taken steps, on the engineer's approval, to borrow the requisite funds.

AN English officer, writing from Paris to the *Daily News*, complains that, at a watering-place in French Savoy, he was charged 300 *francs* (£12) by the medical practitioner of the town for attendance on his wife. She was visited three times, and also visited the medical man eight or nine times.

AT the annual meeting of the Roylston Prize Committee on June 3rd, a prize of 200 dollars was awarded to Dr. J. Collins Warren of Boston for an essay on the Pathology of Malignant and Semimalignant Diseases ; and one of 150 dollars, for an essay on Sunstroke, to Dr. Horatio C. Wood, jun., of Philadelphia.

THE bark *Pelayo* from Havanna, and the bark *Baluer* from Aspinwall, have arrived at New York with cases of yellow fever on board, making in all six vessels at quarantine there, with twenty-eight patients in the hospital. The quarantine is so rigorous, that the alarm in New York city may be regarded as over.

DEATHS FROM SNAKE-BITE IN INDIA.

As many as sixty-two deaths from snake-bites and wild animals took place in the Punjab during the month of May. Although the estimated population is very great—probably over ninety-five millions—still this is a serious and more or less preventable item. In the same period, there were 4,406 deaths from small-pox, and 15,539 from fever. The total death-rate, however, was 23 per 1,000 per annum—less than in many of our British towns.

A NUT FOR VITAL STATISTICIANS.

It is stated as a curious fact, on the excellent authority of our contemporary the *Edinburgh Medical Journal*, that, during the strike of the scavengers in Edinburgh, the mortality of that city fell to 15 per 1,000.

AGING WINE.

M. Pasteur, the eminent Frenchman who has already extinguished the silkworm disease in France, and who is now aiming at improving the preparation of wines, communicated to a recent sitting of the French Academy the account of a comparative tasting of twenty-four sorts of natural wines, and the same wines heated in bottle at periods already somewhat distant. It follows from these results, that the heating improves the bouquet and brightens the colour, contrary to what he had feared.

COMPARATIVE MORTALITY OF MODERN WARS.

The relative mortality following great operations consecutive to wounds in recent wars was as follows: American war of secession, 42.2 per 100; England, Crimean war, 33.9 per 100; France, Crimean war, 72.8 per cent.; Italian war, 63.9 per cent. M. Leon Lefort, who collects and comments upon these figures in a recent work, ascribes the true cause of the frightful excess of mortality following the efforts of French military surgeons to numerical insufficiency of the medical staff and of hospital material, to the bad organisation of the service, and to administrative incompetence. It must, however, be remembered that the French mortality of civil hospitals is not less excessive.

A DANGEROUS HABIT.

The parish of Paddington has done well in putting a stop to the disfigurement of the pavements in its jurisdiction by the unsightly stencilled advertisements. There is, however, a matter of far greater importance, to which the governing boards of Paddington and other metropolitan parishes would do well to turn their immediate attention. We allude to the dangerous habit, into which the greengrocers and others have been allowed to fall, of leaving pieces of cabbage and other succulent vegetable matter on the footways in front of their shops. Accidents are frequently occurring from such causes, and are far more often barely avoided. There is at the present time an aged female in the wards of St. Mary's Hospital who has sustained a fracture of the neck of her thigh-bone from slipping over a piece of cabbage-leaf. Such accidents would be of much less frequent occurrence, if the offenders received a cautioning notice from the police.

WATER-SUPPLY IN LONDON.

A minute respecting the water-supply in the metropolis has been issued by the Board of Trade. It contains, among others, the following orders. No communication-pipe for the conveyance of water from the waterworks of the company into any premises shall hereafter be laid until after the point or place at which such communication-pipe is proposed to be brought into such premises shall have had the approval of the company. No lead pipe shall hereafter be laid or fixed in or about any premises for the conveyance of, or in connection with, the water supplied by the company (except when and as otherwise authorised by these regulations, or by the company), unless the same shall be of equal thickness throughout, and of at least certain specified weights. No house shall, unless with the permission of the company in writing, be hereafter fitted with more than one communication-pipe. Every house supplied with water by the company (except in cases of stand pipes) shall have its own separate communication-pipe; but, in certain cases, the owner of houses may have one sufficient communication-pipe for such group or block. No pipe shall be used for the conveyance of, or in connection with, water supplied by the company, which is laid or fixed through, in, or into any drain, ashpit, sink, or manure hole, or through, in, or into any place where the water conveyed through such pipe may be liable to become fouled, except where such drain, ashpit, sink, or manure hole or other such place, shall be in the unavoidable course of such pipe, and then in every case such pipe shall be passed through an exterior cast iron pipe or jacket of sufficient length and strength, and of such construction as to afford due protection. Every cistern used in connection with the water supplied by the company shall be made and at all times maintained water-tight, and be properly covered and placed in such a position that it may be inspected and cleansed. Every such existing cistern, if not already provided with an efficient ball-tap, and every such future cistern shall be provided with a sound and suitable ball-tap of the valve kind for the inlet of water. Every boiler, urinal, and water-closet in which water supplied by the company is used (other than water-closets in which hand flushing is employed), shall, within three months after these regulations come into operation, be served only through a cistern or service-box and without a stool-cock, and there shall be no direct communication from the pipes of the company to any boiler, urinal, or water-closet. No pipe by which water is supplied by the company to any water-closet shall communicate with any part of such water-closet, or with any apparatus connected therewith, except the service-cistern thereof.

THE PUBLIC HEALTH ACT.

The Local Government Board have issued a circular reminding the boards of guardians that they are now constituted sanitary authorities under the Public Health Act, and must appoint officers; but stating that the Board are about to issue an order containing regulations with regard to the qualifications, appointment, duties, salary, and tenure of office, of the medical officers of health, and recommending the guardians to wait until that order is issued before making any such appointments.

A MEDICAL MICROSCOPICAL SOCIETY.

It is proposed to form a Society for the sole investigation of microscopical subjects in intimate relation with man, both in health and in disease. The objects of the proposed Society will be the reading and discussion of papers; the exhibition of specimens; the formation of a cabinet; the exchange of specimens; etc. A preliminary meeting, of which due notice will be given, will be held early in October, for the formation of the Society; and it is hoped that all qualified medical gentlemen and registered students interested in the movement will attend. All questions with regard to fees, hour and place of meeting, subjects admissible for papers, etc., will be settled at the preliminary meeting. Communications should be addressed to Mr. J. W. Groves, St. Bartholomew's Hospital.

TELEGRAPHIC COMMUNICATION WITH HOSPITALS.

We strongly commend the following remarks, taken from the *Pall Mall Gazette*, to the attention of hospital authorities. "It is to be hoped" (says our contemporary) "that at no distant day the system of telegraphic communication may be extended to our hospitals. When a fire breaks out the occurrence is immediately telegraphed to the engine stations, and the engines are in a few moments despatched at full gallop to the scene of conflagration. There is no good reason why ambulances should not in like manner be despatched from hospitals when accidents endangering human life occur. How many lives might be saved if the sufferer from a street accident were carefully and immediately conveyed to a hospital in an ambulance under the care of a surgeon, instead of lying on the pavement surrounded by a gaping crowd until a stretcher can be sent from a police station. At Bellevue Hospital in New York, this ambulance system has been adopted. From every police station there is telegraphic communication with the hospital, and each accident occurring in the city is telegraphed to the hospital, when one of the four or five ambulances in waiting immediately starts for the place. The result is a great saving in time, suffering, and often in life. On the arrival of the ambulance the patient receives prompt attention from the surgeon who accompanies it, and the sufferer is then removed on a comfortable bed to the hospital. The ambulances do quick work, and on a recent occasion a workman employed at the Roosevelt Hospital who had fallen from it and injured his back, was taken, on the receipt of a

despatch from a policeman who had observed the accident, to Bellevue Hospital, before the attendants at Roosevelt Hospital knew of his misfortune. Now that fixed points are established in London, at which police constables are constantly stationed, there could be no great difficulty in arranging a similar system of communication with the principal hospitals; and if the plan of hospital ambulances were adopted there would be no longer a necessity for conveying apoplectic patients to police stations on stretchers and thrusting them into cells on the charge of being drunk and incapable, there to lie until they prove their innocence by death."

THE EAST LONDON CHILDREN'S HOSPITAL.

THE East London Hospital for Children at Ratcliffe Cross has now become too small to meet the increasing demands of a growing neighbourhood. During the fortnight ending 24th August, 992 patients were treated; 963 being out-patients. The hospital contains 35 beds, which are never empty, 17 new patients having been admitted during the above period. More patients cannot be taken in for want of room, and the out-patients are increasing daily. Strenuous efforts are now being made to raise funds for the new hospital, the land for which has been purchased.

A CHILDREN'S HOSPITAL IN LISBON.

THE King of Portugal has lately made formal transfer to the State of the Estephania Hospital in Lisbon, which was founded by the late King Pedro V, and Queen Estephania, for the reception of sick children. His Majesty desires that it may be used as a general hospital, in order to relieve the excessive accumulation of patients in the St. Joseph and other hospitals; and that it may also contain an infirmary for children, in conformity with the intentions of its founders. The Committee which was appointed some months ago to select a site for a new hospital and prepare a plan for its construction, is charged with the duty of examining the already existing portion of the Estephania hospital, for the purpose of pointing out to what purposes it may be applied, and what measures are necessary for its completion in such a manner as to carry out the objects of its founders and of the King.

A SPANISH MEDICAL RETROSPECT.

WE have received a copy of the first volume of an annual serial published in Barcelona, under the title of *El Relampago Medico: Anuario de Medicina, Cirugia, Farmacia, y Ciencias Naturales*. It is edited by Dr. Marsillach y Parera, physician to the Santa Cruz Hospital, in the above-named city. The object of the work is the same as that of the Retrospects published in this country—that of affording to the profession an epitome of the latest essays on medical science and practice. The selections are made from various sources—British, French, German, Spanish, and American. It is divided into sections containing articles on Medicine, Surgery, Pharmacy and the auxiliary sciences, and miscellaneous scientific information. In the latter are included, with other things, lists, with prices, of medical works in the Spanish, German, French, English, and Italian languages; lists of Spanish and foreign medical journals; and various official documents relating to the medical profession. The volume contains in a small compass a large amount of matter both interesting and useful; and we hope that the editor will find that his labours to place his professional brethren *au courant* with the progress of medicine are appreciated according to their merits.

THE NEW FRENCH SCIENCE ASSOCIATION.

AMERICA some time since followed in our steps by creating an American Association for the Advancement of Science on the British model. France has this year adopted the same measure, and in a few days will be held the first congress of the French Association. The model of the meetings, such as that just held at Brighton, has been rigidly followed. The meeting will be held at Bordeaux, from the 5th to the 12th of September, under the presidency of M. Claude Bernard, the great French physiologist. It will be divided into four groups, these being subdivided into fifteen sections: 1. Mathematical Sciences, four sections (mathematics, astronomy and geodesy, navigation, civil and military engineering); 2. Physical and Chemical Sciences, three sections (physics, chemistry, meteorology and physical geography); 3. Natural Sciences, five sections (geology and mineralogy, botany, zoology and zootechny, anthropology, and medical sciences); 4. Economic Sciences, three sections (agromony, geography, political economy and statistics). Public addresses will be delivered by M. Broca on certain Troglodytes, by M. Levasseur (of the Institute) on Commercial Geography, by Lieutenant Gamier on his recent travels of exploration in Cambogia and on the Political and Commercial Relations of France in the extreme East, and by M. Dupuy de Lome on Aërial Navigation. In the Section of Medical Sciences are inscribed the names of M. Bouillaud on the Pulse, M. Guérin on Cotton-wool Dressings, M. Oré on Injections into the Veins, especially of Hydrate of Chloral. MM. Quatrefages, Broca, and Hamy, will conduct discussions on the Conformation of the Human Skull. Numerous public addresses, *soirées*, excursions, and parties of pleasure and exploration, have been arranged; and trains run at half-price. To English men of science proposing to take a holiday in this direction, the congress would be offering many attractions; only we are bound to say that, unless the organisation be much better than on the occasion of the International Medical Congress in Paris, they are likely to meet with a very left-handed hospitality.

INTRODUCTORY LECTURES AT THE PROVINCIAL MEDICAL SCHOOLS.

THE winter session will be opened at the University of Durham College of Medicine, Newcastle-upon-Tyne, with an address by Dr. W. C. Arnison; at the Liverpool Royal Infirmary School of Medicine, by Mr. W. Mitchell Banks; at the Leeds School of Medicine, by Dr. J. D. Heaton; and at the Sheffield School of Medicine, by Mr. T. G. Morton.

MR. SIMON.

A WELL merited honour has been paid to Mr. Simon, F.R.S., D.C.L., by the University of Munich. At its recent four hundredth anniversary, the honorary diploma of Doctor of Medicine was conferred on him "propter præclarissima de sanitate publicâ tuendâ atque augendâ merita."

ROYAL COLLEGE OF PHYSICIANS, LONDON.

THE following gentlemen have been elected by the Council Examiners of this College for the ensuing year:—Anatomy and Physiology, Frederick W. Pavy, M.D., and John Burdon Sanderson, M.D., F.R.S. Chemistry, Materia Medica, and Practical Pharmacy, Alfred S. Taylor, M.D., F.R.S., and William H. Dickinson, M.D. Medical Anatomy and the Principles and Practice of Medicine, Herbert Davies, M.D., and George Johnson, M.D., F.R.S. Midwifery, John Braxton Hicks, M.D., F.R.S., and William S. Playfair, M.D. Surgical Anatomy and the Principles and Practice of Surgery, Campbell De Morgan, F.R.S., and George W. Callender, F.R.S.

CONNECTION BETWEEN PULMONARY HÆMORRHAGE AND PHTHISIS.

IN a paper contributed by Dr. Julius Sommerbrodt of Breslau, to the June number of *Virchow's Archives*, the question whether the extravasation of blood into the air-cells of the lungs is ever the cause of consumption is very fully discussed. Numerous experiments were made by injecting blood taken from their own bodies into the tracheæ of dogs; the animals being killed at periods of time varying from one hour to twelve days after the operation. In those soonest killed the blood was found to have penetrated into different parts of the lungs, but was accumulated in greatest quantity near the roots. At the end of the first day, the injected patch could be readily distinguished from the other portions of the lung by a well-defined difference in colour, which, however, became fainter on the third day, and generally ceased to exist on the eighth day. In no case were fibrinous coagula found obstructing the bronchial tubes. In dogs killed in from two to three hours after the experiment, the microscope showed the presence in the

alveoli, containing blood, of some pale cells, two or three times as large as the blood-corpuscles, and having a nucleus and opaque somewhat granular contents. Twenty-four hours later, these cells, which varied in size from 0.006 to 0.015 mm., had become more numerous; their nucleus was less distinct, and their contents were more opaque. The cells continued to increase in number until the fifth day, when they also attained their maximum size (0.021 to 0.024 mm.). Occasionally, Dr. Sommerbrodt has discovered within them corpuscular elements, which he has no doubt are blood-corpuscles, not only because they resemble the corpuscles, lying free in the alveoli, but also because they are not stained by carmine as are the nucleus and nucleolus. He thinks, therefore, that they have penetrated into these cells. In animals killed after the seventh day, the cells were found to have become less round, to have a tendency to become crenated and more opaque, and to decrease in numbers. Dr. Sommerbrodt has no doubt that these cells take their origin from the walls of the alveoli, and has been able not only to trace the gradations from the healthy cell to those just described, but also to detect the points from which they have been thrown off. These appearances he attributes to catarrhal pneumonia, and he therefore asserts that blood is capable of exciting this form of inflammation; but, having never been able to discover thrombi in the minute bronchial tubes, he rejects the explanation of Niemeyer, believing that blood exercises a directly irritating effect upon the alveoli.

CHOLERA IN INDIA.

A TELEGRAM from India states that a fresh and alarming outbreak of cholera has occurred at Mean Meer, situated five miles from Lahore, where, it is said, seventy deaths have occurred in the 37th Regiment. A Bombay telegram, dated August 27th, states that cholera is raging in Cashmere. During the month of May there were 1,072 deaths from cholera in the Punjab.

DENGUE IN INDIA.

DENGUE fever has, it appears, abated in Calcutta, but it is still severe in the other Presidencies. In Madras, the population is suffering severely from the malady; and it is said that actually dogs at Pegu have been attacked after the inhabitants, and numbers of their cattle had suffered. All sorts of reports are current about the fever.

AN ANONYMOUS STAFF.

THE first report of the Boston Cottage Hospital is before us. It seems to be working satisfactorily. We notice as a defect in the report the absence of any satisfactory medical report, or of any list of the attending medical officers. There is a list of cases and results at the end: the list states most particulars, but never "by whom attended." The committee are evidently, and no doubt properly, well satisfied with their own handiwork: the decoration is characterised by "neatness with simplicity," the walls are in "light and pleasing tints," there is a most efficient nurse, Miss Bowles; but we are quite unable from the context to discover who are the medical officers. They must have names, and their names are as well worthy of record as those of trustees or honorary secretary.

FOREIGN DIPLOMAS.

As the time approaches for the publication of a new edition of the *Medical Directory*, the question of including foreign non-registerable diplomas in the published lists is again being agitated. Last year, the editors determined not to do so, and their resolution gave great offence and caused considerable annoyance to some distinguished persons holding such diplomas. There are a considerable number of graduates holding diplomas of Berlin, Paris, Brussels, Heidelberg, Giessen, and other universities, whose diplomas are not registerable under the Medical Act. It is an appreciable grievance that no provision should be made for the recognition of reputable and honourable degrees acquired in foreign schools and universities of known and tested character, such, for example, as those we have named and others which might be named. It remains, however, for future legislation to remedy this grievance in amending the Medical Act. Meantime, the fact stands that all foreign degrees in medicine acquired since the passage of the Act are alike unregisterable, and confer no legal privileges or status on their possessors in this country. Nor is there any test or means by which the compiler of a volume such as the *Medical Directory* can separate disreputable degrees purchased from venal universities from those which have been honourably acquired. The compiler of the *British Medical Directory* is then, we think, well advised in his decision of the present year, to record in that volume only those degrees of medicine which the law recognises. There is, however, something to be said in favour of the view that in a Directory a man is entitled to wear whatever titles he possesses, provided their character be distinctly indicated. We have reason to know that some of the leading graduates concerned would be content that their diplomas should be recorded in the *Directory* with the indication that they are "non-registerable." This may prove an adequate solution of the difficulty; and we present it for the consideration of the editors of the *Directory*.

THE SOCIAL SCIENCE CONGRESS.

LORD NAPIER AND ETTRICK will deliver the opening address, as President, on the evening of Wednesday next. On Monday week, Dr. Acland, F.R.S., Regius Professor of Medicine at Oxford, President of the Health Department, will deliver his address.

GUY'S HOSPITAL.

AT a general Court of the Governors of Guy's Hospital, held on Wednesday, Mr. Durham was appointed Surgeon, to fill the vacancy caused by the death of Mr. Poland.

MEDICAL RISKS.

WE have received the report of an action of a peculiarly scandalous character, involving a charge of assault against a surgeon at Evesham, who had been requested by a lady to examine a maid-servant with a view to give an opinion as to her pregnancy. It is needless to say that no surgeon would be justified in making the personal examination of a woman except with her own free assent. In this case, however, not only was the mistress present throughout the examination, whose evidence proved, equally with that of the medical man, that such assent was fully given, but it was proved that the girl had declared previously her intention to call for such an examination, in order to afford material for an action against a woman who had traduced her character, and that she endeavoured to base such proceedings upon the result of the examination; but, finding that no money was to be got from this woman, proceeded then to have a shot at the doctor whose evidence she had procured, and to lodge a charge against him of criminal assault. So scandalous a case has rarely been brought into court. We refer to it, after carefully reading through the evidence, in order to offer our sincere sympathy to Mr. Martin, the surgeon concerned, whose character, however, was triumphantly vindicated, and to emphasise the warning which the case conveys against the arts of unscrupulous persons, who often find in medical men persons whose delicate duties and confiding character mark them as victims for the basest attacks.

SCOTLAND.

THE FEMALE MEDICAL STUDENTS.

WE understand that the respondents in the action of Miss Jex-Blake and others *v.* the Senatus Academicus of Edinburgh University, have appealed against Lord Gifford's interlocutor to the Second Division of the Court. In the action of Walker, etc., against Law and others, Managers of Edinburgh Royal Infirmary, both parties having obtained leave to appeal against the decision of Lord Jerviswoode in reference

to the votes of firms for Managers of the Royal Infirmary, a note of appeal to the Second Division has also been lodged on behalf of the respondents.

IRELAND.

THE LOCAL GOVERNMENT BOARD (IRELAND) ACT.

By the Local Government Board (Ireland) Act, which received the royal assent at the close of the last session, the Poor-law Commission in Ireland is merged into the Local Government Board, which now consists of a President, being the Chief Secretary to the Lord Lieutenant for the time being, the Under Secretary, a Vice-President, and two other commissioners, one of whom shall be a medical commissioner. In this Board is vested certain functions of the Lord Lieutenant, the Privy Council, and the Chief Secretary, concerning the public health and local government, together with the powers and duties of the Poor-law Commissioners. The Local Government Board shall be deemed to be established from and after the date of the first appointment of a Vice-President; and may appoint, in writing, such inspectors, auditors, clerks, messengers, and other officers, as the Board may, with the sanction of the Treasury, determine. The salaries shall be paid out of moneys provided by Parliament, and their amount shall be such as the Treasury may from time to time determine. By Section 9, "The sewer authority of any district, not being Guardians of the poor, shall defray all expenses incurred by such sewer authority, in carrying into effect the provisions of Section 37 of 'The Sanitary Act of 1866'" (which says that "the sewer authority, or in the metropolis the nuisance authority, may provide for the use of the inhabitants within its district hospitals or temporary places for the reception of the sick. Such authority may itself build such hospitals or places of reception, or make contracts for the use of any existing hospital or part of a hospital, or for the temporary use of any place for the reception of the sick"), "out of the funds and in the manner prescribed by Section 58 of the said Act, as if the same were expenses incurred in carrying the Nuisance Removal Act into effect." This clause is a most important one, and enables urban authorities to erect hospitals and convalescent homes in their various districts, a want seriously felt during the late epidemic. The Act itself forms a Board for the carrying out of the Local Government Act of 1871, and both these Acts will probably form the groundwork for a Public Health Bill for Ireland which will probably be introduced next session.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETINGS.

THE next meeting of the members of the above district will be held at the Saracen's Head Hotel, Ashford, on Thursday, September 19th, at 3 o'clock; Mr. THURSTON in the Chair.

Dinner will be provided at 5 o'clock precisely. Charge 5s., exclusive of wine.

All members of the South Eastern Branch are entitled to attend, and to introduce friends.

Notices have been received of the following communications to be read at the meeting. 1. Dr. G. Wilks: Treatment of Varicose Veins. 2. Mr. Nason: Case of Hernia. 3. Dr. Parsons: Case of Hernia.

Gentlemen intending to be present at the dinner, are requested to inform me on or before Tuesday, September 17th.

CHARLES PARSONS, M.D., *Honorary Secretary.*

2, St. James's Street, Dover, September 2nd, 1872.

NORTHERN BRANCH.

THE autumn meeting of the above Branch will be held at Durham, on Thursday, September 26th, at 3 P.M.; CHARLES TROTTER, Esq., F.R.C.S., President, in the Chair.

Members who are desirous of reading papers, are requested to communicate their intention to the Secretary, without delay.

G. H. PHILIPSON, M.D., *Honorary Secretary.*

Newcastle-uponTyne, August 23rd, 1872.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT MEETINGS.

THE first meeting for the sixteenth session will be held at St. Bartholomew's Hospital, Rochester, on Tuesday, September 17th, at 4 P.M.

Dinner will be provided at the Bull Hotel at 6 P.M.

Arthur W. NANKIVELL, Esq., F.R.C.S., will occupy the Chair.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary.*

Rochester, September 2nd, 1872.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

THE next meeting of the members of the above district will be held at the Sussex Hotel, Tunbridge Wells, on Friday, September 20th, at 3.15 P.M.; Mr. B. MARSACK in the Chair.

Dinner will be provided at 5 o'clock. Tickets (exclusive of wine), 5s.

All members of this Branch are entitled to attend, and introduce professional visitors.

An early notice of intended communications is requested, in order that they may be inserted in the circular convening the meeting.

THOMAS TROLLOPE, M.D., *Honorary Secretary.*

35, Marina, St. Leonard's-on-Sea, September 1872.

CORRESPONDENCE.

MEDICAL OFFICERS OF HEALTH UNDER THE NEW ACT.

SIR,—It is due to the numerous Poor-law surgeons, who did me the honour to answer my appeal in the BRITISH MEDICAL JOURNAL (June 29th, 1872), that I should, through the same medium, thank them, as I now do heartily, for valuable information as to their wishes in respect of the appointment of medical officer of health.

To have received nearly two hundred replies is perhaps as much as I could reasonably expect. Probably a large proportion of those surgeons do not see the JOURNAL; and of those who do, many are too much engaged to notice the correspondence columns. The majority, also, of the whole body might prefer not to commit themselves in writing, by opposing arrangements which might soon be forced upon them; so that I am satisfied that the replies which I have obtained represent the opinions of a very influential portion of these officers—certainly of the more independent thinkers among them: and it is remarkable that, wherever there was a district association, enabling them to confer and co-operate, the replies came from nearly the whole body.

Now, of those from whom I heard, only three were in favour of the Government scheme; two more were doubtful, and considered that the advantages and disadvantages of that plan were so nearly balanced that they knew not which to prefer of the two systems. From all the rest, including many names well known and highly honoured in country practice, the suffrages were strongly, even emphatically, in favour of the plan of the Joint Committee, and of course against that of the Government.

Some very striking statements and arguments were adduced by several gentlemen who favoured me with letters, while the pith and vigour of the few words of those who used postal cards showed plainly enough what was the predominant feeling of rural practitioners on the subject.

There can be no doubt that, in the hope of securing credit for a (so-called) Public Health Act, the Government, aided by the opposition chiefs, have carried a measure against the judgment of the most experienced and approved sanitarians, whether in or out of the medical profession; yet with what ultimate success remains to be seen.

Those have much to answer for who, by pandering to official ambition and popular ignorance, by flattering the authors of this legislative manœuvre, and thus gaining an advantage over

their more straightforward antagonists, have promoted the parliamentary success of the very objectionable measures which have now the force of law. It is to be noted that professional support to this "Public Health Act" came chiefly from the metropolis, which is *not* included in the general operation of the Act.

It is not for me to attribute unworthy motives to any public writers; but when they betray their own aspirations, by professing to regret that "many sanitary reformers who might have done good service should have put themselves out of court by their energetic opposition to the Government scheme", these writers hardly conceal their satisfaction that they have not put *themselves* thus "out of court", and that there is likely to be "a considerable augmentation of the inspectorial staff". Hence their pæans of exultation. While they tacitly pay a merited tribute to the disinterestedness, honesty, and independence of their opponents, they can descend to strengthen the vulgar prejudices of their lay readers by clap-trap sneers at a "State church of health and sanitary bishops".

In the face of this enactment, one is astounded at the audacity of the assumption, that "no English statesman would dare to introduce anything like central compulsion", when, in fact, the centralisation of force is the very mainspring of the now legalised machinery.

The medical-officer scheme of the Act of 1872 is, doubtless, in every sense, a great job, and we believe it will prove a *fiasco*. That Mr. Stansfeld looked very coldly and suspiciously on his own bantling, is shown by his ready acceptance of Colonel Barttelot's "five-years" clause, and by his admission that it might be found necessary to supersede those officers, and to appoint others over larger areas. *Our plan would have secured the services of both classes of officers permanently.*

In conclusion, I will venture to offer a bit of advice to those of my professional brethren, whether Union medical officers or not, who may have the fortune or misfortune of being appointed health-officers under Section 10 of the new Act.

"Consider, in the first place, your duties and interests as private practitioners. Your primary obligation is to your patients. Satisfy *them;* for from them, in most districts, you must look for nine-tenths of your income. If you have not ample private means, and are not independent of practice, be assured that your position in life, the maintenance of your families, as well as your professional usefulness and success, will all depend upon your making Therapeutics your chief concern. Carefully avoid poking your noses into your neighbours' sinks and dust-bins. Leave sewerage to the engineers, cesspools to the surveyors, pigsties and stale fish to the nuisance-officers. Keep your test-tube and your microscope mainly for the diagnosis of disease. Take religious care never to carry infection from infected persons or places into private families. And, as to preventive medicine in general, remember Talleyrand's advice to an enthusiastic young official: *Surtout, point de zèle, mon ami.*"

I am, etc.,

August 31st, 1872 H. W. RUMSEY.

OBITUARY.

ALFRED POLAND, F.R.C.S.,

SURGEON TO GUY'S HOSPITAL.

MR. ALFRED POLAND, the well-known surgeon, whose death was briefly alluded to in our last number, was a man of singular ability and industry, who acquired a reputation by his exertions as a teacher and as a hospital surgeon, far exceeding in popularity that worldly success which is commonly thought to be associated with an active professional life. As an articled pupil of the late Mr. Aston Key, Mr. Poland enjoyed those advantages of hospital practice which the custom of the time limited to a few favoured students; and in after years he frequently bore testimony to the privileges he thus obtained as the best educational training he received to enable him to enter on the higher duties of hospital surgeon. Soon after he had finished his student's curriculum, he was appointed demonstrator of anatomy at Guy's Hospital, and obtained the fellowship of the College of Surgeons in 1847. In 1849 he was appointed assistant-surgeon to Guy's Hospital, and not long afterwards, on the death of Mr. Bransby Cooper, he was called on somewhat unexpectedly to deliver the course of lectures on Systematic Surgery, the synopsis of which he afterwards published, and which is remarkable for its methodical construction, and which may even at the present day be consulted as an admirable framework and guide for those engaged in similar prelections. In the year 1861 Mr. Poland was appointed to the office of surgeon to Guy's, with the general charge of the Ophthalmic department, on the retirement of Mr. France. He had previously paid considerable attention to Ophthalmic Surgery, and for some years was attached as surgeon to the hospital in Moorfields. On his appointment as full surgeon to Guy's, he, however, gradually gave up his ophthalmic practice, and devoted himself entirely to his purely surgical duties. During all this time, and in fact up to the period of his death, Mr. Poland was actively engaged in contributing numerous essays, on special surgical subjects, to the medical press, all bearing marks of great research and erudition combined with much practical skill and forethought. His professional pursuits and success in life were, however, sadly marred by failing health, induced, in the first instance, by purulent infection contracted in his hospital work, a subject on which he treated from personal experience in the article on "Animal Poisons," in Holmes's *System of Surgery*. His susceptibility to repeated attacks, originating as he believed from the same cause, disabled him at length from his more active duties; and about five years ago he was reluctantly compelled to relinquish his lectures on surgery, and to devote himself entirely to the work in the wards. During the last two years he had been suffering from chronic catarrh, and was forced, in consequence, to give up his consulting-rooms in the city, and retired to the house of his father, Sir Wm. Poland of Blackheath.

For a time the change appeared to benefit him greatly, the severe symptoms disappeared, and he spoke hopefully of the future, notwithstanding some severe domestic trials which embittered the latter years of his life. The improvement, however, was only temporary. During the summer months of the present year, the cough returned with increased violence; but he fought bravely on to the last, and may be said to have died in harness, as he saw his patients at the hospital for the last time on the 17th ult., devoting more than his usual time and care to the visit. He died on August 21st, at the age of fifty-one.

Before becoming a Fellow of the College of Surgeons, Mr. Poland had obtained an extraordinary premium of fifty guineas from the Council of the College for a dissertation on the "Nerves of the Orbit in Mammalia and Man"—the subject of the Collegiate Triennial Prize. In 1853, he obtained the Fothergillian Medal of the Medical Society of London for an essay on "Injuries and Wounds of the Abdomen," and in 1857 he gained the Jacksonian Prize of the College of Surgeons for his essay on "Gunshot Wounds and their Treatment." He was for some time editor of the *Guy's Hospital Reports;* and contributed numerous valuable articles to Holmes's *System of Surgery* and to the medical journals.

Mr. Poland was a man of retiring disposition and modest demeanour. His repeated attacks of illness affected his appearance, and made him look ten years older than he really was. He could scarcely be said to have done himself justice. His great hospital experience as a surgeon and as a teacher, and the reputation which he acquired as an expert and skilful operator, were in great measure confined to the hospital and to the pupils who had the good fortune to be more exclusively attached to him, and who always held him in the highest respect for his attention to their interests, and for the consideration and kindness with which he always treated them. In private life, he was a man of reserved thought and few words, strictly just and honourable in his dealings, and superior to the petty jealousies which unfortunately are not always inseparable from the character of men who could boast of a more favoured, although a less distinguished career.

FREDERICK CARPENTER SKEY, C.B., F.R.S., ETC.

MR. SKEY died at his residence in Mount Street, Grosvenor Square, on August 15th, in the seventy-third of his age. Having received an excellent preliminary education, the last year or two of which were spent at the University of Edinburgh, he became the pupil of John Abernethy, to whom he was articled at the Royal College of Surgeons on April 5th, 1816, on the payment of the usual premium of 500 guineas. He was admitted a member of the College on April 5th, 1822. He continued to remain with Mr. Abernethy, assisting him in his large practice, and receiving most substantial recognition of the

value of his services from the eccentric but kind-hearted surgeon, who, about the year 1826, appointed him Demonstrator of Anatomy at St. Bartholomew's. On the death of Mr. Abernethy, the Anatomical Lectures fell into the hands of a successor who claimed the emoluments of those given by Mr. Skey, in consequence of which he resigned, and, associating with him Drs. Todd, Hope, Marshall Hall, Pereira, and Mr. Kiernan (now the only survivor), established the Aldersgate Street School of Medicine. Here he lectured for ten years, his audience being largely increased by many of the St. Bartholomew's men, who preferred his lectures on surgery to those of Lawrence. About this time he was elected Surgeon to the Charterhouse. He was offered the appointment of Surgeon and Professor of Surgery at King's College on condition that he would resign them in three years. This he declined, and the negotiations fell to the ground. He was elected an Honorary Fellow of the Royal College of Surgeons in 1843; in 1848 he was returned by the Fellows to a seat in the Council, and in 1850 delivered the Hunterian Oration. Mr. Skey was in 1852 Professor of Human Anatomy and Surgery at the College. In 1855, he was elected a Member of the Court of Examiners, and in 1863 became President. In 1843, he was invited to return to St. Bartholomew's and accept the Chair of Anatomy, Mr. (afterwards Sir William) Lawrence retaining that of Surgery, and Mr. (now Sir James) Paget that of Physiology. It was not until after holding the appointment of Assistant-Surgeon for about a quarter of a century that he was elected full Surgeon, when, after nine years, he retired, having reached the age of sixty-five years.

On the formation of a Committee to inquire into the Prevention of Contagious Diseases in the Navy and Army, Mr. Skey was appointed Chairman, Mr. Spencer Smith, Surgeon to St. Mary's Hospital, another Member of the Council of the College of Surgeons, acting as Secretary. The result of the deliberations of the Committee, which sat for about eighteen months, was the passing of the Contagious Diseases Acts. For his valuable labours on this occasion Mr. Skey obtained the honour of C.B.

Mr. Skey was a valuable contributor to the advancement of professional knowledge, and a paper on Muscular Fibre, published in the *Transactions* of the Royal Society, obtained for him the Fellowship. He was the author of works on *The Venereal Disease*, on *Operative Surgery*, and on *Hysteria*. He published also Lectures on the *Prevalent Treatment of Disease*, and on the *Relative Merits of the two Operations for Stone*. He was also a frequent writer in the medical and other journals.

The immediate cause of death was ulceration of the intestines; and at the close, when the pain was excessive, he bore it with indomitable courage, supported by the presence of all his family, with the exception of one son, who had to join his regiment a few hours before the close of his father's career.

ROBERT WINSTANLEY, M.R.C.S., WIGAN.

THE late Robert Winstanley, whose death occurred on August 17th, was born in the neighbourhood of Wigan, and received his medical education first with Dr. Latham, of that town, and subsequently at Glasgow, Edinburgh, and King's College, London. He became a member of the Royal College of Surgeons, and a licentiate of the Apothecaries' Hall, in 1857. He practised in Wigan, where he held several public appointments, and where, by his genial disposition and affable manner, he gained the esteem of a large circle of acquaintance. Failing health obliged him, in 1869, to give up his profession, and to seek for a more suitable climate abroad; but his disease (phthisis) had made such progress that the benefit he derived was but temporary. The immediate cause of death was hæmorrhage from the rupture of a blood-vessel in the lungs. He was in the thirty-ninth year of his age, and unmarried.

THOMAS BALLE FORSTER, M.D., R.N.

DR. THOMAS B. FORSTER died at Plymouth on August 20th, aged 47. He entered the Royal Navy as an assistant-surgeon in October 1847, and served on the Pacific Station successively in Her Majesty's ships *Asia*, *Nereus*, and *Dædalus*, until September 1851, when he joined Her Majesty's ship *Plover*, at that time engaged in arctic service. On his arrival in England, he volunteered to return to Behring's Straits, and was appointed to Her Majesty's ship *Rattlesnake*, to which ship he was attached for upwards of three years. In April 1857, he was appointed assistant-surgeon of Her Majesty's Dockyard at Keyham, Devonport, which position he held until March 1870, when he retired from active service.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 29th, 1872.

Blake, John Ffrench, Galway, Ireland
Eagar, Robert Taylor Sumner, Sheffield
Paterson, Robert Haldane, Brigg, Lincolnshire
Waghorn, Albert Richard, Anerley

The following gentlemen also on the same day passed their primary professional examination.

Highton, Thomas, St. Thomas's Hospital
Knowles, Edmund, St. Mary's Hospital
Squire, William, St. Bartholomew's Hospital
Travers, Otho Robert, Guy's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALDERBURY UNION, Wilts—Medical Officer and Public Vaccinator for District No. 3: £120 per annum, and extra fees.
ALVERSTOKE UNION—Medical Officer for the Town District: £90 per annum, and extra fees.
DONEGAL UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Dunkineely Dispensary District: £100 per annum, and fees.
EVESHAM UNION, Worcestershire—Medical Officer for the Workhouse: £30 per annum, and midwifery fees.—Medical Officer and Public Vaccinator for District No. 1: £52 per annum and extra fees.—Medical Officer and Public Vaccinator for District No. 2: £50 per annum, and extra fees.
GENERAL HOSPITAL, Birmingham—Assistant Dispenser.
HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square—Consulting-Physician.
LANCASTER INFIRMARY—House-Surgeon: £100 per annum, apartments, coal, gas, and attendance.
LIMERICK UNION, co. Limerick—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Annacotty Dispensary District: £100 per annum, and fees.
LIVERPOOL DISPENSARIES—Medical Officer to the East Dispensary.
LLANELLY, Carmarthenshire—Certifying Factory Surgeon.—Surgeon to the Llanelly Tin Plate Works, the Old Castle Works, and the Pottery Works.
MEATH INFIRMARY, Navan—Apothecary, Secretary, and Registrar.
METROPOLITAN DISPENSARY and CHARITABLE FUND, Fore Street, Cripplegate—Physician.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Two Entrance Scholarships: £25 and £20 per annum, for two years.
PLYMOUTH, Pride of Devon Lodge of Odd Fellows—Surgeon.
SALFORD and PENDLETON ROYAL HOSPITAL and DISPENSARY—District Surgeon: £80 per annum, board and lodging.
ST. GEORGE, Hanover Square—Medical Officer of Health: £350 per annum.
ST. MARY'S HOSPITAL MEDICAL SCHOOL—Scholarship: £40 per annum for three years.—Exhibition: £20 for one year.
SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds—Physician.
SUSSEX COUNTY HOSPITAL—House-Surgeon: £80 a year, with £10 a year from each resident pupil, board, and residence.
TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.
WESTMINSTER GENERAL DISPENSARY, Gerrard Street—Physician.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

COATHUPE.—On August 30th, at Manchester, the wife of *Edwin Wise Coathupe, Esq., Surgeon, of a daughter.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

The Rev. Dr. Haughton, Dublin; Dr. Rumsey, Cheltenham; Dr. Leared, London; Mr. Solomon, Birmingham; Dr. Parsons, Dover; Dr. Drysdale, London; Dr. Morell Mackenzie, London; Dr. A. Edis, London; Dr. J. W. Eastwood, Darlington; Dr. E. T. Wilson, Cheltenham; Mr. J. W. Groves, London; Mr. J. W. Langmore, London; Mr. Henry Morris, London; Mr. Lettis, Great Yarmouth; Mr. Forster, Plymouth; Mr. F. Owen, Leatherhead; Dr. Frederick J. Brown, Rochester; Dr. Cordwent, Taunton; Dr. Roden, Kidderminster; Mr. Dickinson, Cannes; Dr. Heywood Smith, London; Dr. Rushton Parker, Liverpool; Dr. Philipson, Newcastle-upon-Tyne; Mr. Beardsley, Grange-on-Sands; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. E. Robinson, Leeds; B. B. B.; Mr. Lawson Tait, Birmingham; Dr. Samelson, Manchester; Mr. J. Hughes, Middlewich; An Associate; Mr. Henry Arnott, London; Mr. Martin, Evesham; Mr. Pearse, Wellington; Dr. T. Ballard, London; Dr. Marsillach y Parera, Barcelona; Dr. Taylor, Nottingham; Dr. J. C. Murray, Newcastle-upon-Tyne; Dr. Steele, London; Mr. Longmore, Netley; Dr. Charles Creighton, London; Dr. Guy, London; Mr. Bryden, Uffculme; Dr. Moxey, Tottenham; Mr. Spurrier, Birch Hall; Dr. Trollope, St. Leonards-on-Sea; Mr. Bradley, Manchester; Mr. Hewitt, Manchester; Mr. Slaytor, Newton Abbott; Dr. Taylor, Nottingham; Mr. F. Workman, Reading; etc.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. HEWITT (Manchester).—The letter shall appear next week.

A MEMBER OF THE BRITISH MEDICAL ASSOCIATION (Norwich) shall receive a private letter.

MR. H. SPURRIER (Birch Hall, Kersal) will find details of asylums for inebriates among our advertising columns.

THE OPHTHALMOLGICAL CONGRESS.—Dr. Samelson (Manchester) wishes us to state that, in taking part (as reported in the JOURNAL) in the discussion of Dr. Argyll Robertson's case, he showed his case of Total Absence of Iris and Lens from Accident.

THE PUBLIC HEALTH ACT.

1. Have the guardians the power to fix the salary of medical officers of health?—Yes, *subject* to the approval of the Local Government Board.

2. Can a medical officer of health in small unions or rural districts undertake the duties of sanitary inspector combined?—It is very undesirable that officers of health should be appointed, except as *deputies*, in separate small local districts; and not less so that they should act as inspectors of nuisances.

3. Must the guardians (as stated in Query 2) appoint, or are they compelled to appoint, such officers? and when?—They are compelled to appoint, and will shortly receive instructions and advice from the central authority.

4. Is the Medical Officer of the Privy Council, or the President of the Poor Law Board, the authority for carrying this Act into operation?—The former Medical Officer of the Privy Council is now transferred to the Local Government Board.

5. Is any duly registered medical man qualified for the appointment?—Legally, yes.

DR. LETTIS (Great Yarmouth) is thanked.

LIFE ASSURANCE SCHEDULES.

MR. RICHARD BRYDEN (Uffculme, Devon) has received the following letter, in reply to an application for the usual fee for filling up the usual paper of questions.

"Protector Endowment Loan and Annuity Company,
34, King Street, Cheapside, E.C., London, 29th July, 1872.

"Dear Sir—Mr. —— gave us your name as a reference on the usual application form. We accordingly sent out our usual reference letters, and paid our own medical referee for his examination on our behalf. If Mr. —— is not a patient of sufficient interest to you for you to have answered our letter out of courtesy to him, he clearly ought to have paid you, or not given your name at all. You had better make your demand on him. "I remain yours faithfully,

"ALEX. MCMONAN, Secretary.

"R. Bryden, Esq., Uffculme, Devon."

The letter is an irrelevant impertinence. It is not worth, at this date, answering or refuting its flippant pretence at an argument; but medical men will take notice that this is one of the few offices which decline to afford payment for indispensable skilled services; and they will be cautious not to have anything to do with it, except under a special agreement.

MIDWIFERY IN RUSSIA.—It is stated that the Emperor of Russia has just issued a Ukase ordering the immediate establishment at St. Petersburg of a school to train midwives, as up to the present time no such institution had existed anywhere in that immense empire. The curious part of the matter, however, is that the direction of this school is placed in the hands of the Minister of War, who, under date of the 10th of August, published the regulations of the institution and the programme of the studies. This anomaly results from the fact that the new school is subordinate to the Academy of Medicine and Surgery at St. Petersburg, which is also under the control of the War Department.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

DR. DIXON (Cardiff).—Dr. Parkes on Hygiene; Professor Longmore's treatise on.

MR. HENRY MORRIS (London).—Many thanks.

M.D. (Shropshire).—The admirable address delivered by Professor Attfield at the recent meeting of the British Pharmaceutical Conference, is published in full in the *Pharmaceutical Journal* of August 24th. It will well repay perusal.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

SPASMODIC ASTHMA FOLLOWING USE OF LINSEED-MEAL POULTICES.

DR. LEARED writes:—In addition to the cases already published in the JOURNAL of the effects of linseed-meal in producing asthmatic and other symptoms, I may mention the following. The present head of one of the principal pharmaceutical establishments in London, long ago assured me that, whenever linseed-meal was opened near him, he was seized with violent sneezing, lacrymation, and other catarrhal symptoms. So susceptible is this gentleman of the presence of linseed, that he is obliged to have the meal kept for use in an underground apartment. Ipecacuanha also possesses the power of causing what may be termed artificial spasmodic asthma and catarrh.

CORRECTION.—In Mr. Teevan's letter, published at p. 258 of last week's JOURNAL, the concluding sentence of the first paragraph appears as if the words were those of Mr. Teevan instead of Mr. Pemberton. The quotation from Mr. Pemberton's address was as follows. "Now, I know that many believe that this dilatation means laceration. It has, indeed, not very long since been described as 'complete rupture and laceration' (Mr. Teevan, *Lancet*, vol. ii, page 237, 1870), and as 'unsurgical and dangerous.' I answer this statement, which I venture to characterise as eminently reckless, by a positive contradiction as to facts."

MIDWIFERY ENGAGEMENTS.

B. B. B. asks the following questions. Perhaps some of our readers who have had practical experience in the matter, will help us to the solution.

1. I was engaged to attend Mrs. F. at her forthcoming confinement, and heard nothing of the matter till about two months afterwards, when it casually came to my knowledge that she had employed another medical man. As I received no notice that she would not require my services, am I likely to recover my fee by taking the case to the County Court?

2. In some instances here, where no medical man has attended the case, though one has been retained, the judge has decided against the doctor, I am told. Should this be a fact, would you still advise me to sue?

3. A neighbouring practitioner says that in similar cases he warns the people of the consequences should they not send for him (not having withdrawn the engagement); after which, should they not require his services, he would summon them, making his bill out for "advice". Would he or I be likely to succeed in such a case, or in this one?

MR. LAWSON TAIT'S CASE OF RETRO-UTERINE GESTATION.

SIR,—Mr. Pope must have misunderstood what I said about my case. I stated that in my own experience I had not known of a case of extrauterine pregnancy diagnosed and operated on during life; and my position seems not to be uncommon, when a practitioner of Dr. Ringland's great experience told us that such cases were very uncommon, and no one present asserted that he had ever seen such a thing. I am, etc., LAWSON TAIT.

ANIMAL TEMPERATURE.

SIR,—The communication on the above subject, in the JOURNAL of August 10th, signed "W. H. D. Mence", quite astonished me. I have now for six years made a pocket companion of the clinical thermometer, and without egotism I know I am right in estimating its value exceedingly high. The armamentarium of a successful general practitioner would be very incomplete without it.

Mr. Mence states the temperature of a healthy adult in this month of August to be 102 deg.; and of this he has tested the truth with four thermometers. I have in use a Casella, and a Harvey and Reynolds; and if either of these registered 102 deg., even in August, I should immediately be on the alert for something to happen, even if my patient appeared healthy. If Mr. Mence's thermometer be correct, the so-called healthy adults, with temperature at 102 deg., will soon develope some disease which is now latent. My observations and study of the subject enable me to say that a temperature of 102 deg. is inconsistent with health: in fact, it means disease, and admits of no doubt.

Since I read Mr. Mence's astounding announcement, I have tried adults in health, under varied circumstances, and I cannot make the mercury run up to 102 deg. on Derbyshire healthy adults.

There can be no doubt that Mr. Mence's instruments are inaccurate, or else sufficient care has not been used in the observation. I am unknown to Mr. Mence, but would strongly advise him to read Wunderlich's treatise on *Medical Thermometry*, published by the new Sydenham Society. I have never found the seasons of the year create the variation of which he speaks. I should not expect a case of pneumonia or acute rheumatism to register 103 or 104 deg. in January, and 107 or 108 deg. simply because it was August (all other things being equal). A temperature of 107 or 108 deg., whether at Christmas or at midsummer, is of bad omen to the patient, unless he have the most intelligent management. I would advise Mr. Mence to look out for latent tubercle in his healthy adults at 102 deg.

I have a profound conviction that a medical practitioner ought to possess a clinical thermometer, a stethoscope, microscope, and an uterine sound. He may do much successful work with these and brains, though he may add many other accessories. I am, etc., EDWARD GAYLOR.

Belper, August 12th.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, August 31st; The Manchester Guardian, Sept. 4th; The Tewkesbury Record, August 31st; The North British Advertiser, August 31st; Saunders's News-Letter and Daily Advertiser, Sept. 3rd; The Bath Express, August 31st; The Jersey Express, August 29th; The Homeward Mail, August 28th; etc.

EDUCATIONAL NUMBER.

A WORD TO STUDENTS.

We have formally abandoned the time-honoured custom of composing an oration to medical students in the issue which we annually devote to the record of the arrangements of Medical Colleges and Schools and of Clinical Hospitals. In its place, we have given during the last few years a brief annual review of the impediments to knowledge on the part of students, and the shortcomings of Colleges. We are able this year to note the salutary progress which has been made in the directions to which we pointed, and along the lines which we traced. The means of working at the physiological and microscopical subjects of the curriculum are now provided at every school; whereas, when we first attacked the existing state of things, such teaching was chiefly oral, and practical teaching in the laboratory either did not exist, or for the most part was of delusive incompleteness, and merely formal. Even now, the arrangements for practical surgery and microscopic work and physiological work are of very various efficiency; and we would counsel every student to compare the actual arrangements of all the schools in this respect before entering. There can be no better test of the efficiency of a school than the reality and completeness of these arrangements. It is not enough that there should be a nominal completeness. Unless there be special teachers in regular attendance, good accommodation, and a proper supply of instruments in each of the laboratories, the teaching cannot be anything else than a sham, by which the student's knowledge and his whole after-career will be tinged.

We may advise the student also not to rely upon the mere reading of a prospectus to decide his career. He must consider the facts of the school as they relate to his own aptitudes, knowledge, and intentions. It does not follow, because a hospital possesses a large museum, a large number of beds, or an imposing set of officers, that it is therefore best for him. Is he ambitious of a career as a consulting officer, and of high place in the profession? He must consider whether he aims at devoting himself to medicine or to surgery. He must look to the working reputation and ability of the staff, their number, the probability of openings among the junior staff in any given direction, and the character of the teaching in particular directions. Too great a mass of students at a small hospital renders clinical teaching impossible. Too small a staff of teachers and an insufficient clinical staff render the resources of a large hospital unavailable. Age, indifference, and extensive preoccupations, make some illustrious medical and surgical officers ornamental rather than useful working members of a staff which their names illustrate.

A serious student will consider all these things. He will not be led away by the attractions of having a friend on the staff, or a comrade among the students: friends and comrades are acquired naturally in the course of an orderly working student's career.

Having chosen a hospital which attracts him by the excellence of its laboratories, the completeness of its clinical teaching, the earnestness and regular attendance of its officers, he will have to blame himself only if he fail to acquire a sound and useful knowledge of his profession. He will eschew idleness; shun the top benches in the lecture-room; abhor beer, billiards, and smoking; think and write instead of only listening and dosing. The slowly surmounted difficulties of his first lectures will give him something of the exquisite pleasure which the solving an intellectual problem never fails to afford; and the care of a healthy body, with the growing development of a mind rising in power and instruction, will fill all his time with useful, vigorous, enjoyable occupation, and will leave him no time or sympathy for any other pursuits than those of a cultivated English gentleman, who has undertaken to prepare himself for a most high responsibility, and who desires to be able to assume it without the sense of degrading deception which must be the feeling of those who enter upon a medical career with the hidden consciousness that they are shams, that they have only a thin veneering of superficial knowledge, and are but half equal to the work which must fall upon them. We hope that every student who reads these lines will resolve, above all, to be earnest and true in his work, and to aim, not at passing examinations, but at building up a solid basis of knowledge on which to found his future life-career of honourable and candid usefulness.

PRIZES AND PRIZE-GIVING.

On looking over the pamphlets which we have lately received from the different medical schools, and comparing them with what we remember a few years back, few changes appear more striking than that which results from the rapid development of the prize system. The modest rewards of a recent time are now replaced in many instances by valuable scholarships and exhibitions; and prizes are given for subjects which were not then taught, or which were scarcely thought of.

By analysis of this particular bundle of prospectuses, supplemented by information very courteously given by some of the officials, respecting the value of medals, etc., not stated in the advertisements, we have attempted to draw out some account of the sums annually returned to the London students in the shape of rewards; but we found it undesirable, if not impossible, to carry out this idea in detail, for the following reasons.

Prizes may be roughly divided into two classes—first, those to which no duties are attached; and, secondly, those which are given on condition that the holder discharges certain functions. Now it is quite impossible to estimate in money either the actual or comparative value of this latter class. For instance, a prize of £20 or £30 is given to a man at the end of his second winter, on condition that he acts as demonstrator or laboratory assistant during the following year. This is no prize to most students. Unless he be going up for the F.R.C.S.E., wish to devote himself to scientific pursuits, hope to be attached to the lecturing staff, or, in short, have some special object in view, he cannot afford to give the time required; besides, the school gets back, more or less, the worth of the money in the value of the services rendered. Then there are the resident hospital posts. At some of the schools these can only be obtained on payment of sums varying from £10 to £30; at others, they are given after competition, without any extra payment. These appointments are generally stated to be prizes, and must certainly be regarded as such. One prospectus says, "the money value of these appointments far exceeds that of scholarships of £50 each"; but, indeed, their value cannot be computed in money—they are invaluable. The amount given in prizes is one of the last things a man should consider in choosing a school; but he should carefully inquire as to the way in which the clinical posts are disposed of, and as to the expenses attendant upon them. We have, then, been obliged to omit all account of prize appointments, and have confined our arithmetical investigations to those scholarships, exhibitions, and prizes, which are given in money, books, medals, etc., and to which no executive office is attached. The result of our calculation is that, even after this large deduction has been made, over £3,000 is annually distributed amongst the London students. The eleven hospitals contribute very unequally to this amount; and the disproportion is especially great when the number of entries at each is taken into account: thus, two schools each give over £12 a year in prizes for every student who enters, while two others give about £3 *per annum* for each entry; at the other seven the proportion varies between these extremes. The way in which the whole sum given is apportioned among the subjects taught is also remarkable for the absence of any general agreement. Six hospitals offer prizes for general knowledge (entrance scholarships); the total amount thus given is £510; in addition, there are two or three scholarships which are limited to boys from Epsom College. Then there are prizes which have been bequeathed by benefactors, who have left special directions concerning them. As a rule, these regulations are just and sensible; and, if not, it is not easy to point out where the fault lies.

But it is in the distribution of the ordinary school prizes that the various and conflicting opinions of medical teachers, as to the branches of study most needing encouragement, are best seen. For instance, one school gives £140 in prizes for natural science, while £10 : 10 is the whole sum allotted to medicine and surgery, both theoretical and practical; at another school, £120 is given for proficiency in medicine and surgery, while £45 suffices to find prizes for all the other subjects in the curriculum. At some of the schools, again, the prizes are given for general proficiency, according to the aggregate number of marks obtained at the end of each session, after the examination in several subjects; at others, prizes are given in each class separately. To this last plan there is a grave objection—viz., the temptation which it offers to students to work up one subject at a time and to neglect others. By thus cramming one subject each session, we have known inferior men to get a considerable number of prizes, whilst men who take a good average place in all the classes, and are, therefore, far better educated, get nothing.

As regards the form of the prizes, there is also great difference: some schools give money, others books or instruments at the option of the scholar, and two or three give nothing but medals. This last we consider to be, except in special cases, a most unsatisfactory form of prize: medals are very expensive, but utterly useless and unprofitable to the owner: it does not look well to see them ostentatiously displayed in the drawing- or consulting-room, to say nothing of the chance of losing them; and all that the happy recipient can do is to lock them up and forget them, till, by some chance in later years, he reviews them again with a smile fading into a sigh, as he recalls to mind the prowess and the hopes, the labours and the wasted chances of earlier years.

We have not exhausted the differences and contrasts which our investigations revealed, but we cannot pursue the subject further without making remarks and comparisons which would be personal to the different schools, and this we have no wish to do. We are aware that no plan of prize-giving would be arranged which would be equally suitable to each and all of our medical academies. The large schools and the small; the colleges, which contain a considerable number of men who are preparing for various scientific pursuits; and the more exclusively medical "colleges"—must each adapt the system to their special requirements. But the great differences which exist cannot be all accounted for in this manner.

We should like to see more evidence of uniformity of plan: if some of the present systems be right, others must certainly be wrong; at least, there must be a mean standard somewhere. Prizes are a great power for good or for evil, and it cannot be wise to give them in the present almost haphazard fashion. It may perhaps even be doubted whether the growth of this custom of prize-giving has been as healthy as it has been rapid. At any rate, in some cases the prizes appear to us to have been arranged on the most showy rather than the most advantageous principles, and with a view rather to attract the ambitious than to benefit the working student.

CHANGES IN THE HOSPITALS AND MEDICAL SCHOOLS.

THE following are the principal changes which have taken place in the staffs of the hospitals and medical schools during the past year.

At St. Bartholomew's Hospital, Mr. Holmes Coote has retired from the lectureship on Surgery. Dr. T. L. Brunton has been associated with Dr. Farre as lecturer on Materia Medica: and Dr. Southey has been appointed lecturer on Hygiene.

At the Charing Cross Hospital, Dr. Headland has been appointed lecturer on Medicine in the room of the late Dr. Hyde Salter; and is succeeded as lecturer on Materia Medica by Dr. Douglas Powell. Mr. J. M. Bruce has been appointed instructor in Practical Histology. Dr. Poore lectures on Forensic Medicine in place of Dr. A. J. Pollock. The vacancy in the office of physician to the Hospital caused by the death of Dr. Salter has been filled by the promotion of Dr. Silver: and Dr. Poore has been appointed Assistant-Physician. Mr. Hancock has resigned the office of Surgeon, and has been appointed Consulting Surgeon: and Mr. Fairbank is Dental Surgeon in place of Mr. Parkinson.

At St. George's Hospital, Dr. William Ogle has resigned the office of Assistant-Physician, and has been succeeded by Dr. Whipham.

The vacancy in the office of Surgeon to Guy's Hospital, occasioned by the death of Mr. Poland, has been filled by the promotion of Mr. Durham.

At King's College, Dr. W. S. Playfair has succeeded Dr. Priestley as professor of Obstetric Medicine and Physician Accoucheur to the Hospital. Dr. Ferrier has been appointed lecturer on Forensic Medicine in place of Dr. Guy, who is now professor of Hygiene. Dr. Urban Pritchard has been appointed Demonstrator of Practical Physiology.

At the London Hospital, Mr. Couper is associated with Mr. Hutchinson in the lectureship on Surgery: and Mr. A. Sanders has been appointed lecturer on Comparative Anatomy.

At St. Mary's Hospital, Dr. Nunneley has retired from the office of Assistant-Physician and teacher of Experimental Physiology, and has been succeeded by Dr. Shepherd. Dr. Wiltshire has been appointed Assistant Physician Accoucheur: and Dr. R. Stocker resident medical tutor.

At the Middlesex Hospital, Mr. Morris is associated with Dr. R. Liveing in the lectureship on Anatomy: and Dr. John Murray with Dr. Cayley in the lectureship on Pathology. Dr. Thorowgood lectures on Materia Medica in place of Dr. Brunton (appointed to St. Bartholomew's Hospital): and Mr. Hensman on Botany in place of Dr. Cobbold, who lectures on Parasitic Diseases. A lectureship on Psychological Medicine has been instituted, to which Dr. H. Rayner has been appointed. In the Hospital, Dr. Goodfellow has retired from the office of Physician, and has been appointed Consulting Physician. Dr. R. Liveing has become full physician: and Dr. R. King has been appointed Assistant-Physician. Mr. G. Lawson has been promoted to the rank of full surgeon, and Mr. Henry Morris and Mr. Andrew Clark have been appointed Assistant-Surgeons.

At St. Thomas's Hospital, Dr. Ord and Dr. John Harley give instruction in Practical Physiology, in place of Mr. Rainey: and Dr. Payne and Mr. Arnott give Demonstrations in Pathology in place of Dr. Lee.

At University College Hospital, Dr. J. Williams has been appointed Assistant Obstetric Physician.

At the Westminster Hospital, Dr. H. Sutherland has been appointed lecturer on Psychological Medicine; and Dr. W. H. Allchin demonstrator of Practical Physiology in place of Mr. Maclure. Dr. Allchin has also been appointed, with Mr. Ramsey, to the demonstratorship of Morbid Anatomy. Mr. Cowell gives lectures on Ophthalmic Surgery.

At the Queen's College in Birmingham, Mr. Thomas has been appointed joint-lecturer on Anatomy with Mr. Bracey, and Mr. Edginton demonstrator with Dr. Jolly. Dr. Sawyer has been elected a physician to the General Hospital.

In the Bristol Medical School, Dr. W. H. Spencer has been appointed lecturer on Physiology in place of Mr. C. Steele; and Mr. Dobson lecturer on Anatomy in place of Mr. Lansdown. At the Royal Infirmary, Mr. Board, late Assistant-Surgeon, has become Surgeon; Mr. C. H. Dowson has been appointed Assistant-Surgeon; and Dr. W. H. Spencer Assistant-Physician. In the General Hospital, Dr. H. Marshall has retired from the office of Surgeon and has been appointed Consulting Surgeon; and Mr. N. C. Dobson has been appointed Surgeon.

In the Leeds School of Medicine, Dr. Chadwick has retired from the lectureship on Medicine. Mr. S. Hey has resigned the office of Surgeon to the Infirmary, and has been appointed Consulting Surgeon; and Mr. J. Seaton has been appointed Surgeon.

At the Liverpool Royal Infirmary School of Medicine, Dr. Caton has become lecturer in Physiology in place of Dr. Waters, who succeeds Dr. Cameron as lecturer on Medicine. Dr. Vose has retired from the office of Physician to the Royal Infirmary, and has been appointed Consulting Physician; and the vacancy has been filled by the appointment of Dr. Glynn.

The Manchester Royal School of Medicine has been incorporated with the Owens College. There are no changes in the staff of lecturers. Mr. Beever, the senior surgeon of the Royal Infirmary, is dead; but no fresh appointment has been made.

At the University of Durham College of Medicine, at Newcastle-upon-Tyne, Dr. G. H. Hume has been appointed lecturer on Anatomy and Physiology in the room of Dr. W. Murray; Dr. Philipson lecturer on Medicine in place of Dr. Embleton. Mr. H. E. Armstrong has been associated with Mr. Thornhill in the lectureship on Botany. Dr. Reoch has been appointed to give instruction in Practical Physiology.

REGULATIONS

OF

THE GENERAL MEDICAL COUNCIL AND MEDICAL LICENSING BODIES.

SESSION 1872-73.*

THE GENERAL MEDICAL COUNCIL.

Recommendations and Opinions on Preliminary Examination.

THAT Testimonials of Proficiency granted by the National Educational Bodies, according to the subjoined list, may be accepted, the Council reserving the right to add to, or take from, the list. I.—*Universities of the United Kingdom.* Oxford: Examination for a Degree in Arts; Responsions; Moderations; Local Examinations (Senior), Certificate to include Latin and Mathematics. Cambridge: Examination for a Degree in Arts; Previous Examination; Local Examinations (Senior), Certificate to include Latin and Mathematics. Durham: Examinations for a Degree in Arts; Examination for Students in their Second and First years; Registration Examination for Medical Students; Local Examinations (Senior), Certificate to include Latin and Mathematics. London: Examination for a Degree in Arts; Matriculation Examination. Aberdeen, Edinburgh, Glasgow, or St. Andrew's: Examination for a Degree in Arts; Preliminary Examination for Graduation in Medicine or Surgery. Edinburgh: Examination of (Senior) Candidates for Honorary Certificates under the Local Examinations of the University of Edinburgh. Dublin: Examination for a Degree in Arts; Entrance Examination. Queen's University (Ireland): Examination for a Degree in Arts; Entrance Examination; Examination for the Diploma of Licentiate in Arts; Previous Examination for B.A. Degree. II.—*Other Bodies named in Schedule (A) to the Medical Act.* Royal College of Surgeons of England: Examination conducted, under the superintendence of the College of Surgeons, by the Board of Examiners of the Royal College of Preceptors. Society of Apothecaries of London: Examination in Arts. Royal College of Physicians, Edinburgh, and Royal College of Surgeons, Edinburgh: Preliminary Examination in General Education, conducted by a Board appointed by these two Colleges combined. Faculty of Physicians and Surgeons of Glasgow: Preliminary Examination in General Literature. Royal College of Surgeons in Ireland: Preliminary Examination, Certificate to include Mathematics. Apothecaries' Hall of Ireland: Preliminary Examination in General Education. III.—*Examining Bodies in the United Kingdom, not included in Schedule (A) to the Medical Act.* Royal College of Preceptors: Examination for a First Class Certificate. The Examiners for Commissions in the Military and Naval Services of the United Kingdom: Certificate to include all the subjects required by the General Medical Council. IV.—*Colonial and Foreign Universities and Colleges.* University of Calcutta, Madras, or Bombay: Entrance Examination, Certificate to include Latin. University of M'Gill College, Montreal, of Toronto, of King's College, Toronto, of Queen's College, Kingston, of Victoria College, Upper Canada, of Fredericton, New Brunswick, or of Sydney: Matriculation Examination. University of King's College, Nova Scotia: Matriculation Examination; Responsions. University of Melbourne: Matriculation Examination, Certificate to include all the subjects required by the General Medical Council. Codrington College, Barbadoes: English Certificate for Students of two years' standing, specifying the subjects of Examination; Latin Certificate, or "Testamur." Tasmanian Council of Education: Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics. Christ's College, Canterbury, New Zealand: Voluntary Examinations, Certificate to include all the subjects required by the General Medical Council. Cape of Good Hope: Third Class Certificate in Literature and Science, granted by the Board of Public Examiners.—N.B. A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council, is considered a sufficient Testimonial of Proficiency.—That it be recommended to the Licensing Boards not to accept the certificate of proficiency in general (preliminary) education from any of the Bodies, the names of which are contained in the list annually circulated, unless such certificate testify that the student to whom it has been granted has been examined in—1. English Language, including Grammar and Composition.* 2. Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. Geometry: First Two Books of Euclid. 4. Latin, including Translation and Grammar. And in one of the following *Optional Subjects*:—Greek; French; German; Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.—That students who cannot produce any of the testimonials referred to in the first recommendation be required to pass an Examination in Arts, established by any of the bodies named in Schedule (A) to the Medical Act, and approved by the General Medical Council.—That certificates of proficiency, to be received from all bodies legally authorised to examine in General Education in Great Britain and Ireland, and from the several Licensing Bodies enumerated in Schedule (A) to the Medical Act in Great Britain and Ireland, shall bear evidence that the candidates have been examined and approved in at least the above subjects.—That, in the case of certificates received from similar educational and licensing bodies in other parts of the empire and foreign countries, satisfactory evidence shall be given to the Medical Council, or Branch Councils, that such certificates are equivalent to those recognised in the United Kingdom.—That it shall be delegated to the Executive Committee to prepare annually and lay before the Council for recognition a list of Examining Bodies, whose examinations shall fulfil the conditions of the Medical Council as regards Preliminary Education.

Registration of Medical Students.

Every medical student shall be registered in the manner prescribed by the General Medical Council.—No medical student shall be registered until he has passed a Preliminary Examination.—The commencement of the course of Professional Study recognised by any of the qualifying bodies, shall not be reckoned as dating earlier than fifteen days before the date of registration.—The registration of medical students shall be placed under the charge of the Branch Registrars.—Each of the Branch Registrars shall keep a Register of medical students according to a form, containing the Date of Registration, the Name, the Preliminary Examination and Date, and the Place of Medical Study.—Every person desirous of being registered as a medical student, shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to the annexed form,† which may be had on application to the several qualifying bodies, medical schools, and hospitals; and shall produce or forward to the Branch Registrar a certificate of his having passed a preliminary examination, as required by the General Medical Council, and a statement of his place of medical study.—The Branch Registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration.—Each of the Branch Registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for the registration of medical students.—The several Branch Councils shall have power to admit special exceptions to the foregoing regulations as to registration, for reasons which shall appear to them satisfactory.—A copy of the Register of Medical Students, prepared by each of the Branch Registrars, shall be transmitted, on or before the 31st December in each year, to the Registrar of the General Council; who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an Alphabetical List of all students registered in the preceding year, and supply copies of such authorised list to each of the bodies enumerated in Schedule (A) to the Medical Acts, and through the Branch Registrars to the several medical schools and hospitals.—The several qualifying bodies are recommended not to admit, after October, 1870, to the final examination for a qualification under the Medical Acts, any candidate (not exempted from registration) whose name had not been

* To save space, we omit those portions of the Recommendations of the General Medical Council and of the Regulations of the Examining Bodies, which are not of direct importance to medical students.

* The General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate—1. To write a few sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition. 2. To write a portion of an English author to dictation. 3. To explain the grammatical construction of one or two sentences. 4. To point out the grammatical errors in a sentence ungrammatically composed, and to explain their nature. 5. To give the derivation and definition of a few English words in common use. Provided always that an examination may be accepted as satisfactory that secures, on the part of the candidate passing it, a sufficient grammatical knowledge of English.

† *Form of Application for Registration as a Medical Student.*—I hereby apply to be registered as a Student in Medicine, in conformity with the Regulations of the General Council of Medical Education and Registration of the United Kingdom, for which purpose I submit the following particulars. [Name of applicant (to be written in words at length); Surname; Christian name; Preliminary examination; Date of preliminary examination; Place of medical study; Applicant's signature; Address; and Date of application. To the Registrar of the Branch Council for —.]

N.B.—The above Form of Application, duly and legibly filled up, must be forwarded to the Registrar, post free, and be accompanied by a Certificate of the applicant's having passed a Preliminary Examination, as required by the General Medical Council, and a statement of his place of Medical Study.

entered in the Medical Students' Register at least four years previously.—In the case of candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.

Age for Licence to Practise.

That the age of 21 be the earliest age at which a candidate for any Professional Licence shall be admitted to his final examination; that the age shall, in all instances, be duly certified; and that a return of any exceptions to this recommendation allowed by the Licensing Bodies, together with the reasons for such exceptions, be transmitted to the Branch Council of that part of the United Kingdom in which they have been granted.—That no Licence be obtained at an earlier period than after the expiration of forty-eight months subsequent to the registration of the candidate as a medical student.

Professional Education.

That the course of Professional Study required for a Licence shall comprehend attendance during not less than four winter sessions, or three winter and two summer sessions, at a school recognised by any of the Licensing Bodies mentioned in Schedule (A) to the Medical Act.—That the following are the subjects without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered:—1. Anatomy; 2. General Anatomy; 3. Physiology; 4. Chemistry; 5. Materia Medica; 6. Practical Pharmacy; 7. Medicine; 8. Surgery; 9. Midwifery; 10. Forensic Medicine. "Chemistry" should include a knowledge of the principles of Chemistry, and of those details of the science which bear on the study of Medicine. "Medicine and Surgery" should include a knowledge of systematic and Clinical Medicine and Surgery, and also of Morbid Anatomy.—That it be recommended to the several Licensing Bodies that the courses of instruction required by them be framed in such a manner as to secure a due share of attention, both to preparatory branches and to those more strictly connected with the practice of medicine and surgery; and that it be suggested accordingly to these bodies, that their regulations should be such as to prevent attendance upon lectures from interfering with hospital and clinical study.—That the Council will view with approbation any encouragement held out by the Licensing Bodies to students to prosecute the study of the natural sciences before they engage in studies of a strictly professional character.

Professional Examination.

That it is desirable that the different Licensing Bodies should combine their examinations, when this is practicable, so as to secure that the knowledge of every practitioner whose name appears on the *Register* shall have been tested in all the subjects of professional education which the Council has determined to be essential, as above enumerated.—That the professional examination for any Licence be divided into two parts; the first embracing the primary or fundamental branches directly connected with the Practice of Medicine and Surgery. That the former be not undergone till after the close of the winter session of the second year of professional study; and the latter, or final examination, not till after the close of the prescribed period of professional study.—That the examination in Physics, Botany, and Natural History may be undergone at an earlier period than the first professional examination.—That the professional examinations be conducted both in writing and orally; and that they be practical in all branches in which they admit of being so.—That not less than two examiners, or one examiner with an assessor, should be present at every oral examination.—That the oral examinations should be so far public as to be open at least to the medical and surgical graduates, or members of the examining body.—That the questions to be answered in writing should be so numerous, and embrace such a variety of the details of each subject, as may adequately test the proficiency of the candidate; and that they should be submitted to the whole body of examiners for consideration and revision, if desirable, before being proposed to the candidates.—That the written answers should be submitted to more than one of the examiners.—That excellence in one or more subjects should not be allowed to compensate for failure in others.—That if a candidate be rejected for failure in any one subject, he should be re-examined in all.—That examiners should only be elected for definite periods, with power of reappointment.—That the professional examinations be held by the several Licensing Bodies, except in special cases, at stated periods, to be publicly notified.—That returns from the Licensing Bodies in Schedule (A) be made annually, on January 1st, to the General Medical Council, stating the number and names of the candidates who have passed their first as well as their second and third examinations, and the number of those who have been rejected at the first and second and third examinations respectively.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.*

EXTRACTS OF BYE-LAWS RELATING TO MEMBERS.

Any person who shall have satisfied the College touching his acquirements in general Science and Literature, and his knowledge of Medicine, Surgery, and Midwifery, and who shall comply with the Bye-Laws and Regulations of the College, may be proposed to the College to be admitted a Member. Every Candidate for the Membership who shall have commenced his professional studies after September 1861, shall satisfy the Censor's Board that previously to the commencement of his professional studies he has obtained a Degree in Arts from some University of the United Kingdom or of the Colonies, or from some other University specially recognised by the Medical Council, or that he has passed examinations equivalent to those required for a Degree in Arts. Every Candidate for membership shall furnish proof that he has attained the age of 25; and shall produce a testimonial of moral character and conduct from a Fellow or Member of the College.—Every Candidate *(except such as are specially exempted as below described)* shall produce proof of his having been engaged in professional studies during five years, of which four years at least shall have been passed at a medical school or schools recognised by the College; and shall produce evidence, satisfactory to the Censors' Board, of having studied the following subjects. [The subjects are the same as those required for the Licence (see next page); but Morbid Anatomy must be attended during six months, and Clinical Medicine during *three winter and three summer sessions.*] He must also give evidence of having attended diligently during three winter sessions and three summer sessions the medical practice, and *during three winter sessions and two summer sessions the surgical practice*, of an hospital containing at least 100 beds; of having been engaged during six months in the clinical study of Diseases peculiar to Women; and of having served the office of clinical clerk in the medical wards during at least six months.—Every candidate who has prosecuted his studies abroad, whether in part or to the full extent required by the preceding bye-law (*except such as shall be exempted as below stated*), shall, nevertheless, bring proof of his having attended, during at least twelve months, the medical practice of an hospital in the United Kingdom containing at least 100 beds.—If the Censors' Board doubt the sufficiency of the certificates and testimonials produced by any candidate, or his fitness for admission to examination, they may submit the case to a general meeting of the Fellows.—No candidate shall be admitted to examination who is engaged in trade; or who dispenses medicine, or makes any engagement with a chemist, or any other person, for the supply of medicines; or who practises medicine or surgery in partnership by deed or otherwise, so long as that partnership continues; or who refuses to make known, when required by the President and Censors, the nature and composition of any remedy he uses.—Every candidate (except in cases specially exempted) shall give proof of his acquirements by written answers to questions, and shall be examined *vivâ voce* at three separate examinations, and shall be approved by the President and Censors, or by the major part of them.

Exemptions.—Any candidate who has already obtained the degree of Doctor or Bachelor of Medicine at an University in the United Kingdom, wherein the courses of study, and the examinations to be undergone by the students previously to graduation, shall have been adjudged by the Censors' Board to be entirely satisfactory, shall be exempt (if the Censors shall think fit) from all or any part of the examinations hereinbefore described, except such as relate to the third or pass examination; the nature and extent of which examination shall, in the case of each candidate, be determined by the Censors' Board. Every candidate for the membership will, however, be required to translate into English a passage from a Latin author, and he will have the opportunity of showing a knowledge of Greek, or of one or more of the modern European languages.—If any candidate who has attained the age of 40 years shall produce testimonials satisfactory as to his moral character and conduct and his general and professional acquirements, further showing that he has improved the art or extended the science of Medicine, or has at least distinguished himself highly as a medical practitioner; the Censors' Board, having well considered these testimonials, may, if they see fit, submit them to the Fellows at a general meeting, and it shall be determined by the votes of the Fellows present, or of the majority of them, taken by ballot, whether the candidate shall be admitted to examination, which shall, in every such case, be as full and complete as the Censors may deem sufficient.—Any candidate who shall produce satisfactory evidence of having passed an

* The requirements printed in italics apply to candidates who commence their Professional Education in the United Kingdom on or after October 1st, 1867; and to candidates who commence their Professional Education at a recognised Foreign or Colonial School on or after October 1st, 1868.

examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act, and recognised as requiring a course of study and an examination satisfactory to the College, will be exempt from re-examination on the subjects of the primary examination.—Any candidate who shall have obtained a degree in Surgery at an University in the United Kingdom, or who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery.

Every candidate approved by the Censors' Board, shall be proposed, at the next general meeting of Fellows, as qualified to become a Member of the College; and if the majority of the Fellows present shall consent, he shall, on complying with the regulations prescribed by the bye-laws, be admitted a member. The Fee for admission shall be Thirty Guineas.

Every Candidate for the Membership of the College (except such as shall be exempted as above stated), will be required to pass the following examinations.

The First Examination, on Anatomy and Physiology, will be conducted on successive days as follows. First day, *Evening*, from seven to ten, by written questions. Second Day: *Evening*, commencing at seven o'clock, *vivâ voce*, on Dissections and Preparations.

The Second Examination will be conducted on successive days, as follows. First day: *Evening*, from seven to ten, by written questions on Surgical Anatomy, and on the Principles and Practice of Surgery. Second Day: *Morning*—The candidate's practical knowledge will be tested, either at the College or in the surgical wards of a Hospital. *Afternoon*, from one to four, on Materia Medica, and on Chemistry in its applications to Pathology, Pharmacy, and Toxicology.* (This examination will be conducted partly by written questions and partly in a practical manner.) *Evening*, commencing at seven o'clock, by written questions on Midwifery and the Diseases Peculiar to Women.

The Third, or Pass Examination, will be conducted on successive days as follows. First Day: *Afternoon*, from two to six, by written questions on Medical Anatomy and on the Principles of Medicine. Second Day: *Afternoon*, from two to six, by written questions on the Practice of Medicine, including the Principles of Public Health, and on Psychological Medicine. Third Day: The candidate's practical knowledge will be tested, either at the College or in the medical wards of a Hospital. Fourth Day: *Afternoon*, commencing at three o'clock, *viva voce*, on Medical Anatomy, and on the Principles and Practice of Medicine.

Candidates will not be admitted to the first examination until after the termination of the second winter session of professional study at a recognised medical school, nor to the second examination until after the termination of four years of professional study, nor to the third or pass examination until after the completion of the required course of professional study.—Any candidate who shall be rejected at the first examination, will not be readmitted to examination until after the lapse of three months, and will be required to produce a certificate of the performance of dissections, or other professional study, satisfactory to the examiners, during that time.—Any candidate who shall be rejected at the second examination, will not be readmitted to examination until after the lapse of six months, and will be required to produce a certificate of attendance on the practice of a recognised Hospital during that time, and also of attendance on Clinical Lectures.—Any candidate not approved by the Censors' Board at the third or pass examination, will not (except by special permission of the College) be readmitted to examination until after the lapse of a year.—Every candidate must give fourteen days' notice in writing to the Registrar of the College, of his intention to present himself for examination, at the same time transmitting the following certificates. *For the Primary Examination:* Evidence of having passed an Arts Examination; and, in the case of those who shall have commenced professional studies after 1861, evidence of having previously obtained a Degree of Arts from some University of the United Kingdom, or of the Colonies, or from some other University specially recognised by the Medical Council, or that he has passed examinations equivalent to those required for a Degree in Arts; of having been duly registered as a medical student; and of having completed the second winter session of professional study at a recognised medical school. *For the Second Examination:* Evidence of having completed four years of professional study; of having attained the age of 21 years; of instruction and proficiency in the practice of vaccination; and of having attended not less than twenty labours. *For the Pass Examination:* Proof of having attained the age of 25 years; a testimonial from a Fellow or Member of the College; evidence of having completed the required course of professional study.

Blank forms of the required certificates of attendance on hospital practice and on lectures may be obtained on application at the College.

Examinations of Candidates for the Membership of the College will take place in 1873 as follows. *First Examination*, commencing on Mondays, February 3rd, April 6th, July 6th, October 5th, December 7th. *Second Examination*, commencing on Mondays, February 10th, April 13th, July 13th, October 12th, December 14th. *Third, or Pass Examination*, commencing on the third Thursdays in January, April, July, and October.

* Candidates who shall have passed the first examination for the Licence at this College before October 1st, 1867, are exempted from re-examination on Materia Medica, and on Chemistry in its application to Pharmacy.

BYE-LAWS RELATING TO LICENTIATES.

Every candidate for the College Licence (except when otherwise provided by the bye-laws) is required to produce satisfactory evidence to the following effect.—Of having attained the age of 21 years.—Of moral character.—Of having passed, before the commencement of professional study, an examination in the subjects of general education recognised by the College.—Of having been registered as a medical student in the manner prescribed by the General Medical Council.—Of having been engaged in professional studies during four years, of which at least three winter sessions and two summer sessions shall have been passed at a recognised medical school or schools, and one winter session and two summer sessions, in one or other of the following ways: 1. Attending the practice of a hospital or other institution recognised by the College; 2. Receiving instruction as the pupil of a legally qualified practitioner, holding any public appointment which affords opportunities, satisfactory to the examiners, of imparting a practical knowledge of Medicine, Surgery, or Midwifery; 3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction.*—*Of having attended, during three winter sessions and two summer sessions, the Medical and Surgical Practice at a recognised Hospital or Hospitals*, and of having been engaged during six months in the clinical study of Diseases peculiar to Women.—Of having studied the following subjects: Anatomy (with Dissections), two winter sessions;† Physiology, two winter sessions; Chemistry, six months; Practical Chemistry, three months; Materia Medica, three months; Practical Pharmacy, three months;‡ Botany, three months;§ Morbid Anatomy, two winter sessions;‖ Principles and Practice of Medicine, two winter sessions;¶ Principles and Practice of Surgery, *two winter sessions;*** Clinical Medicine, and Clinical Surgery, *each two winter sessions and two summer sessions;*†† Midwifery and Diseases peculiar to Women, three months;‡‡ Forensic Medicine, three months.—Of having passed the professional examinations.

Examination for the Licence.

Every candidate for the Licence, before he is admitted to examination, will be required to sign a declaration, stating whether he has or has not been rejected within three months by any of the Examining Boards included in Schedule (A) to the Medical Act.

The first examination, and the second examination as far as the end of the second day, are conducted at the same hours and on the same subjects as the first and second examinations for the membership. The remainder of the examination is as follows. Third day: *Evening*, from seven to ten, by written questions on Medical Anatomy, and on the Principles and Practice of Medicine, including the Principles of Public Health. Fourth day: *Morning*—The candidate's practical knowledge will be tested, either at the College or in the medical wards

* Professional studies commenced *before* the candidate shall have passed an examination in the subject of general education, will not be recognised by the College.

† The winter session comprises a period of six months, and the summer session a period of three months.

‡ By Practical Pharmacy is meant instruction in the Laboratory of a Registered Medical Practitioner, or of a member of the Pharmaceutical Society of Great Britain, or of a Public Hospital or Dispensary recognised by the College.

§ This course of Lectures may be attended prior to the commencement of professional studies; and any candidate producing satisfactory evidence that Botany formed one of the subjects of his preliminary examination, will be exempt from attendance on this course.

‖ This includes attendance and instruction in the *Post Mortem* Room during the period of Clinical Study.

¶ It is required that the Principles of Public Health should be comprised in this course of Lectures, or in the course of Lectures on Forensic Medicine.

** The attendance on the Lectures on Medicine and Surgery must not commence earlier than the second winter session at a recognised Medical School.

†† The attendance on the Lectures on Clinical Medicine and Clinical Surgery must not commence until after the first winter session at a recognised Medical School. By Clinical Medicine and Clinical Surgery are meant special study and instruction at the bedside, with Lectures on cases.

‡‡ Certificates must also be produced of attendance on not less than twenty Labours, and of instruction and proficiency in Vaccination.

of a Hospital. *Evening*, commencing at seven o'clock, *vivâ voce*, on the Principles and Practice of Medicine, Surgery, and Midwifery.

Candidates will not be admitted to the first examination until after the termination of the second winter session of professional study at a recognised medical school, nor to the second or pass examination until after the termination of four years of professional study. The College will not admit to the pass examination any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least four years previously.

Any candidate who shall be rejected at the first examination, will not be re-admitted to examination until after the lapse of three months, and will be required to produce a certificate of the performance of Dissections, or other professional study satisfactory to the examiners, during that time. Any candidate who shall be rejected at the second or pass examination, will not be re-admitted to examination until after six months, and will be required to produce a certificate of attendance on the practice of a recognised Hospital during that time, and also of attendance on Clinical Lectures, or other professional study satisfactory to the examiners.

Every candidate intending to present himself for examination, is required to give fourteen days' notice in writing to the Registrar of the College, at the same time transmitting the following certificates. *For the First Examination*—Evidence of having passed an Arts Examination; of having been duly registered as a medical student; and of having completed the second winter session of professional study at a recognised medical school. *For the Second, or Pass Examination*—Evidence of having completed four years of professional study: of having attained the age of 21 years; of proficiency in the practice of vaccination; and of having attended not less than twenty labours. A testimonial of moral character is required of every candidate. Blank forms of the required certificates of attendance on hospital practice and on lectures may be obtained on application at the College.

The exemptions in the regulations regarding the Membership, are applicable also to candidates for the Licence; and any candidate who shall have obtained a Degree in Medicine at an University recognised by the College, after a course of study and examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination.—Any Registered Medical Practitioner, whose qualification or qualifications shall have been obtained before the 1st day of January, 1861, having been, with the consent of the College, admitted a candidate for the Licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the professional examination as his qualifications may seem to the examiners to render in his case unnecessary.*

The fee for the Licence is Fifteen Guineas, of which Five Guineas are to be paid on admission to the first examination, which fee will not be returned to any candidate rejected at this examination, but will be allowed in the fee for the Licence; and he will be admitted to one subsequent first examination without the payment of an additional fee.† Any candidate who shall be rejected at the second or pass examination will have the fee, paid on admission to this examination, returned to him, less Three Guineas.

Licentiates of this College shall not compound or dispense medicines except for patients under their own care.

Examinations of candidates for the College Licence will take place as follows. *First Examination*, commencing on the first Mondays of February, April, July, October, and December. *Second, or Pass Examination*, commencing on the second Mondays of the same months.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

REGULATIONS RESPECTING THE DIPLOMA OF MEMBER.

Section I.—*Preliminary General Education and Examination.*

CANDIDATES who commenced their professional education on or after the 1st of January, 1861, will be required to produce one or other of the following certificates:—1. Of Graduation in Arts at an University recognised for this purpose; viz., Oxford; Cambridge; Dublin; London; Durham; Queen's University in Ireland; Edinburgh; Glasgow; Aberdeen; St. Andrew's; Calcutta; Madras; Bombay; McGill College, Montreal; and Queen's College, Kingston, Canada. 2. Of having passed an examination for Matriculation, or such other examination as shall, in either case, from time to time be sanctioned by the Council of this College, at an University in the United Kingdom, or at a Colonial or Foreign University recognised by the Council of this College.* 3. Of having passed the preliminary examination for the Fellowship of this College. 4. Of having passed the preliminary examination of the Royal College of Surgeons in Ireland or of Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow. 5. Of having passed the examination in Arts of the Society of Apothecaries of London, or of the Apothecaries' Hall of Ireland. 6. Of having passed the first-class examination of the Royal College of Preceptors. 7. Testamur of the Codrington College, Barbadoes. 8. Degree of Associate of Arts granted by the Tasmanian Council of Education, with a certificate that the student has been examined in Latin and Mathematics. 9. Of having passed the voluntary examinations of Christ's College, Canterbury, New Zealand, the certificate to include all the subjects required from time to time in the Preliminary Examination of the College. Candidates who shall not be able to produce one or other of the foregoing certificates, will be required to pass an examination in English, Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of this College.†

Section II.—*Professional Education.*

Professional studies prior to the date at which the candidate shall have passed an examination in general knowledge, in conformity with the regulation in the preceding section, are not recognised.—The following will be considered as the commencement of professional education:—1. Attendance on the practice of a hospital, or other public institution recognised by this College; 2. Instruction as the pupil of a legally qualified surgeon, holding the appointment of Surgeon to a Hospital, General Dispensary, or Union Workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council; 3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College. *The commencement of professional study otherwise than by attendance on lectures in recognised Medical Schools, or by attendance on the practice of recognised Hospitals, will not be admitted until a certificate thereof shall be furnished to the Secretary for registration at the College, by the practitioner whose pupil the candidate shall have become, or by the medical superintendent of the Hospital or other institution to the practice of*

* Forms of application may be obtained of the Registrar of the College.

† The Fee must be paid within three days prior to the day on which the examination commences.

* The following are the Examinations at present recognised under this Clause (No. 2), viz.: Oxford—Responsions or Moderations; Middle-Class Examinations, Senior, the Certificates to include Latin and Mathematics. Cambridge—Previous Examination; Middle-Class Examinations, Senior, the Certificates to include Latin and Mathematics. Dublin—Entrance Examination. London—Matriculation Examination. Durham—Examination of Students in Arts in their second and first years; Middle-Class Examinations, Senior, the Certificates to include Latin and Mathematics; Registration Examination for Medical Students. Queen's University in Ireland—Two years' Arts Course for Diploma of Licentiate in Arts; Preliminary Examinations at end of B.A. Course; Middle-Class Examinations, the Certificates to include Latin and Mathematics; Matriculation Examinations. Edinburgh, Aberdeen, Glasgow, and St. Andrew's—Preliminary or Extra Professional Examinations for Graduation in Medicine. Calcutta, Madras, and Bombay—Matriculation Examinations. Canada: McGill College, Montreal; University College, Toronto; Queen's College, Toronto; University of Lavel, Quebec—Matriculation Examinations. Queen's College, Kingston—Matriculation Examination; Preliminary Examination of Students in Medicine. University of Melbourne—Matriculation Examination, with a Certificate that the Student has passed an Examination in Latin.—Sydney—Matriculation Examination.—New York, Bellevue Hospital Medical College—Matriculation Examination.

† The following are the subjects of the examination during the year; viz.—Part I. *Compulsory Subjects.* 1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English Grammar. 4. Writing a short English composition: such as a description of a place, an account of some useful or natural product, or the like. 5. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple or compound, of Vulgar Fractions, and of Decimals. 6. Questions on the Geography of Europe, and particularly of the British Isles. 7. Questions on the outlines of English History; that is, the succession of the Sovereigns and the leading events of each reign. 8. Mathematics: Euclid, Books I and II; Algebra to Simple Equations inclusive. 9. Translation of a passage from the second book of Cæsar's *Commentaries De Bello Gallico.*—Part II. *Optional Subjects.* Papers will also be set on the following six subjects; and each candidate will be required to offer himself for examination on one subject at least, at his option; but no candidate will be allowed to offer himself for examination on more than four subjects:—1. Translation of a passage from the first Book of the *Anabasis* of Xenophon. 2. Translation of a passage from X. B. Saintine's *Picciola.* 3. Translation of a passage from Schiller's *Wilhelm Tell.* Besides these translations into English, the candidate will be required to answer questions on the grammar of each subject, whether compulsory or optional. 4. Mechanics: the questions will be chiefly of an elementary character. 5. Chemistry: the questions will be on the elementary facts of Chemistry. 6. Botany and Zoology: the questions will be on the Classification of Plants and Animals. The quality of the handwriting and the spelling will be taken into account. N.B. Each candidate (who has not already paid the amount) is required to pay a Fee of £2 on the morning of the first day of the examination, prior to his admission thereto. The next examination will be held on or about the third Tuesday or Wednesday in December. The exact dates of the examination are duly advertised when fixed in the Medical Journals; and candidates are required to send in the prescribed forms of application not less than three weeks before the commencement of each examination. NOTE. A candidate, in order to qualify for the Fellowship, is required, in addition to the subjects included in Part I, to pass in Greek, French, or German; and in one, at his option, of the remaining subjects in Part II.

which he shall have entered, and will date only from the reception of such certificate by the Secretary; the certificate to be accompanied by proof of having passed the preliminary examination in general knowledge.—Candidates will be required to produce certificates:—1. Of being 21 years of age. 2. Of having been engaged, subsequently to passing the preliminary examination, during four years, or during not less than four winter and four summer sessions, in the acquirement of professional knowledge. 3. Of having attended the following courses: Lectures on Anatomy, two winter sessions. 4. Dissections, not less than two winter sessions. 5. Lectures on General Anatomy and Physiology, one winter session. 6. Practical General Anatomy and Physiology during another winter or a summer session, consisting of not less than thirty meetings of the class.* 7. Lectures on Surgery, one winter session. 8. Practical Surgery during a period occupying not less than six months prior or subsequent to the course required by Clause 7.† 9. One course of lectures on each of the following subjects, viz.: Chemistry;‡ Materia Medica; Medicine; Forensic Medicine; Midwifery (with practical instruction, and a certificate of having personally conducted not less than ten labours); Pathological Anatomy during not less than three months. 10. Practical Pharmacy, three months. 11. A three months' course of Practical Chemistry (with manipulations), in its application to medical study. 12. Instruction and proficiency in the practice of Vaccination.§ 13. Of having attended, at a recognised hospital or hospitals, the practice of Surgery during three winter‖ and two summer¶ sessions. 14. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised teacher, during not less than three months.** 15. Of having, subsequently to the first winter session of attendance on Surgical Hospital Practice, attended at a recognised hospital or hospitals, Clinical Lectures on Surgery during two winter and two summer sessions. 16. Of having been a dresser at a recognised hospital, or of having, subsequently to the completion of one year's professional education, taken charge of patients under the superintendence of a Surgeon during not less than six months, at a hospital, general dispensary, or parochial or union infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery. 17. Of having attended, during the whole period of attendance on Surgical Hospital Practice (see clause 13), demonstrations in the *post mortem* rooms of a recognised hospital. 18. Of having attended, at a recognised hospital or hospitals, the Practice of Medicine and Clinical Lectures on Medicine during one winter and one summer session.

NOTICE.—*Clauses* 6, 8, 11, 14, *and* 17, *and the notes to clauses* 6, 8, 9, 12, *and* 14, *together with the courses of lectures on Forensic Medicine and Pathological Anatomy mentioned in Clause* 9, *are applicable to candidates who commenced their professional education on or after the* 1*st of October*, 1870.

N.B.—Blank forms of the required certificates may be obtained on application to the Secretary, and all necessary certificates will be retained at the College.

Section III.—Concerning Certificates, etc.

1. Certificates will not be received on more than one branch of science from one and the same lecturer; but Anatomy and Dissections will be considered as one branch of science. 2. Certificates will not be recognised from any hospital in the United Kingdom, unless the surgeons thereto be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any School of Anatomy and Physiology or Midwifery, unless the teachers in such school be members of some legally constituted College of Physicians or Surgeons in the United Kingdom; nor from any School of Surgery, unless the teachers in such school be members of one of the legally constituted Colleges of Surgeons in the United Kingdom. 3. No Metropolitan Hospital will be recognised by this College which contains less than 150, and no Provincial or Colonial Hospital which contains less than 100 patients. 4. The recognition of Colonial Hospitals and Schools is governed by the same regulations, with respect to number of patients and to courses of lectures, as apply to the recognition of Provincial Hospitals and Schools in England. 5. Certificates of attendance upon the practice of a recognised Provincial or Colonial Hospital unconnected with, or not in convenient proximity to a recognised medical school, will not be received for more than one winter and one summer session of the hospital attendance required by the regulations of this College; and in such cases clinical lectures will not be necessary, but a certificate of having acted as dresser for the period of at least six months will be required. 6. Certificates will not be received from candidates who have studied in London, unless they shall have registered at the College their cards of admission to attendance on lectures and hospital practice within fifteen days from the commencement of the session; nor from candidates who have studied in the provincial schools in England, unless their names shall be duly returned from their respective schools.* 7. Candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland, from candidates for their diploma. Candidates who shall have pursued the whole of their studies at recognised foreign or colonial Universities will be admitted upon the production of the several certificates required for their degree by the authorities of such universities. 8. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom; Graduates in Surgery of any University recognised for this purpose by this College; and 9. Graduates in Medicine of any legally constituted College or University recognised for this purpose by this College, will be admitted to examination on producing their Diploma, Licence, or Degree, together with proof of being 21 years of age. In each of these cases, 7, 8, and 9, the candidate will also be required to produce a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

Section IV.—Professional Examination.

This examination is divided into two parts. 1. The First or Primary Examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the human body. 2. The Second or Pass Examination, on Surgical Anatomy and the Principles and Practice of Surgery and Medicine, is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients. [A candidate can claim exemption from examination in Medicine under the following conditions, viz.: *a.* The production by the candidate of a Degree, Diploma, or Licence in Medicine entitling him to register under the Medical Act of 1858, or a Degree, Diploma, or Licence in Medicine of a Colonial or Foreign University approved by the Council of the College. *b.* A declaration by the candidate, prior to his admission to the final examination for Membership or Fellowship, that it is his intention to obtain either of the medical qualifications mentioned in the foregoing paragraph; in which case the Diploma of the College will not be issued to him until he shall produce either the said medical qualification or proof of having passed the several examinations entitling him to receive the same.] 3. The primary examinations are held in January, April, May, July, and November, and the pass examinations generally in the ensuing week respectively. 4. Candidates will not be admitted to the primary examination until after the termination of the second winter session of attendance at a recognised school or schools; nor to the pass or surgical examination until after the termination of the fourth year of professional education. 5. The fee of Five Guineas, paid prior to the primary examination, and allowed on the whole fee of Twenty-

* By the practical course referred to in Clause 6, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, etc.

† The course of Practical Surgery is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in—the application of anatomical facts to Surgery, on the living person, or on the dead body; the methods of proceeding and the manipulations necessary in order to detect the effects of diseases and accidents, on the living person, or on the dead body; the performance, where practicable, of the operations of Surgery on the dead body; the use of Surgical Apparatus; the examination of diseased structures, as illustrated in the contents of a museum of Morbid Anatomy and otherwise.

‡ The course of Lectures on Chemistry will not be required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

§ In the case of candidates who commenced their professional education on or after the 1st of October, 1868, the certificate of instruction in vaccination will only be received from recognised Vaccine Stations, or from recognised Vaccine Departments in Medical Schools or Hospitals, or other Public Institutions, where the appointed teacher of vaccination is not liable to frequent change, and where ample means for study are provided by not less than such a number of cases (eight or ten on an average weekly) as may be found, after due inquiry, to be sufficient for this purpose at each place.—The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

‖ The Winter Session comprises a period of six months: and, in England, commences on the 1st of October and terminates on the 31st of March.

¶ The Summer Session comprises a period of three months: and, in England, commences on the 1st of May and terminates on the 31st of July.

** It is intended that the candidate should receive the instruction required by Clause 14 at an early period of his attendance at the Hospital.

* At their first registration in October, candidates will be required to produce a certificate of having passed one or other of the preliminary examinations in general knowledge recognised by this College.

two pounds* payable for the diploma, is retained; and after any two consecutive failures at the primary examination, the candidate is required to pay an *additional* fee of Five Guineas prior to being again admitted to that examination, which *additional* fee is also retained. 6. Five Guineas, part of the sum of sixteen pounds fifteen shillings, the balance of the whole fee due for the diploma and paid prior to the pass examination, is retained; and after any two consecutive failures at the pass examination, the candidate is required to pay an *additional* fee of five guineas prior to being again admitted to the said pass examination, which *additional* fee is also retained. 7. A candidate having entered his name for either the primary or pass examination, who shall fail to attend the meeting of the Court for which he shall have received a card, will not be allowed to present himself for examination within three months from the date at which he shall have so failed to attend. 8. A candidate referred on the primary examination is required, prior to his admission to re-examination, to produce a certificate of the performance of dissections during not less than three months subsequently to the date of his reference. 9. A candidate referred on the pass examination is required, prior to his admission to re-examination, to produce a certificate of at least six months' further attendance on the Surgical Practice of a recognised hospital, together with Lectures on Clinical Surgery, subsequently to the date of his reference.

REGULATIONS RELATING TO THE DIPLOMA OF FELLOW.

Section I.—Preliminary Examination.

Candidates must produce certificates of graduation in Arts at an University recognised for this purpose ;† or of having passed such examinations in Arts as shall from time to time be required for graduation in Medicine at Oxford, Cambridge, Dublin, London, or Durham. Candidates who shall not be able to produce one or other of the foregoing certificates will be required to pass an examination conducted by the Board of Examiners of the Royal College of Preceptors.‡

Section II.—Professional Education.

I. Except in the cases provided for to the contrary, every candidate for admission to the First or Anatomical and Physiological Examination for the Fellowship is required to produce, in addition to certificates of the same kind as are described in Section II, Clauses 3, 5, 6, 10, and 11 of the Regulations for the Membership, Certificates of having passed the preliminary examination; of having performed Dissections during three winter sessions; of having attended one course of lectures on Comparative Anatomy and one course of Lectures on Chemistry.

II. Except in the cases provided for to the contrary, every candidate before his admission to the Second or Professional Examination is required to produce, in addition to the certificates described in Section II, Clauses 7, 8, 9 (except Chemistry, included in the first examination), 12, 14, and 15 of the Regulations for the Diploma of Member, certificates of being 25 years of age; of having been engaged for six years in the acquirement of professional knowledge in hospitals or schools of Anatomy, Surgery, and Medicine recognised by the Council of the College (or, if the candidate be already a Member of the College, certificates of having been engaged for two years in the acquirement of professional knowledge in recognised hospitals and schools, in addition to the certificates required for the diploma of Member; of having performed Operations on the dead body under the superintendence of a recognised teacher; of having attended the Surgical Practice of a recognised hospital or hospitals during four winter and four summer sessions, and the Medical Practice during one winter and one summer session; of having attended, during three winter and two summer sessions, demonstrations in the *post mortem* rooms of a recognised hospital; of having attended Clinical Lectures on Medicine during one winter and one summer session; and of having served the office of house-surgeon or dresser for not less than six months.

III. In the case of a candidate who shall have taken by examination the Degree of Bachelor or Master of Arts in any University in the United Kingdom recognised by the Council, it shall be sufficient for him to produce a certificate or certificates that he has been engaged for five years (instead of six years) in the acquirement of professional knowledge in hospitals or schools of Anatomy, Surgery, and Medicine recognised by the Council of the College.

IV. Any Member of the College shall, after the expiration of eight years from the date of his diploma, be entitled to be admitted to the professional examination for the Fellowship upon the production of a certificate, signed by three Fellows, that he has been for eight years in the practice of the profession of surgery, and that he is a fit and proper person to be admitted a Fellow if upon examination he shall be found qualified.

Section III.—Professional Examinations.

The examinations are held twice in the year, in May and November, and at such other times as the Council may appoint. They occupy not less than two days. The subjects of the first examination are the same as for the membership; the second examination, on Pathology, Therapeutics, and the Principles and Practice of Surgery and Medicine,* is partly written, partly *vivâ voce*, and partly on the practical use of surgical apparatus, and includes the examination of patients, and operations on the dead body.—The Fees are: for the first examination Five Guineas, to be allowed on the fee for the Diploma of Fellow, but to be retained in case of rejection; for the second examination Five Guineas (if the candidate be a member) over and above charges for stamps, to be retained in case of rejection; Twenty-five Guineas (if he be not a Member) over and above charges for stamps, of which Five Guineas will be retained in case of rejection.† A candidate whose qualifications are found insufficient on his anatomical and physiological examination cannot present himself for re-examination until after the expiration of six months; and a candidate whose qualifications shall be found insufficient upon his pathological and surgical examination cannot present himself for re-examination until after the expiration of one year, unless the Court of Examiners shall otherwise determine.

* This sum of twenty-two pounds is exclusive of the fee of two pounds paid for the preliminary examination.

† See Regulations for Diploma of Member, Section i, Clause 1.

‡ For the Subjects, see Note to Section i, Clause 9, page 290.

SOCIETY OF APOTHECARIES, LONDON.

REGULATIONS RELATING TO ALL CANDIDATES FOR EXAMINATION.

Every candidate for a certificate of qualification to practise as an Apothecary will be required to produce testimonials—1. Of having passed a preliminary examination in Arts, as a test of general education. (This examination must be passed before the commencement of professional studies, which is defined by the Medical Council to be "the time of commencing studies at a medical school".) 2. Of having served an apprenticeship or pupilage of not less than five years to a practitioner qualified by the Act of 1815. (This period may include the time spent in attending lectures and hospital practice). 3. Of having attained the full age of 21 years. 4. Of good moral conduct. 5. Of having pursued a course of medical study in conformity with the regulations of the Court. 6. Of having served the office of clinical clerk at a recognised hospital during the period of six weeks at least. 7. Of having been examined at the class-examinations instituted by the various lecturers and professors of the respective medical schools and colleges.

The Court meets every Thursday; and candidates are required to attend at 3.45 P.M. Every candidate intending to offer himself for examination must give notice on or before the Monday previous to the day of examination, and must at the same time deposit all the required testimonials, with the fee, at the office of the beadle, where attendance is given every day, except Sunday, from ten to four o'clock; Saturdays, ten to two.

Course of Study.

Every candidate whose attendance on lectures shall have commenced on or after October 1, 1863, must attend the following lectures and medical practice during not less than three winter and two summer sessions (each winter session to consist of not less than six months, and to commence not sooner than the 1st nor later than the 15th of October; and each summer session to extend from May 1 to July 31). *First Year: Winter Session:* Chemistry; Anatomy and Physiology; Dissections. *Summer Session:* Botany; Materia Medica and Therapeutics; Practical Chemistry.—*Second Year: Winter Session:* Anatomy and Physiology, including Dissections and Demonstrations; Principles and Practice of Medicine; Clinical Medical Practice. *Summer Session:* Midwifery and Diseases of Women and Children, and Vaccination; Forensic Medicine and Toxicology; Clinical Medical Practice.—*Third Year: Winter Session:* Principles and Practice of Medicine; Clinical Medical Lectures; Morbid Anatomy; Clinical Medical Practice.—No certificates of lectures or of anatomical instruction delivered in private to particular students, apart from the ordinary classes of recognised public medical schools, can be received by the Court of Examiners.—All students are required *personally* to register the several tickets of

* For the condition of exemption from examination in Medicine, see Regulations respecting the Diploma of Member, Section iv, Clause 2. A candidate who has passed an examination in Medicine for the Membership will not be required to pass any further examination in Medicine for the Fellowship.

† The sum of £2, paid on the Preliminary Examination, will be allowed against these amounts.

admission to lectures and medical practice within the first fifteen days of the months of October and May.

Examinations in the subjects of preliminary education will be held at the Hall of the Society on Friday and Saturday, January 26th and 27th, April 26th and 27th, September 27th and 28th, 1872.—Candidates will be examined in the following branches; and no candidate will be approved unless he show a competent knowledge of each branch:—1. The English Language; 2. The Latin Language; 3. Mathematics; 4. One of the following subjects, at the option of the candidate; (*a*) Greek; (*b*) French; (*c*) German; (*d*) Natural Philosophy.* Candidates applying to be admitted to any examination must pay the fee (One Guinea) at least one week before the examination; and must sign their names in the candidates' book between 11 A.M. and 3 P.M., not later than the previous Thursday.

If a candidate fail to pass the examination, the fee will not be returned to him; but he will be admissible to either or both of the two next following examinations in Arts without the payment of an additional fee, upon giving the usual notice, and signing the candidates' book. Certificates in Arts granted by any of the bodies whose certificate is recognised by the Medical Council will be accepted as equivalent to having passed the above examination.

The examination of candidates for the Licence is divided into two parts, and is conducted partly in writing, and partly *vivâ voce*.

The *First Examination*, which may be passed after the second winter session, embraces the following subjects:—The *British Pharmacopœia;* Latin of Physicians' Prescriptions; Anatomy and Physiology; General and Practical Chemistry; Botany and Materia Medica.

The *Second Examination*, after the third winter session (the five years' pupilage having been completed), includes: Principles and Practice of Medicine; Pathology and Therapeutics: Midwifery, including the Diseases of Women and Children; Forensic Medicine and Toxicology.

Modified Examinations.—All Graduates in Medicine of British Universities will be admitted to a practical examination in Medicine and Midwifery only.—Licentiates of the Royal Colleges of Physicians of London or of Edinburgh; of the Royal Colleges of Physicians and Surgeons, Edinburgh; of the King and Queen's College of Physicians, Ireland; of the Faculty of Physicians and Surgeons, Glasgow; and of the Apothecaries' Hall, Dublin, will be admitted to a *vivâ voce* examination in Medicine, Midwifery, Forensic Medicine, and Toxicology.—Members of the Royal College of Surgeons of England; and Licentiates of the Royal Colleges of Surgeons of Edinburgh, and of Ireland, possessing a surgical qualification only, will be admitted to a first and second examination on one evening. The first or *vivâ voce* examination, will include Physicians' Prescriptions, Visceral Anatomy, Physiology, Chemistry, Materia Medica, Botany, and Pharmacy; the second, partly written, and partly *vivâ voce*, will include Practice of Medicine, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Toxicological Chemistry.—Any candidate who has passed his first examination for the Licence of the Royal College of Physicians, London; the Licence of the King and Queen's College of Physicians, Ireland; the joint Licence of the Royal Colleges of Physicians and Surgeons, Edinburgh; or for the single Licence of the College of Physicians, Edinburgh; the Licence of the Faculty of Physicians and Surgeons, Glasgow; the first professional examination for the Degree of M.B., or Master in Surgery in the Universities of Oxford, Cambridge, or London; or the second part of the professional examination for the degree of M.D., or Master in Surgery in the Universities of Edinburgh, Aberdeen, St. Andrew's, and Glasgow; or the first examination for medical and surgical degrees in the Irish Universities; or the first examination for the Licence of the Apothecaries' Company, Dublin, will be admitted to a single examination in Materia Medica, Therapeutics, Medicine, Pathology, Midwifery, and Toxicology, part of which examination will be conducted in writing.

No rejected candidate for the Licence can be re-examined until the expiration of six months from his former examination. A candidate rejected on his first professional examination can be admitted to re-examination after the expiration of three months.

Fees.—For a certificate of qualification to practise, Six Guineas, the half to be paid at the first examination; for an assistant's certificate, Two Guineas.

Prizes.—The Society of Apothecaries annually offer two prizes for proficiency in the knowledge of Botany, and also two prizes for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry. The prizes consist of a gold medal awarded to the candidate who distinguishes himself the most in the examination; and of a silver medal and a book to the candidate who does so in the next degree. The examination in Botany will be held at the Hall of the Society on the second Wednesday in June, at 10 A.M., and will be conducted by printed papers and *vivâ voce* questions. The examinations in Materia Medica and Pharmaceutical Chemistry will be held at the Hall of the Society on the third Wednesday, and on the following Friday, in October, from ten in the forenoon to one in the afternoon of each day; by printed papers on the Wednesday, and by *vivâ voce* questions on the Friday.

* The following is the Syllabus of Subjects for Examination in 1873. 1. English. The leading features of its History. Its Structure and Grammar. English Composition. [The Books recommended for study in this subject are Adams's *Elements of the English Language*, and Trench, *English, Past and Present.*]—2. Latin. January: Cicero, *De Senectute*. April: Virgil, *Æneid*, Book III. September: Horace, *Odes*, Books III and IV. Re-translation of easy sentences. Grammatical Questions will be introduced into the Latin Paper, and each Candidate will be expected to give satisfactory answers.—3. Mathematics: The Ordinary Rules of Arithmetic; Vulgar and Decimal Fractions; Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Simple Equations; The First Two Books of Euclid.—4. (*a*) Greek: Homer, *Iliad*, Book I; Grammatical Questions. (*b*) French: Molière, *Le Malade Imaginaire:* Translation from English into French; Grammatical Questions. (*c*) German: Schiller, *Ritter Toggenburg, Der Kampf mit dem Drachen*, and *Der Gang nach dem Eisenhammer;* Translation of short sentences from English into German; Grammatical Questions. (*d*) Natural Philosophy: Mechanics; Hydrostatics and Pneumatics. [The Book recommended for study in this subject is Snowball's *Cambridge Course of Elementary Natural Philosophy.*]

UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

EVERY student must reside either in one of the Colleges or Halls, or in a Licensed Lodging-House, for three years. During these three years he has to pass two examinations in Arts, and one in either Mathematics, Natural Science, or Law and Modern History; when, if he obtain a first, second, or third class, he can take his B.A. degree; if he do not gain such honours, he has to pass a third examination *in Literis Humanioribus*. A student deciding to graduate in medicine must, after passing the requisite examination for the degree of B.A., spend two years in study prior to a scientific examination for the degree of Bachelor of Medicine, unless he shall have taken a first or second class in the natural science school, when he may go in at the first opportunity for the first M.B. Examination. Two years after passing this examination, and after four years of professional and scientific study, he may go in for the second or practical examination for the M.B. Degree. These four years of medical study may be spent either in or out of Oxford, in an approved medical school.

The M.B. Degree confers the Licence to practise. For the Degree of Doctor in Medicine, a dissertation has to be publicly read three years after taking the M.B. Degree.

The medical examinations take place annually in Michaelmas Term.

Scholarships of about the value £75 are obtainable at Christ Church, Magdalen, and other Colleges, by competitive examination in natural science. Every year a Radcliffe Travelling Fellowship is competed for by any one who, having taken a first-class in any of the Public Examinations of the University, or having obtained some University Prize or Scholarship open to general competition, proposes to study medicine. The travelling Fellows receive £200 a year for three years, half this period being spent in study abroad.

UNIVERSITY OF CAMBRIDGE.

DEGREES IN MEDICINE AND SURGERY.

Degree of Bachelor of Medicine.

A STUDENT proceeding to this degree must—(1) Reside in the University two-thirds of each of nine terms; (2) Pass the previous examination;* (3) Pursue medical study for five years, unless he have obtained honours in the Mathematical, Classical, Moral Sciences, or Natural Sciences Tripos, in which case only four years are required. Of this time of five years he must spend six terms in medical study in the University† after passing the previous examination, unless he has obtained

* A student who is, at least, in his second term of residence, may be admitted to the previous examination, and also to the examination in the additional subjects, held in the Lent Term, provided he presents to the Registrary a certificate from the Master of his College, or his *locum tenens*, stating that he has declared that it is *bonâ fide* his intention to register himself as a medical student and to study medicine in the University. But in order that such a student may be admitted to the examination for any Tripos, or to the Degree of Bachelor of Arts or Bachelor of Law, a certificate from the Regius Professor of Physic that he has been *bonâ fide* engaged in medical study, including hospital practice, subsequently to having passed the previous examination, and also certificates that he has attended three courses of medical lectures subsequently to his having passed the previous examination, must be presented to the Council.

† That is, by attending, in each Term, courses of lectures delivered in the University on two of the following subjects; viz., Chemistry, Botany, Human Anatomy and Physiology, Comparative Anatomy, Materia Medica and Pharmacy, Pathology; or, instead of two courses of lectures, by attending one course of lectures and the Medical Practice of Addenbrooke's Hospital.

honours in one of the above-mentioned Triposes, in which case four terms only are required.—A student who has not graduated in Arts is required, before keeping the terms of medical study, in addition to passing the previous examination, to pass in Algebra either in the examination for the additional subjects of the previous examination (which he may do in his second term of residence or in any subsequent term), or in the general examination for the ordinary B.A. Degree.

There are three examinations for the degree of Bachelor of Medicine, conducted partly by written answers, and partly *vivâ voce*. The examinations include chemical analysis, the recognition and description of specimens (healthy, morbid, and microscopical), dissections, and the examination of patients.

The subjects of the first examination are—1, Mechanics and Hydrostatics; 2, Chemistry with Heat and Electricity; 3, Botany.* The student may present himself for this examination at any time after passing the previous examination. He must produce certificates of having diligently attended one course of lectures on Chemistry, including manipulation, and one course on Botany.

The subjects of the second examination are—1, Elements of Comparative Anatomy;† 2, Human Anatomy and Physiology; 3, Pharmacology. Before presenting himself for this examination, the student must have completed two years of medical study, the time of medical study required to be spent in the University being included in these two years. He must have attended hospital practice during one year, have practised dissection during one season, and must produce certificates of having diligently attended a course of lectures on each of the following subjects:—1, Elements of Comparative Anatomy; 2, Human Anatomy and Physiology; 3, Materia Medica and Pharmacy; 4, Pathology.

The subjects of the third examination are—1, Pathology and the Practice of Physic (two papers); 2, Clinical Medicine; 3, Medical Jurisprudence.—Before presenting himself for this examination, the student must have completed the course of medical study, must have attended hospital practice during three years, and must produce certificates of having attended one course of lectures on each of the following subjects:—1, Principles and Practice of Physic; 2, Clinical Medicine; 3, Clinical Surgery; 4, Medical Jurisprudence; 5, Midwifery.

After these examinations have been passed, an Act must be kept in the schools. The candidate reads a thesis, composed in English by himself on some subject approved by the professor; the professor brings forward arguments or objections in English for the candidate to answer, and examines him *vivâ voce* as well on questions connected with his thesis as on other subjects in the faculty of a more general nature. The exercise must continue at least one hour.

Degree of Doctor of Medicine.

This may be taken by a Bachelor of Medicine in the ninth term after his inauguration. He is required to produce certificates of having been engaged five years in medical study, to keep an act similar to that for M.B., and write an extempore essay. He pays ten guineas to the Professor of Physic for the act.—A Master of Arts may proceed to the Degree of M.D. in the twelfth term after his inauguration as M.A. without having taken the degree of M.B. He must pass the three examinations for M.B., and keep the act, for the M.D. Degree. He must produce certificates of having been engaged five years in medical study, and the same certificates of attendance on lectures and hospital practice are required as of the candidate for the Degree of M.B.; but he is not required to have kept medical terms in the University.

Degree of Master of Surgery.

The subjects of the examination for this degree are—1, Surgical Anatomy; 2, Pathology and the Principles and Practice of Surgery; 3, Clinical Surgery; 4, Midwifery.—Before admission to this examination, the candidate must have passed all the examinations for the Degree of M.B., and must produce certificates of having attended the surgical practice of a hospital for three years, of having been house-surgeon or dresser for six months, and of having attended—1, a second course of lectures on Human Anatomy; 2, one course of lectures on the Principles and Practice of Surgery; 3, lectures on Clinical Surgery, during one year; 4, ten cases of Midwifery; 5, of having practised Dissection during a second season.—The examination takes place at the same time as those for M.B., and in a similar manner. The candidate is required to perform operations on the dead body, and to examine patients in the hospital.

* Students who have obtained Honours in the Mathematical, Classical, Moral Sciences, or Natural Sciences Tripos, or passed the general examination for the B.A. Degree, are not required to be examined in Mechanics and Hydrostatics; and those students who have obtained Honours in the Natural Seiences Tripos are not required to be examined in Botany or Chemistry, with Heat and Electricity, if they have passed with credit the examination in the Tripos in those subjects. Students who have passed the special examination in Botany for the B.A. Degree, are not required to be examined again in that subject.

† Students who have obtained honours in the Natural Sciences Tripos, and passed with credit the examination in Comparative Anatomy for that Tripos, are not required to be examined again in that subject.

UNIVERSITY OF LONDON.

DEGREES IN MEDICINE AND SURGERY.

The following Examinations for Degrees in Medicine are held in the University of London. Each takes place once yearly.

Preliminary Scientific Examination, commencing on the third Monday in July.

Bachelor of Medicine (*M.B.*) *First Examination:* Last Monday in July.

Bachelor of Medicine (*M.B.*) *Second Examination:* First Monday in November.

Bachelor of Surgery (*B.S.*): Tuesday following the fourth Monday in November.

Master in Surgery (*M.S.*): Fourth Monday in November.

Doctor of Medicine (*M.D.*): Fourth Monday in November.

The certificates in each case must be transmitted to the Registrar at least fourteen days before the commencement of the examination.

The fee for each examination is Five Pounds.* If a candidate withdraw or fail to pass either of the examinations, the fee is not returned; but he is admitted without further payment to *two* subsequent preliminary scientific, first M.B., second M.B., or B.S. examinations, or to *one* subsequent M.S, or M.D. examination, provided that he give notice to the Registrar at least fourteen days before the commencement of the examination.

Bachelor of Medicine.

Every candidate for the Degree of Bachelor of Medicine is required—1. To have passed the Matriculation Examination, or to have taken a Degree in Arts in either of the Universities of Sydney, Melbourne, or Calcutta (provided in the last case, that Latin has been one of the subjects in which he has passed). 2. To have passed the preliminary Scientific Examination.† 3. To have been engaged in his professional studies during four years subsequently to Matriculation or Graduation in Arts, or one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom. 4. To pass two examinations in medicine.

First M.B. Examination.—The candidate must produce certificates:—1. Of having completed his nineteenth year. 2. Of having passed the preliminary scientific examination at least one year previously. 3. Of having been a student during two years at one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of three of the following subjects: Descriptive and Surgical Anatomy; General Anatomy and Physiology; Comparative Anatomy; Pathological Anatomy; Materia Medica and Pharmacy; General Pathology; General Therapeutics; Forensic Medicine; Hygiene; Obstetric Medicine and Diseases peculiar to Women and Infants; Surgery; Medicine.‡ 4. Of having dissected during two winter sessions. 5. Of having attended a course of Practical Chemistry. 6. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the preparation of medicines. Candidates are examined in Anatomy; Physiology;§ Materia Medica

* For the degree of Doctor of Medicine, the fee will continue to be Ten Pounds to all such as, having taken their M.B. degree under the former regulations, shall not have paid the fee of Five Pounds at the Preliminary Scientific Examination.

† Candidates for the Degree of M.B. are strongly recommended by the Senate to pass the Preliminary Scientific Examination before commencing their regular medical studies. For the Preliminary Scientific Examination, a candidate must have completed his seventeenth year, and have either passed the Matriculation Examination or taken a degree in Arts in either of the Universities of Sydney, Melbourne, or Calcutta (provided in the last case that Latin be one of the subjects in which he has passed). Candidates are examined in Mechanical Philosophy, including Statics, Dynamics, Hydrostatics, Hydraulics, Pneumatics, and Optics; Natural Philosophy, including Heat, Electricity, and Magnetism; Inorganic Chemistry; Botany and Vegetable Physiology; Zoology. They must show a competent knowledge in all the subjects of examination. Candidates who matriculated previously to January 1861, are not required to pass the Preliminary Scientific Examination in any other subjects than Chemistry and Botany; and they may pass the Preliminary Scientific Examination and the First M.B. Examination in the same year, if they so prefer.

‡ The subjects numbered 3, 4, and 5, must be attended after taking a Degree in Arts or passing the Matriculation Examination.

§ Any candidate is allowed, if he so prefer, to postpone his examination in Physiology from the First M.B. Examination at which he presents himself for examination in the remaining subjects until the First M.B. Examination in the next or any subsequent year; but such candidate is not admitted to compete for honours on either occasion; and he cannot be admitted as a candidate at the Second M.B. Examination until after the lapse of at least twelve months after having passed his examination in Physiology.

and Pharmaceutical Chemistry; Organic Chemistry. Candidates must show a competent knowledge in all the subjects of examination. The examinations are conducted by printed papers and *vivâ voce* interrogation, by demonstration from preparations and specimens, and by dissections. After 1871, there will be a practical examination in histology.

Examination for Honours.—Any candidate who has been placed in the first division may be examined for Honours in (1) Anatomy, (2) Physiology, Histology, and Comparative Anatomy, and (3) Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry. If in the opinion of the examiners sufficient merit be evinced, the candidate who distinguishes himself most in each of these three divisions receives an exhibition of £40 *per annum* for the next two years, payable in quarterly instalments; provided that on receiving each instalment he declare his intention of presenting himself at the second M.B. examination within three years from the time of passing the first M.B. examination. Under the same circumstances, the first and second candidates in each subject receive each a Gold Medal of the value of Five Pounds.

*Second M.B. Examination.**—No candidate is admitted to this examination within two academical years of the time of his passing the first examination, nor without certificates:—1. Of having passed the first M.B. examination. 2. Of having subsequently attended a course of lectures on each of two of the subjects for which he had not presented certificates at the first examination. 3. Of having conducted at least twenty labours.† 4 and 5. Of having attended the surgical and the medical practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Surgery and Clinical Medicine.‡ 6. Of having, subsequently to the completion of his attendance on surgical and medical hospital practice, attended to Practical Medicine, Surgery, and Midwifery, with special charge of patients, in Hospital, Infirmary, Dispensary, or Parochial Union, during six months. 7. Of having acquired proficiency in vaccination.§ The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. Candidates are examined in General Pathology, General Therapeutics, and Hygiene; Surgery; Medicine; Midwifery; Forensic Medicine. The examinations include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry. The examinations are conducted by printed papers and *vivâ voce* interrogation; by practical examinations in obstetric preparations and apparatus; by examination, and report on cases, of medical patients in the wards of a hospital; demonstration from specimens and preparation. Candidates are expected to write prescriptions in Latin, without abbreviations.

Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine.

Examination for Honours.—Any candidate who has been placed in the first division may be examined for Honours in (1) Medicine, (2) Midwifery, and (3) Forensic Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in Medicine receives £50 *per annum* for the next two years, with the style of University Scholar in Medicine; and the candidates who distinguish themselves the most in Midwifery and in Forensic Medicine receive each £30 *per annum* for the next two years, with the style of University Scholar in Obstetric Medicine and in Forensic Medicine respectively. The first and second candidates in each of the preceding subjects each receive a Gold Medal, value Five Pounds.

Bachelor of Surgery.

The candidate must produce certificates:—1. Of having taken the Degree of Bachelor of Medicine in this University. 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject. The examinations are conducted by printed papers on surgical anatomy and surgical operations; by examination and report on cases of surgical patients; by performance of operations upon the dead subject; by application of surgical apparatus; and by *vivâ voce* interrogation.

Examination for Honours.—Any candidate who has passed the B.S. examination may be examined for Honours in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives £50 *per annum* for the next two years, with the style of University Scholar in Surgery; and the first and second candidates each receive a Gold Medal of the value of Five Pounds.

Master in Surgery.

The candidate must produce certificates:—1. Of having taken the Degree of Bachelor of Surgery* in this University. 2. Of having attended subsequently—(*a*) to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; (*b*) or to Clinical or Practical Surgery during one year in a recognised hospital or medical institution, and of having been engaged during three years in the practice of his profession; (*c*) or of having been engaged during five years in the practice of his profession, either before or after taking the Degree of Bachelor of Surgery in this University.† 3. Of moral character, signed by two persons of respectability. The examination is conducted by means of printed papers and *vivâ voce* interrogation; and the candidates are examined in Logic and Moral Philosophy,‡ and in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most at this examination receives a Gold Medal of the value of Twenty Pounds.

Doctor of Medicine.

The candidate must produce certificates analogous to those required for candidates for the Degree of Master in Surgery, but having special relation to Medicine. The examination is conducted by printed papers and *vivâ voce* interrogation; and candidates are examined in Logic and Moral Philosophy, and in Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most at this examination receives a Gold Medal of the value of Twenty Pounds.

UNIVERSITY OF DURHAM.

REGULATIONS REGARDING DEGREES IN MEDICINE.

EVERY student in medicine must have been registered, and no one shall be registered unless he have passed the Registration Examination or such other examination as the Warden and Senate shall deem equivalent. The Registration Examination is directed to the rudiments of Religion, Literature, and Science; and is conducted by two or more examiners nominated by the Warden. The Registration Examination will begin on April 15th and September 16th, 1873.§

Licence in Medicine.

The candidate must be of the age of 21 years, and must, since his registration, have spent four years in medical study at one or more of the schools recognised by the Licensing Bodies named in Schedule A of the Medical Act, 1858. There are two public examinations: the first after two years at least of medical study; the second after four years at least of medical study. Candidates must produce satisfactory testimonials of conduct, and such certificates of attendance on lectures and hospital practice as the Warden and Senate shall require.

Bachelor of Medicine.

The candidate must be of the standing of three terms at least as a Licentiate in Medicine, and of eighteen terms (six years) at least from the date of registration or matriculation.—No one who is not a Bachelor of Arts shall be admissible to the Degree of Bachelor of Medicine, unless he have kept three terms by residence at Durham or

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* Any candidate for the Second M.B. Examination who has passed the First M.B. Examination under the former regulations, is required to have also passed the Examination in Physiology at some previous First M.B. Examination carried on under the present regulations; at which examination he is not allowed to compete for honours.

† Certificates will be received from any legally qualified practitioner.

‡ The student's attendance on the Surgical and on the Medical hospital-practice specified in Regulations 4 and 5, may commence at any date after his passing the Preliminary Scientific Examination, and may be comprised either within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subsequently to his passing the First M.B. Examination. Attendance during three months in the wards of a Lunatic Asylum recognised by the University, with clinical instruction, may be substituted or a like period of attendance on medical hospital practice.

§ Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council.

* Candidates who have obtained the degree of Bachelor of Medicine previously to 1866, will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and in the case of such candidates, the attendance on surgical practice required by regulation 2, may commence from the date of the M.B. Degree.

† One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division.

‡ Any candidate who has taken the degree either of B.A., B.Sc., or M.D. in this University, is exempted from this part of the examination; and any candidate who has passed the Second M.B. Examination, may at any subsequent M.S. Examination present himself for Logic and Moral Philosophy alone, if he so prefer; thereby gaining exemption, if he should pass, from examination in that subject when he presents himself to be examined for the degree of Master in Surgery.—An analogous exemption is allowed in the case of candidates for the degree of M.D.

§ The following are the subjects for examination. The History contained in the Acts of the Apostles.—English Grammar and Composition.—Arithmetic, including Vulgar Decimal Fractions; Algebra, including Simple Equations.—Euclid, Books I and II.—Latin Grammar, with—In April, Cæsar, *De Bello Gallico*, Lib. I and II In September, Virgil, *Æneid*, Lib. I and II.—Also any one of the following: Greek Grammar, with Xenophon's *Memorabilia*.—French Grammar, with Voltaire's *Charles XII.*—German Grammar, with Goethe's *Dichtung and Wahrheit*, Book I. —Elementary Questions in Mechanics, Hydrostatics, and Pneumatics.

at Newcastle, and have passed the final examination for the Degree of Bachelor of Arts, or an equivalent to it, besides the examination for the Degree of Bachelor of Medicine, nor unless he have spent one year at least in medical study at some school of medicine in connexion with the University.—The examination for the Degree of Bachelor of Medicine is directed chiefly to the Practice of Medicine.

Doctor of Medicine.

The candidate must be a Bachelor of Medicine of the standing of twenty-one terms at least (seven years) from his registration or matriculation, and of three terms at least from his admission to the Degree of Bachelor of Medicine; and must perform such exercises as the Warden and Senate require.

Licence in Surgery.

The candidate must be of the age of 21 years, and have spent four years in medical and surgical study since his registration as a student in medicine. In other respects, the regulations are similar to those for the Licence in Medicine; but the second examination is partly in surgical subjects.—The second examination for a Licence in Surgery may or may not be passed at the same time with the second examination for a Licence in Medicine.

Master in Surgery.

The candidate must be a Licentiate in Surgery, and also a Licentiate in Medicine, and of the standing of eighteen terms (six years) at least from the date of his registration or matriculation, and of three terms at least from the date of his admission to the Licence in Surgery.—[In other respects, the regulations for this degree are analogous to those for that of Bachelor of Medicine, but having relation to Surgery in place of Medicine.]

The Warden and Senate shall have authority to arrange for students in the Faculty of Medicine an examination equivalent to that for the Degree of Bachelor of Arts, by substituting for the theological part of it an examination in Hippocrates, Galen, or such other ancient medical author or authors as they may think fit.

Any student in medicine who was registered before Easter Term, 1868, shall be entitled to be admitted to the Degree of Master in Surgery on the same conditions as above are required for a Licence in Surgery.

These regulations shall not interfere with the power of the University to grant degrees by diploma to persons of sufficient standing and approved merit.

Fees for Examinations and Degrees.—Senior Middle-Class Examination, £1; Examination at the end of First Year, £1; Registration Examination, £1; Extraordinary Registration Examination, £2; Registration, 5s.; each Public Examination in Medicine and in Surgery, £1; Licence in Medicine or Surgery, £3; Degree of Master in Surgery, Bachelor in Medicine, or Doctor in Medicine, each £6.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

REGULATIONS FOR THE LICENCE.

No one can obtain the Licence of the College until he has completed the age of 21 years. Every applicant must produce satisfactory evidence of having been engaged in the study of medicine during at least four years subsequently to registration as a medical student, and of having attended the following courses at an University, or at a medical school recognised by the College:—Anatomy, Practical Anatomy, Chemistry, Practice of Medicine, Clinical Medicine, and Principles and Practice of Surgery, each a six months' course; Practical Chemistry, Materia Medica and Pharmacy, Physiology or Institutes of Medicine, Clinical Surgery, Midwifery, Medical Jurisprudence, General Pathology or Pathological Anatomy, and Practical Pharmacy, each a three months' course. The applicant must have attended the practice of a Public Hospital (containing no fewer than eighty beds) during not less than twenty-four months, twelve of which must have been spent in attendance on the medical wards. He must also have attended for six months the practice of a public dispensary, or have acted for six months as clinical clerk or dresser in a hospital; or have been engaged during six months as visiting assistant to a registered practitioner. He must also have attended at least six cases of labour under the superintendence of a qualified medical practitioner. He must produce a certificate that he has studied vaccination under a competent and recognised teacher, and that he is thoroughly informed in every necessary part of the subject. He must have passed the Preliminary Examination in Literature and Science,* and had his name inscribed in the General Medical Council's *Register* of Medical Students, previously to the commencement of his Medical Studies. Masters and Bachelors of Arts of any British or Foreign University, whose course of study may from time to time be approved of by the College, will be exempted from the preliminary examination; also those who have passed the examination of the national educational bodies, or any of the licensing boards recognised by the Medical Act.

The professional examination will be divided into two parts: (1) Anatomy, Physiology, Chemistry; (2) Materia Medica and Pharmacy, Pathology and Pathological Anatomy, Practice of Medicine, Midwifery, Medical Jurisprudence, Clinical Medicine. No candidate will be admitted to the first examination until he has completed two, or to the second until he has completed four, years of professional study. The following will be the periods of Examination to October 1873:—1. Preliminary examinations, October 30, 1872; April 29 and July 30, 1873. 2. First professional examinations, October 16, 1872; January 15, March 26, April 30, July 16, and October 15, 1873. The second professional examinations will be held on the Thursdays following the first professional.

Candidates who already possess a qualification from a recognised Licensing Body, or who have passed the first professional examination before a qualifying body (provided it be as extensive as that required by this College), will be at once admitted to the second examination. Meetings for the examination of candidates who already possess a qualification from a recognised Licensing Body will be held on the first Wednesday of every month (except September and October), and, if necessary, on the following days. Candidates are required to communicate with the Secretary to the College not less than eight days before the date of the examination.

No candidate is admissible to examination who has been rejected by any other licensing board within the previous three months.

The Fee payable by a Licentiate is Ten Guineas. If a candidate be unsuccessful, Two Guineas will be retained to pay expenses.

Candidates may be admitted to special examination on bringing forward satisfactory reasons and paying an extra Fee.

* For the subjects, see note to regulations for double qualification

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS FOR CANDIDATES FOR THE DIPLOMA.

The regulations regarding schools of medicine, preliminary examination, and professional study and examination, are similar to those for the double qualification (see next page), except that the third course of Medicine and the course of Pathological Anatomy are not required.

Registered medical practitioners whose degree or licence in medicine is dated prior to October 1st, 1861, are exempt from the first professional examination. The examinations under this regulation may take place on the first and third Tuesdays of each month.

At the second examination, the student, in furnishing the statement of his professional study, must, if he has been an apprentice, insert the name of his master, the date of his indenture, and the length of time for which he was bound. If the candidate have been an apprentice to a Fellow of the College, he must also produce his discharged indenture.

Recent Dissections, Anatomical Specimens, and articles of the Materia Medica, are employed during the examinations; and all candidates are required to write out formulæ of prescription. They are also subjected to a practical clinical examination in the Surgical Hospital.

No candidate shall be admissible to examination who has been rejected by any other Licensing Board within three months preceding his application to be examined.

The Fees are: for the first examination, £4; for the second, £6; in each £2 will be returned to unsuccessful candidates. The Fee from candidates who have elsewhere passed the first professional examination is £10, of which £2 is retained if the candidate be unsuccessful.

Special examinations are held when required, the regulations being the same as in Clause 16 of the regulations for the professional examination for the double qualification, and an extra Fee being paid.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

DOUBLE QUALIFICATION IN MEDICINE AND IN SURGERY.

The Royal College of Physicians of Edinburgh and the Royal College of Surgeons of Edinburgh, while they still continue to give their Diplomas separately, have made arrangements by which, after one series of examinations, the student may obtain the Diplomas of both Colleges. This joint examination is conducted by a Board, in which each body is represented for examination in those branches which are common to both Medicine and Surgery; but the College of Physicians takes exclu-

sive charge of the examination in Medicine, and the College of Surgeons of the examination in Surgery. Students passing that examination are enabled to register two qualifications—Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh.

1. Every candidate must have followed his course of study in an University, or in an established School of Medicine, or in a Provincial School specially recognised by the College of Physicians and Surgeons of that division of the United Kingdom in which it is situate. 2. Under the title *Established School of Medicine* are comprehended the medical schools of those cities of Great Britain and Ireland in which Diplomas in Medicine or Surgery are granted, and such Colonial and Foreign Schools as are similarly circumstanced in the countries in which they exist.

Professional Education.

1. Candidates commencing professional study after September 16th, 1866, must have been engaged, during four years after the examination in general education, in not less than four winter sessions' or three winter and two summer sessions' attendance at a recognised medical school.* 2. The candidate must have attended the following courses of lectures:—Anatomy, two courses† of six months each, and Practical Anatomy, twelve months; or Anatomy, one course of six months, and Practical Anatomy, eighteen months; Physiology, not less than fifty lectures;‡ Chemistry, Practice of Medicine, Clinical Medicine,§ Medicine (a third course, either Practice or Clinical, at option),§ Principles and Practice of Surgery, Clinical Surgery,§ Surgery (a third course, either Principles and Practice or Clinical Surgery, at option),§ each six months; Practical or Analytical Chemistry, Materia Medica, Midwifery, and Diseases of Women and Children, Medical Jurisprudence, and Pathological Anatomy,‖ each three months.¶ 3. He must also produce certificates:—*a.* Of having attended at least six cases of labour under the superintendence of a registered medical practitioner. *b.* Of having attended, for three months, instruction in Practical Pharmacy. The teacher signing the certificate must be a Member of the Pharmaceutical Society of Great Britain, or a chemist and druggist recognised by either College on special application, or the superintendent of the laboratory of a Public Hospital or Dispensary, or a registered practitioner who dispenses medicine to his own patients. *c.* Of having attended, for twenty-four months, a public General Hospital containing, on an average, at least eighty patients. *d.* Of having attended, for six months, the practice of a public Dispensary specially recognised by either College; or of having been engaged for six months as assistant to a registered practitioner. *e.* Of having been instructed in vaccination; the certificate to be signed by the teacher, who must be a registered practitioner.—It is strongly recommended to students to avail themselves of opportunities of attending lectures on Ophthalmic and Mental Diseases, also on Natural History and Comparative Anatomy; and of obtaining practical instruction in the use of the Microscope.**

Preliminary Examination in General Education.

All students who intend becoming candidates for the Diplomas of the Colleges must have passed the complete examination in General Education,†† and have had their names inscribed in the General Medical Council's Register of Medical Students at the commencement of their Medical Studies.—Testimonials of proficiency granted by the educational bodies recognised by the Medical Council will be accepted as sufficient evidence of general education, and will exempt from the preliminary examination.—Students who intend to undergo the preliminary examination must give in their names, addresses, and places of birth to the officer of either College, not later than two days before the day of examination; and must pay a fee of Ten Shillings, not to be returned in case of rejection; but they will be admissible to re-examination at a future period without paying another fee.—Candidates, the commencement of whose professional studies was prior to September 17th, 1866, may pass the preliminary examination in general education at any of the periods previous to the first professional examination, but are recommended to do so at the earliest possible period. Candidates under this regulation, who have not passed a preliminary examination in general education, will be admitted to a special examination in general education previously to their first professional examination. For this they pay a fee of £1.

Professional Examination.

1. Candidates for the double qualification are subjected to two professional examinations, partly written and partly oral. 2. Opportunities for both examinations will be presented six times in each year. On each of these occasions, the candidates write answers to the questions proposed. The oral examinations are conducted on the days immediately succeeding. 3. Unsuccessful candidates are remitted to their studies for not less than three months. 4. The first examination embraces Anatomy, Physiology, and Chemistry; and takes place not sooner than the end of the second winter session. 5. Candidates who desire to pass this examination must apply to the Inspector of Certificates on or before the Saturday preceding the day of examination;* and must produce tickets, and also certificates of attendance on those courses of lectures which have reference to the subjects of the examination, and evidence of having passed the preliminary examination. 6. The sum of £6 must be paid to the Inspector of Certificates for this examination, not later than 10 A.M. of the day preceding it. This sum will be considered as paid to account for the entire Fee of £16 payable for the two Diplomas. 7. In the case of a candidate being unsuccessful at this examination, £4 will be returned to him. 8. The second examination embraces Medicine, Surgery and Surgical Anatomy, Midwifery, Pathological Anatomy, Materia Medica and Pharmacy, and Medical Jurisprudence; and does not take place before the termination of the winter session of the last year of study. In the case of candidates who began their course of study after September 16th, 1866, it will not take place until four years after the examination in general education. 9. Applications for examination must be made to the Inspector of Certificates not later than the Monday previous to the day of examination. 10. Every candidate must produce to the Inspector—*a.* Satisfactory evidence of having attained the age of twenty-one years; *b.* A certificate of having passed the preliminary examination, unless this certificate have been already seen by the Inspector of the Colleges; *c.* A certificate of registration in the books of the General Medical Council; *d.* A certificate of having passed the first professional examination; *e.* The certificate of his classes, etc.; *f.* A tabular statement (for which a printed form will be furnished by the Inspector), exhibiting the full amount of his professional education, and distinguishing the classes, hospitals, and dispensaries attended during each session of his studies. 11. The fee payable for this examination, which is £10, must be lodged with the Inspector not later than 10 A.M. of the day preceding the examination-day. 12. On the production of the above documents, and after receiving the fees, the Inspector gives the candidate a letter authorising the examiners to take him on trial. 13. In case of a candidate being unsuccessful at the second examination, £8 will be returned to him. 14. Candidates who have passed the first professional examination in Anatomy, Physiology, and Chemistry, at any of the Licensing Boards recognised by the Medical Act, will be admissible to the second professional examination on producing certicates of the whole course of study prescribed, and of having passed their preliminary and first professional examinations. If any of the

* Candidates commencing study prior to the above date, will be admitted to examination after four winter sessions' or three winter and two summer sessions' attendance on classes at a regular Medical School.

† The two courses must not be attended in the same session.

‡ In those Schools of England and Ireland in which two separate courses of Lectures are delivered at separate hours—one on Anatomy, the other on Anatomy and Physiology—the former of these courses will be received as a course of Anatomy, and the other as a course of Physiology.

§ Two courses of Clinical Medicine or of Clinical Surgery of three months each, if not simultaneous, will be held equivalent to one course of six months. They must be attended during the period of attendance at the Hospital where they are delivered.

‖ A certificate of attendance at the *Post Mortem* Examinations at a General Hospital will be accepted in lieu of this course.

¶ The six months' courses delivered in Scotland must consist of not fewer than one hundred lectures, with the exception of Clinical Medicine and Clinical Surgery. The three months' courses must consist of not fewer than fifty lectures.

** The following order of study is recommended as a guide to the student, though not enjoined. *First Year*—Anatomy; Practical Anatomy; Chemistry; Practical or Analytical Chemistry; Hospital. *Second Year*—Anatomy; Practical Anatomy; Physiology; Surgery; Materia Medica (the last either in this or the third year); Hospital. *Third Year*—Practice of Medicine; Clinical Surgery; Practical Anatomy; Practical Pharmacy; Clinical Medicine; Pathological Anatomy; Hospital. *Fourth Year*—Surgery or Clinical Surgery; Midwifery and Diseases of Women and Children; Practice of Medicine or Clinical Medicine; Medical Jurisprudence; Practical Midwifery; Hospital.

†† The examination will embrace the following subjects:—1. English language, including Grammar and Composition. 2. Arithmetic, including Vulgar and Decimal Fractions. Algebra, including Simple Equations. 3. Geometry: First Two Books of Euclid. 4. Latin: Cicero, *De Senectute et de Amicitiâ;* or Horace, *Carmina*, Lib. II and III; also a passage from an unprescribed author. 5. One of the following subjects at the option of the candidate:—(1) Greek: Herodotus, *History*, Book I; and Homer, *Iliad*, Book II. (2) French: Voltaire's *Henriade*. (3) German: Schiller's *Wilhelm Tell*. (4) Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. In Latin, Greek, French, and German, parsing of words from the passages given to be translated will be required; also, translation of short sentences from English into the respective languages.

* Candidates at a distance are requested to send their certificates much earlier, so as to give sufficient time for the exchange of one or two explanatory letters; as much disappointment has been occasioned by the discovery of defects in their course of study when it was too late to rectify them by the production of documents.

three subjects of the first examination have been omitted, such candidates will have to undergo an examination on the omitted subjects; and none of the subjects set down in § 8 will be omitted at the second examination, even if some of them should have formed part of the first examination by another Board. The fee payable by such candidates is £16, and unsuccessful candidates will receive back £14. 15. In addition to the written and oral examinations, all candidates shall be subjected to a practical Clinical Examination in Medicine and Surgery, which shall include the examination of patients, physical diagnosis, the use of the microscope, surgical appliances, bandages, etc. 16. Candidates desirous of special examination on other days than those fixed by the regulations must prepare a case to be submitted for the consideration of the authorities of the Colleges, with evidence to show why it was and is impossible for them to avail themselves of the ordinary examinations, past or future. They must *at the same time* produce certificates of the whole of the prescribed course of study and of the preliminary examination, and state the earliest and the latest days within which they can present themselves. It is very desirable that all such candidates, and especially those who are at a distance from Edinburgh, should present their applications as long beforehand as possible. An extra fee is required in such cases. 17. No candidate shall be admissible to examination who has been rejected by any other Licensing Board within the three preceding months.

Communications from candidates to be addressed to DR. GAIRDNER, *Inspector and Treasurer of the Double Qualification, at* 45, *Northumberland Street, Edinburgh.*

The following will be the periods of examinations for the Double Qualification of the Royal Colleges of Physicians and Surgeons of Edinburgh, for the year 1872-73. *Preliminary Examination in General Education*, October 30th, 1872, April 29th and July 30th, 1873. *First Professional Examinations.*—Tuesdays, October 22nd, 1872, January 21st, April 1st and 19th, July 8th and 22nd, 1873. *Second Professional Examinations.*—These will take place immediately after the conclusion of the first professional examinations, at each of the above-mentioned periods. In no case will they be begun on an earlier day than the Thursday of any period, nor will they usually be later than that day.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

REGULATIONS FOR THE DIPLOMA.

THE Regulations respecting the Curriculum of Professional Study are similar to those of the Royal College of Surgeons of Edinburgh.

Preliminary Examinations in General Literature will be held in October 1872, and in April, July, October, and November, 1873.* The Fee is Ten Shillings. Candidates are requested to give in their names to the Secretary at least two days before the examination, and to give intimation of the optional subject they select.

The *First Professional Examinations* take place on the second Tuesday of every month. The *Second Professional Examinations* take place, the written part on the second Tuesday of every month, and the clinical and oral parts on the succeeding day.

The Fee is £10; viz., £4 for the first, and £6 for the second examination.

The examinations are conducted partly in writing and partly orally. Recent Dissections, Anatomical Specimens, Chemical Tests, Articles of the Materia Medica, the Microscope, Surgical Apparatus, and Pathological Specimens are employed at the discretion of the examiners. Candidates are also subjected, at the second examination, to a practical Clinical Examination at the Hospital.

Candidates for the Diploma of the Faculty, who possess a qualification to practise, or who have passed the examination in Anatomy, Physiology, and Chemistry, before any of the Licensing Bodies enumerated in Schedule (A) of the Medical Act, on complying with the regulations in other respects, will be admitted to the second professional examination. In such cases, the full fee is exigible. In the case of unsuccessful candidates, £2 of the fee is retained.

A candidate, on showing a sufficient reason, may be admitted to examination on a day specially arranged, on paying an extra fee.

* The examination will embrace the following subjects:—1. English Language, including Grammar and Composition, and writing to dictation. 2. Latin: Translation from one of the two following Books, at the option of the candidate; viz., for 1872, the Second Book of the *Commentaries*, and *Æneid*, Lib. vi; an Exercise in rendering English correctly into Latin, the Latin words being supplied. 3. Arithmetic, to Vulgar and Decimal Fractions inclusive; Algebra, including Simple Equations. 4. Geometry: First two Books of Euclid. 5. One of the following subjects at the option of the candidate. *a.* Natural Philosophy: Mechanics, Hydrostatics, and Pneumatics. *b.* Greek: Xenophon's *Anabasis*, Book II; or Homer's *Iliad*, Book VI. *c.* French: Voltaire, *Histoire de Charles XII. d.* German: in 1872, Schiller's *Wilhelm Tell.* In the Latin, Greek, French, and German papers, questions on Grammar will be given.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

DOUBLE QUALIFICATION IN MEDICINE AND IN SURGERY.

THE Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Physicians of Edinburgh, conjointly grant their Diplomas after one series of examinations before a Board of Examiners in which each body is represented. The regulations as to the curriculum of study are the same as those for the conjoined examinations of the Royal Colleges of Physicians and Surgeons of Edinburgh. The fee for the two diplomas granted conjointly is £16.

UNIVERSITIES OF EDINBURGH, GLASGOW, ABERDEEN, AND ST. ANDREW'S.

REGULATIONS RESPECTING DEGREES IN MEDICINE.

[THE Regulations of these Universities are nearly similar. We therefore give but one statement, noticing points of difference when necessary.]

Three Medical Degrees are conferred by each University; viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.) The Degree of C.M. is not conferred on any person who does not also at the same time obtain the Degree of Bachelor of Medicine.

Preliminary Education.†

The preliminary branches of extra-professional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and candidates must also pass a satisfactory examination in at least two of the following subjects:—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy.* The examinations on both classes of subjects take place† before the candidate has entered on his medical curriculum.‡

* The Universities of Glasgow, Aberdeen, and St. Andrew's, include Natural History.

† As far as possible.—*Aberdeen.*—At *Glasgow*, the examination in the first class of subjects must take place before Matriculation; and that in the second class previously to the first professional examination.

‡ In Edinburgh, examinations on these subjects will be held on 15th and 16th of October 1872, and 18th and 19th March 1873. 1. *English*—A portion of an English author must be written to dictation; the grammatical construction of one or two sentences must be explained; the grammatical errors in a sentence ungrammatically composed must be pointed out, and their nature explained; and the derivation and definition of a few English words in common use must be given (see Bain's *English Grammar*, and Angus on the *English Language*). 2. *Latin*—Cicero *ad Familiares*, book iv; an easy passage Latin from a Prose Author, and a single passage of English (translated from a Latin Author) to be re-translated into Latin, the more difficult Latin words being given. 3. *Arithmetic*—The Common Rules, including Decimals. 4. *Elements of Mathematics*—Euclid, Books I, II, and III; and the Rudiments of Algebra, including Simple Equations. A knowledge of Euclid alone will not be sufficient. 5. *Elements of Mechanics*—Elementary Mechanics and Hydrostatics. (*See* Tomlinson's *Rudimentary Mechanics*, Weale's series.)—At the same date, examinations will also take place in the additional subjects, as follows. 1. *Greek*—Xenophon's *Cyropædia*, book i. 2. *French*—Molière, *Le Malade Imaginaire.* 3. *German*—Lessing's *Emilia Galotti.* 4. *Higher Mathematics*—Euclid, Books I to VI: Algebra, Trigonometry, and Conic Sections. 5. *Natural Philosophy*—Balfour Stewart's *Elementary Physics.* 6. *Logic*—Terms, Propositions, Syllogisms, and Fallacies. Induction. Fowler's *Elements of Deductive Logic.* 7. *Moral Philosophy*—Moral Faculty, Desires and Emotions. The Will. Moral Obligations. Practical Ethics. Stewart's *Outlines of Moral Philosophy*, Part II, with M'Cosh's Notes.

In Glasgow, examinations will take place on October 11th, 1872, and April 11th, 1873, as follows. *First or Elementary Part*, Exercises in all of which are required. *English*—Writing correctly a passage to dictation; Composition of a short Essay on a given theme; Questions in Grammar. *Latin*—Fourth Book of the *Æneid* of Virgil, and Fourth Book of Cæsar *De Bello Gallico:* Translations of passages from authors not prescribed, and of English passages into Latin, the principal Latin words being supplied: Questions in Grammar and Construction. *Arithmetic*—the Common Rules, including Vulgar and Decimal Fractions. *Elements of Mathematics*—Euclid, Books I, II, and III: Algebra, as far as Simple Equations. *Elements of Mechanics*—Questions, for which such works as Tomlinson's *Rudimentary Mechanics* may serve as text-books. —*Second Part*, Exercises in two of the subjects of which, to be selected by the candidate, are required. *Greek—Anabasis* of Xenophon, Book I, and the Gospel according to St. John; Translations of passages from Greek authors not prescribed, and of English passages into Greek—the principal Greek words supplied; Questions in Grammar. *French*—Voltaire's *Charles XII*; Translations and exercises as in Latin and Greek. *German*—Schiller's *William Tell;* Translations and exercises as in the other languages. *Mathematics*—Euclid, Books I to VI; Algebra, including Quadratic Equations, and the Rudiments of Trigonometry. *Natural Philosophy*—Such

A Degree in Arts (not honorary) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University specially recognised by the University Court, exempts from all preliminary education; [and an examination in Arts by any corporate body, whose examination has been recognised by the General Medical Council, and also approved by the University Court, shall exempt from preliminary examination in Arts on all subjects comprised in the examination of the said corporate body.]*

Degree of Bachelor in Medicine and Master in Surgery.

Candidates for the Degree of Bachelor of Medicine or Master in Surgery must have been engaged in medical and surgical study for four years—each *Annus Medicus* being constituted by at least two courses of not less than 100 lectures each, or by one such course, and two courses of not less than 50 lectures each; with the exception of the clinical courses, in which lectures are to be given at least twice a week.

Every candidate for the degree of M.B. and C.M. must give sufficient evidence by certificates—1. That he has studied Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine and of Surgery, Midwifery and the Diseases of Women and Children†, General Pathology,‡ during courses including not less than 100 Lectures; Practical Anatomy, a course of the same duration as the preceding; Practical Chemistry, three months; Practical Midwifery, three months at a Midwifery Hospital, or attendance on six cases under a registered medical practitioner; Clinical Medicine and Clinical Surgery, each course of not less than 100 lectures or two courses of three months; Medical Jurisprudence, Botany, Natural History, including Zoology, courses of not less than 50 Lectures. 2. That he has attended for at least two years, the Medical and Surgical Practice of a General Hospital with not fewer than eighty patients. 3. That he has been engaged for at least three months in compounding and dispensing drugs at the Laboratory of a Hospital or Dispensary, Member of a Surgical College or Faculty, Licentiate of the London or Dublin Society of Apothecaries, or a Member of the Pharmaceutical Society of Great Britain.§ 4. That he has attended, for at least six months, the out-practice of a hospital or the practice of a dispensary, or of a registered practitioner. Evidence of a practical knowledge of vaccination is also required.

One of the four years of medical and surgical study must be in the University granting the degree sought. Another year must be either in the same University, or in some other University entitled to give the Degree of Doctor of Medicine.‖ [At St. Andrew's, no one can be received as a candidate for the Degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of medical and surgical study shall have been in one or more of the following Universities and Colleges; viz., the Universities of St. Andrew's, Glasgow, Aberdeen, Edinburgh, Oxford, or Cambridge; Trinity College, Dublin; and Queen's College, Belfast, Cork, or Galway.] Attendance during at least six winter months on the medical or surgical practice of a General Hospital which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy; and one year's attendance, to the extent of four of the departments of medical study required, on the lectures of teachers of Medicine in the hospital schools of London, or in the school of the College of Surgeons in Dublin, or of such teachers of Medicine in Edinburgh or elsewhere as shall from time to time be recognised by the Edinburgh University Court, may be reckoned as one of the four years.* All candidates not students of the University of Edinburgh, availing themselves of the permission of attending the lectures of Extra-Academical Teachers in Edinburgh, must, at the commencement of each year of attendance, enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the Matriculation Fee.

Every candidate must deliver, before the 31st day of March of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine—1. A declaration, in his own handwriting, that he is 21 years of age, or that he will be so on or before the day of graduation; and that he will not be, on the day of graduation, under articles of apprenticeship. 2. A statement of his studies, general and professional, accompanied with proper certificates.†

Each candidate is examined in writing and *viva voce*—1, on Chemistry, Botany, and Natural History; 2, on Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; 3, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; 4, Clinically on Medicine and on Surgery in a Hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica and Pathology, are conducted, as far as possible, by demonstrations of objects. Students may be admitted to examination on the first division of these subjects at the end of their second year, and on the second division at the end of their third year. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *Annus Medicus*. Candidates may be admitted to examination on the first two of these divisions at the end of their third year, or to the four examinations at the end of the fourth year. If any candidate be found unqualified, he cannot be again admitted to examination unless he has studied during another year two of the prescribed subjects, either in the University or in some other school of medicine.

[The above are the regulations, regarding professional examination, of the University of Edinburgh. Those of the other three Universities differ somewhat from those of Edinburgh. They are as follows.

Every Candidate for the Degrees of Bachelor of Medicine and Master in Surgery shall undergo three professional examinations, which will be conducted in writing and *viva voce*. The first examination (not to be taken before the end of the second year of study) to include Chemistry, Elementary Anatomy, and Botany.‡ The second examination (not to be taken before the end of the third year) to include advanced Anatomy, Physiology, and Zoology with Comparative Anatomy.§ The third examination (not to be taken before the end of the fourth year) to include Materia Medica, General Pathology, Surgery, Practice of Medicine, Midwifery, Medical Jurisprudence, Clinical Medicine, and Clinical Surgery.‖ The examinations in Anatomy, Chemistry, Physiology, Botany, Zoology, and Materia Medica, will be conducted, as far as possible, by demonstrations of objects exhibited to the candidates; and those on Medicine and Surgery, in part, by clinical demonstrations. Candidates may be admitted to examination on the first two of these divisions at the end of the third year, or to the three examinations at the end of their fourth year. If any candidate be found unqualified, he shall not be again admitted to examination unless he shall have completed another year of medical study, or such portion of another year as may be prescribed by the examiners.]

Degree of Doctor of Medicine.

The Degree of Doctor of Medicine may be conferred on any candidate who has obtained the Degree of Bachelor of Medicine, and is of the age of 24 years, and has been engaged, subsequently to his having received the degree of Bachelor of Medicine, for at least two years in attendance on a Hospital, or in the Military or Naval Medical Services, or in Medical and Surgical Practice. The candidate must be a Graduate in Arts, or must, before or at the time of his obtaining the degree of Bachelor of Medicine, or within three years thereafter, have passed a satisfactory examination in Greek, and in Logic, or Moral Philosophy, and in one at least of the following subjects: viz., French,

a knowledge of the principles as may be obtained from the Text-books of Golding Bird and Brooke, and Ganot. *Natural History*—Geology or Zoology. Text-books—Jukes, Lyell, Dana, R. Jones, Dallas, Milne-Edwards. *Logic*—Whately's *Logic*, Books II and III. *Moral Philosophy*—The General Principles, as stated in Dugald Stewart on the Active Powers, or Dr. Fleming's Manual.

At St. Andrew's, the following are the subjects of Preliminary Examination. *English*—style and general character of written translations and answers; derivations of words employed in medicine. *Latin*—Cicero, *De Officiis*, Book I; Virgil, *Æneid*, Book II. *Mathematics*—Elementary Rules of Arithmetic; Euclid, Book I; Algebra as far as Simple Equations and Proportion. *Elements of Mechanics*—Composition and Resolution of Forces, the Lever, the Wheel and Axle, the Pulley, and the Inclined Plane: Centre of Gravity. *Greek*—Xenophon's *Anabasis*, Books I and II; or, if preferred, any one Book of Herodotus or two Books of Homer. *French*—Voltaire's *Charles XII.* *German*—Schiller's *Thirty Years' War*, or any one of his Dramas. *Higher Mathematics*—The First Four and the Sixth Books of Euclid, Algebra, Plane Trigonometry, and the Elementary Propositions on the Straight Line, Circle, and Conic Sections, treated analytically. *Natural Philosophy*—Elementary Mechanics, Hydrostatics, and Optics. *Natural History*—Milne Edwards' *Elémens de Zoologie.* *Logic*—Whately's *Logic*, or his *Easy Lessons on Reasoning.* *Moral Philosophy*—Paley's *Moral Philosophy*, or Macintosh's *Dissertation on the Progress of Ethical Philosophy.*

* This portion, enclosed in brackets, is in the Regulations of the University of Edinburgh alone.

† Two courses of Midwifery, of three months each, are reckoned equivalent to a six months' course, provided different departments of Obstetric Medicine be taught in each of the courses.

‡ Or a three months' course of lectures on Morbid Anatomy, together with a supplemental course of Practice of Medicine or Clinical Medicine.

§ In the Laboratory of an Hospital or Dispensary, of a Registered Medical Practitioner, or of a Member of the Pharmaceutical Society of Great Britain.—*Glasgow.*

‖ Entitled to grant Degrees in Medicine.—*Glasgow.*

* The other two years may be constituted by attendance upon courses in the great Hospital Medical Schools of London or Dublin; and, in default of such attendance, one of the four years may be constituted by attendance on any general Hospital containing not less than eighty beds, provided attendance has been given at the same time on a course of Practical Anatomy.—*Glasgow.*

† The Universities of Aberdeen and St. Andrew's require an Inaugural Dissertation to be presented previously to the final examination for M.B. In Edinburgh and Glasgow, no Thesis is now required until the candidate seeks the Degree of M.D.

‡ And Materia Medica.—*St. Andrew's.*

§ And Surgery.—*St. Andrew's.*

‖ Materia Medica and Surgery in the two previous examinations.—*St. Andrew's.*

German, Higher Mathematics, and Natural Philosophy.* He must submit to the Medical Faculty a Thesis composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the degree of Bachelor of Medicine, which he may have made a subject of study after having received that degree.

Candidates who commenced their medical studies in Edinburgh before February 4th, 1861, and in Aberdeen before November 1861, are entitled to be examined for the degree of Doctor of Medicine, without previously taking that of Bachelor of Medicine, under the regulations then in force in each University respectively.

The Degree of Doctor of Medicine may be conferred by the University of St. Andrew's on any Registered Medical Practitioner above the age of 40 years, whose professional position and experience are such as, in the estimation of the University, to entitle him to that Degree, and who shall, on examination, satisfy the Medical Examiners of the sufficiency of his professional knowledge, provided always that degrees shall not be conferred under this section on a greater number than ten in any one year.

The Graduation Fees in each of the Universities are—for the Degree of M.B., three examinations, each £5 : 5 = £15 : 15 ; for the Degree of C.M., £5 : 5 additional ; for the Degree of M.D., £5 : 5 additional to that for M.B., together with Government Stamp Duty (£10).

The fee for graduating under the old Regulations in Edinburgh is £25 ; at St. Andrew's, the fee for the Degree of M.D. under the section relative to Registered Medical Practitioners is 50 Guineas. Stamp Duty is included in both cases.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

REGULATIONS RELATIVE TO THE LICENCE IN MEDICINE.

EXAMINATIONS for the Licence in Medicine are held on the second Tuesday and following day in each month (except August and September). The name of every candidate, together with his schedule and the documents hereafter mentioned, must first be submitted to the College at one of its meetings. These are held regularly on the first Friday in each month (except August and September), and no name can be received later than the Monday previous to such meeting. If permission to be examined be granted, the candidate may present himself at the next examination, or at a subsequent one: in the latter case, however, he must intimate his intention three clear days before the examination.

A candidate who has not, previously to entering his name, obtained any medical or surgical qualification recognised by the College, must produce certificates—1. of having been engaged in the study of Medicine for four years. 2. Of having passed the preliminary examination of one of the recognised Licensing Corporations before the termination of the second year of medical study. 3. Of having studied at a school or schools recognised by the College the following subjects: Practical Anatomy; Anatomy and Physiology, or Institutes of Medicine; Botany; Chemistry; Practical Chemistry; Materia Medica; Practice of Medicine and Pathology; Surgery; Midwifery; Medical Jurisprudence. 4. Of having attended a Medico-Chirurgical Hospital in which regular courses of Clinical Lectures are delivered, together with clinical instruction, for twenty-seven months, or such hospital for eighteen months, with nine months at a medical hospital. 5. Of having attended Practical Midwifery for six months at a recognised Lying-in Hospital, or evidence satisfactory to the College of having attended Practical Midwifery. 6. Of character, from two registered physicians or surgeons. A candidate who has already obtained a medical or surgical qualification recognised by the College, is required to fill up a schedule which will be supplied on application, and to lodge it in the same manner, as a candidate not previously qualified; but the only documents which he is required to produce are his diploma or certificate of registration, and the certificate of Practical Midwifery, and testimonials as to character.

The examination is conducted, first by printed questions, to be answered in writing, and afterwards *viva voce*, and consists of two parts: —1. Anatomy; Physiology; Botany; Chemistry. 2. Materia Medica; Practice of Medicine; Medical Jurisprudence; Midwifery. Candidates will also be examined at the bedside.

Candidates qualified as follows are required to undergo the *second part* of the professional examination *only*; viz.—1. Graduates in Medicine of an University in the United Kingdom, or of any Foreign University approved by the College. 2. Fellows, Members, or Licentiates of the Royal College of Physicians of London or Edinburgh, who have been admitted upon examination. 3. Graduates or Licentiates in Surgery. 4. Candidates who, having completed the curriculum above mentioned, have passed the previous examination of any of the Licensing Corporations in the United Kingdom. Physicians or surgeons of five years' standing are further exempted from the written portion of the final examination. Fee for Licence in Medicine, £15 : 15; of which £3 : 3 are returned if the candidate be unsuccessful.

* In Greek and in Logic or Moral Philosophy, and in any one of the other optional subjects in the examination in General Education.—*Glasgow.* Natural History added in optional subjects.—*St. Andrew's.*

ROYAL COLLEGE OF SURGEONS IN IRELAND.

REGULATIONS REGARDING DIPLOMAS.

REGISTERED pupils are admitted to the preliminary examination at any period previous to the Final Examination for Letters Testimonial.* The preliminary examinations are held on the third Wednesdays in January, April, July, and October. Students who are not registered pupils are also admitted to answer the preliminary examination upon payment of ten shillings; but they are not enrolled as registered pupils, or entitled to the privileges of such pupils, until they have paid the full registration Fee of Five Guineas. No student is admitted as a candidate to the quarterly examination, or to the final examination for Letters Testimonial, until he has been enrolled as a registered pupil.

Letters Testimonial.

Every registered pupil shall be admitted to an examination for Letters Testimonial if he shall have laid before the Council the following documents:—A receipt showing that he has lodged a sum of £21 in the Bank of Ireland to the credit of the President, and for the use of the College, and certificates that he has passed an examination in the Greek and Latin Languages, and that he has been engaged in the study of his profession for not less than four years.

Examinations are held quarterly, commencing on the second Tuesday in January, April, July, and October, at which candidates are divided into two classes—Junior and Senior. The junior class must produce certificates of having attended three courses each of Lectures on Anatomy and Physiology, and on Practical Anatomy with Dissections; two courses of Lectures on Chemistry; one course each of Lectures on Materia Medica, Botany, and Forensic Medicine. This class is examined in Anatomy, Physiology, and Materia Medica. The senior class must produce certificates of having attended three courses of Lectures on the Theory and Practice of Surgery, and one course each of Lectures on the Practice of Medicine, and of Lectures on Midwifery; also of certificates of attendance on a recognised hospital for three winter and three summer sessions. This class is examined in Surgery, Operative Surgery, the Practice of Medicine, and forms of Prescription.

Candidates for Letters Testimonial or Fellowship of the College, being Licentiates of a College of Physicians or Graduates in Medicine of an University, are examined in General and Descriptive Anatomy, Physiology, the Theory and Practice of Surgery, and Operative Surgery; and, if recommended to the Council for admission as Licentiates, are admitted by the Letters Testimonial. The examinations are both oral and written. Candidates, whose answering shall be found insufficient, will not be allowed to present themselves a second time until after six months from their first examination.

The fee for the junior examination is £5 : 5; for the senior, £15 : 15; making, with the preliminary examination fee (10s.) and registration fee (£5 : 5), a total of £26 : 15 for Letters Testimonial. Every candidate rejected at the quarterly examination must pay £2 : 2 on applying for re-examination.

Fellowship.

Every registered pupil or licentiate may be admitted to examination for the Fellowship on producing a certificate that he is 25 years of age, and that he is a Bachelor of Arts, or has been examined with a view to ascertain that he has obtained a liberal preliminary education; also a certificate, signed by two or more Fellows of the College, of good general conduct. He must have been engaged in the acquisition of professional knowledge not less than six years (five years being required in the case of Bachelors of Arts), during three of which he must have studied in one or more of the schools and hospitals, recognised by the Council. The other three years may have passed in any approved

* The following are the subjects on which candidates for the Preliminary Examination will be examined:—The English Language, including Grammar and Composition. Arithmetic, including Vulgar and Decimal Fractions. Algebra, including Simple Equations. Geometry, first two Books of Euclid. Latin and Greek, including Translation and Grammar. In Greek—The Gospel of St. John, the *Menippus* of Lucian, or the First Book of Xenophon's *Anabasis*. In Latin—The First and Second Books of the *Æneid* of Virgil, the *Jugurthine War* of Sallust, or the Third Book of Livy.

school. He must also have acted as House-Surgeon or Dresser in a recognised hospital; and must have attended the lectures required of candidates for Letters Testimonial, together with one course of lectures on Comparative Anatomy, and one on Natural Philosophy. He must present a thesis on some medical subject, or clinical reports, with observations of six or more medical or surgical cases taken by himself.

Licentiates of the College, who may not be able to show that they have followed the course of study specified in the regulations, may, at the expiration of ten years from the date of their Diploma, be admitted to the examination for the Fellowship, on producing satisfactory evidence that they have conducted themselves honourably in the practice of their profession.

Each candidate for the Fellowship is examined on two days. The subjects of the first examination are Anatomy and Physiology (Human and Comparative); those of the second—Pathology, Therapeutics, the Theory and Practice of Medicine and Surgery, and such other branch of medical science as the Council may, from time to time, direct. The examinations are both oral and written. The candidates must perform Dissections and Operations on the dead body. Rejected candidates cannot present themselves a second time until after one year from the first examination.

The Fee payable is £21 if the candidate be a Licentiate, or £36 : 15 if he be a registered pupil; provided in either case he intends to reside beyond ten miles from Dublin. Should the candidate intend to reside in Dublin, or within ten miles thereof, he pays, if a Licentiate, £31 : 10; if a registered pupil, £47 : 5. Fellows entering on the country list, who may subsequently settle as Practitioners in Dublin, or within ten miles, thereof, must pay £10 : 10 to the College.

APOTHECARIES' HALL OF IRELAND.

REGULATIONS REGARDING THE LICENCE TO PRACTISE.

EVERY candidate for the Licence to practise is required to undergo a Preliminary and a Professional Education and Examination.* The Arts Examination will be held on the third Thursday in January, April, July, and October, at 12 noon. Answers in writing must be given to printed questions. Unsuccessful candidates will be remitted to their studies for six months.

Professional Education and Examination.

Every candidate for the Licence must produce certificates:—1. Of having passed an examination in Arts previously to entering on professional study. 2. Of being at least 21 years of age, and of good moral character. 3. Of apprenticeship to a qualified apothecary, or of having been engaged at a practical pharmacy with an apothecary for a period of three years subsequent to having passed the examination in Arts. 4. Of having spent four years in professional study. 5. Of having attended the following courses; viz., Chemistry, Principles and Practice of Medicine and Surgery, each during one winter session; Anatomy and Physiology, Demonstrations and Dissections, each during two winter sessions; Botany and Natural History, and Forensic Medicine, each during one summer session; Practical Chemistry (in a recognised Laboratory) and Materia Medica, each during three months; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised Hospital (twenty cases); instruction in vaccination. 6. Of having attended, at a recognised hospital or hospitals, the Practice of Medicine and Clinical Lectures on Medicine, during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery, during one winter and one summer session. 7. Of having performed vaccination successfully under a recognised vaccinator.

The examination for the Licence to practise is divided into two parts. The first part comprehends Chemistry, Botany, Anatomy, Physiology, and Materia Medica. The second—Medicine, Surgery, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Hygiene. The first part may be undergone at the close of the second winter session; and the second at the termination of the fourth winter session.

* The following are the subjects of Preliminary Examination:—*Compulsory.* 1. *English:* Grammar, Composition, writing from Dictation, the Roman History (the Punic Wars), and the English History (the reign of George I to the end of George III). 2. *Arithmetic and Algebra:* Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. *Geometry:* First Two Books of Euclid. 4. *Latin:* the Twenty-first Book of Livy, the First Three Books of the *Æneid* of Virgil, the First Two Books of the *Odes* of Horace (any two of the three). 5. *Greek:* the First Two Books of the *Anabasis* of Xenophon, the Ninth Book of the *Iliad* of Homer, the *Ajax* of Sophocles (any two of the three). 6. *French: Charles XII, Histoire de Vie* of Voltaire, or *Voyage en Orient* of Lamartine. 7. *German: Wilhelm Tell* or *Die Räuber* of Schiller.—Candidates will be examined in either French or German, as they may select.—*Optional.* 1. *Natural Philosophy:* Mechanics, Hydrostatics, and Pneumatics. 2. *Natural History:* The Classification, Elementary Structure, and General Physiology of Vegetables and Animals.

The examinations will be held on the first and second Mondays in January, April, July, and October.

Candidates who fail to pass the first part of the professional examination will be remitted to their studies for three months. Unsuccessful candidates at the pass examination will not be re-admitted until after six months.

UNIVERSITY OF DUBLIN.

DEGREES AND LICENCES IN MEDICINE.

THE degrees in Medicine and Surgery granted by the University are: 1. Bachelor of Medicine; 2. Doctor of Medicine; 3. Master in Surgery. It also grants Licences in Medicine and Surgery.

Bachelor in Medicine.

A candidate for the Degree of Bachelor in Medicine must be a Graduate in Arts, and may obtain the Degree of Bachelor in Medicine at the same commencement as that at which he receives his Degree of B.A., or at any subsequent commencement, provided the requisite medical education shall have been completed. The medical education is of four years' duration, and comprises attendance on a course of each of the following lectures: *Winter*—Anatomy; Practical Anatomy; Theoretical and Operative Surgery; Chemistry; Practice of Medicine; Midwifery. *Summer*—Botany; Institutes of Medicine; Materia Medica and Pharmacy; Medical Jurisprudence. *Term Courses*—Heat (Michaelmas); Electricity (Hilary); Magnetism and Comparative Anatomy (Trinity). Two courses of nine months' attendance on the clinical lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board.* Six months' instruction in practical Midwifery,† including clinical lectures. A certificate of personal attendance on fever cases, with names and dates of cases. Six months' dissection, and three months' laboratory instruction in Chemistry. Any of the winter or summer courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows.‡ The Fee for the *Liceat ad Examinandum* is £5; for the Degree of M.B., £11.

Doctor in Medicine.

A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the degree of M.B. for three years, and must perform exercises for the degree before the Regius Professor of Physic, in accordance with the rules and statutes of the Univerity. Total amount of fees for this Degree, £13.

Master in Surgery.

The Degree of Master in Surgery can only be obtained by students who are Bachelors of Arts, and who have completed the professional curriculum, and passed the examinations required. The curriculum comprises the following, in addition to the complete course for the M.B. Degree: Theoretical and Operative Surgery, one course; Dissections, two courses; Ophthalmic Surgery, one course; Nine months in Sir Patrick Dun's or other recognised metropolitan hospital, with clinical lectures. Attendance on the practice of a recognised county infirmary for two years previously to the commencement of medical study in Dublin, is allowed to count as one year of hospital attendance. Candidates are required to perform surgical operations on the dead subject. Candidates for the Degree of Master in Surgery, who have already passed the examination for the Degree of Bachelor in Medicine, will be examined in Anatomy and Surgery only. Fee for the *Liceat ad Examinandum*, £5; for the Degree of M.Ch., £11.

University Licences.

Candidates for the Licences in Medicine or Surgery must be matriculated in medicine, and must have completed two years in Arts and four years in medical studies.

In case the student should wish to continue the undergraduate course in Arts, with a view to the degree of B.A., his answering in the

[*Continued at page* 304.]

* The following Hospitals are recognised:—1. Sir Patrick Dun's Hospital; 2. Meath Hospital; 3. House of Industry Hospitals; 4. Dr. Steevens' Hospital; 5. Jervis Street Infirmary; 6. City of Dublin Hospital; 7. Mercer's Hospital; 8. St. Vincent's Hospital; 9. Adelaide Hospital; 10. Mater Misericordiæ Hospital.

† Certificates of Practical Midwifery are received from 1. the Rotundo Hospital; 2. the Coombe Hospital; 3. Sir P. Dun's Hospital Maternity; 4. Dr. Steevens' Hospital Maternity.

‡ The following schools, in addition to the School of Physic of Trinity College, are recognised:—1. The School of the Royal College of Surgeons in Ireland; 2. The Carmichael School; 3. The School of Dr. Steevens' Hospital. 4. The St. Peter Street School; 5. The School of the Catholic University. The recognition is conditional on the students being furnished with *bonâ fide* certificates of regular attendance equivalent to that required by the University; *i.e.*, three-fourths of the entire Lectures in each course.

GUIDE TO LONDON HOSPITALS AND MEDICAL SCHOOLS: 1872-73.

For further particulars regarding each Hospital and Medical School, see pp. 305 et seq.

Lectures, etc.	St. Bartholomew's Hospital.	Charing Cross Hospital.	St. George's Hospital.	Guy's Hospital.	King's College and Hospital.
WINTER SESSION.					
Physiology	Mr. Baker..Tu. Th. F., 2.30	Dr. Silver .. M. Tu. W. F., 3.30	Dr. W. Ogle..Tu. Th., 3; F., 11	Dr. Pavy..M. W. F., 4.15	Dr. Rutherford ..M. W. Th. F., 4
Anatomy, Descriptive and Surgical	Mr. Callender and Mr. T. Smith..Tu. W. Th. F., 9	Mr. Barwell.. M. W. F., 9; Th., 3	Mr. Rouse..M. W. F., 3	Mr. Durham and Mr.Howse ..Tu. W. Th. F., 9	Mr. Partridge .. Daily, exc. M., 9
Anatomical Demonstrations	Mr. Langton, Mr. Marsh.. Daily, 10.15 to 2	Mr. Bellamy and Mr.Cantlie ..Daily, 10	Mr. Bennett and Mr. Spitta	Mr. Davies-Colley, Mr. R. Rendle, and Mr. Lucas	Dr. Curnow and Mr. Perrin
Chemistry	Dr. Russell..M. W. F., 10	Mr. Heaton..M. Th. F., 11	Dr. Noad..Tu. Th. S., 11.30	Dr. Debus and Dr. Stevenson..Tu. Th. S., 11	Mr. Bloxam.... M. W. Th., 10.15
Medicine	Dr. Black, Dr. Andrew..M. Tu. Th., 3.30	Dr. Headland ....M. W. F., 12.30	Dr. Barclay..Tu. Th. S., 9	Dr. O. Rees and Dr.Wilks.. M. W. F., 3	Dr. Johnson .. Tu., 4 P.M.; Th. F., 5
Surgery	Mr. Savory.. W. Th., 2.30; S., 9 A.M.	Mr. Canton..Tu. Th. S., 9	Mr. Holmes and Mr. Pick ..M. W. F., 9	Mr. Birkett and Mr. C. Forster..Tu.Th.,3.30; F.,10.30	Mr. J. Wood..M. Tu. W., 5
Hospital Practice:					
Physicians	Dr. Black..M. Tu. Th., 1	Dr. Headland ..M. W. F. (Hour of Visit, 1 P.M.)	Dr. Fuller..Tu. S., 1	Dr. Owen Rees..Tu. Th. S., 1.30	Dr. Johnson..M. Th., 2
	Dr. Harris..Tu. Th. S., 1.30		Dr. Barclay..M. F., 1		
	Dr. Andrew..Daily, exc. W., 1.30	Dr. Pollock..Tu. Th. S.	Dr. J. Ogle..M. F., 1	Dr. Habershon..Tu. Th. S., 1.30	Dr. Beale..Tu. S., 2
	Dr. Southey..M. W. Th. S., 1.30	Dr. Silver..Tu. Th. S.	Dr. Wadham..Tu. S., 1	Dr. Wilks..M. Th., 1.30	Dr. Garrod..W. F., 2
				Dr. Pavy..M. F., 1.30	
Obstetric Physicians	Dr. Greenhalgh(in-p.)..Th., 1.30; (out-p.) S., 9	Dr. J. W. Black..M. W. F.	Dr. J. Clarke..in-p. Tu. S., 1; out-p., Th., 12	Dr. Braxton Hicks.. W. S., 1.30	Dr. Playfair.... Tu. Th. S., 1.30
Assistant-Physicians	Dr. Church..Tu. F., 11	Dr. Green..M. Th.	Dr. Dickinson..Tu. S., 12	Dr. Moxon..M., 12	Dr. Duffin..W. S., 1
	Dr. Gee..W. S., 11	Dr. Powell..Tu. F.	Dr. Whipham..M. F., 12	Dr. Fagge..Tu. F., 12	Dr. Yeo..M. Th., 1
	Dr. Duckworth..M. Th., 11	Dr. Poore..W. S.		Dr. Pye-Smith..W., 12	Dr. Kelly..Tu. F., 1
	Dr. Hensley			Dr. Phillips (*obs.*)....M. F., 1.30 (out.-p.) Th. S., 12	
Surgeons	Mr. Coote..M. W. F. S., 1.30	Mr. Canton..Tu. F.	Mr. P. Hewett..M. F., 1	Mr. Birkett..M. Th., 1.30	Sir W. Fergusson, Bart. .. Tu. Th. S., 1.30
	Mr. Holden..Tu. F. S., 1.30	Mr. Hird..W. S.	Mr. Pollock..Tu. S., 1	Mr. C. Forster..M. Th., 1.30	Mr. Wood..M. W. F., 1.30
	Mr. Savory.. M., 1; Tu. W. Th. F. S., 1.30	Mr. Barwell..M. Th.	Mr. H. Lee..Tu. S., 1	Mr. Bryaut..M. Th., 1.30	Mr. H. Smith..M. W. F., 1
	Mr. Callender..Daily, 1.30		Mr. Holmes..M. F., 1	Mr. Durham..W., 12	
Assistant-Surgeons	Mr. T. Smith..M. Th., 12.30	Mr. Bellamy..M. Th.	Mr. Rouse..Tu. S., 12; Th., 12 (*ear*)	Mr. Howse..M. Th., 12	Mr. H. R. Bell..Tu. Th. S., 1
	Mr. Willett..W. S., 12.30	Mr. Fairlie Clark..Tu. F.	Mr. Pick....M. F., 12	Mr. Davies-Colley..S., 12	
	Mr. Langton..Tu. F., 12.30				
	Mr. Morrant Baker				
Clinical Medicine	The Physicians..Weekly	The Physicians	The Physicians..M. F., 2 (Win.); M., 2 (Sum.)	The Physicians (Win.).. S., 1.30; The Assistant-Physicians (Sum.)..W., 1.30	Dr. Johnson..alt. M., 3
					Dr. Beale..alt. Tu., 3
					Dr. Garrod....alt. F., 3
Clinical Surgery	Sir J. Paget (Consulting Surgeon) and the Surgeons..Weekly	Mr. Hancock, and the Surgeons	The Surgeons..Tu., 2	The Surgeons (Win.) .. W., 1.30; The Assistant-Surgeons (Sum.)..F., 1.30	Sir W. Fergusson..alt. Th., 3
					Mr. Wood..alt. F., 3
Clinical Midwifery	Dr. Greenhalgh..Weekly	Dr. J. W. Black .....Fortnightly	Dr. J. Clarke	Dr. Hicks (Win.)..W., 1.30; Dr. Phillips (Sum.)..M., 3	Dr. Playfair..alt. Th., 3
Operations	Wednesday & Saturday, 1.30	Saturday, 2	Thursday, 1	Tuesday and Friday, 1.30; on Eye, M., 1.30	Weduesday, 2; Saturday, 1.30
SUMMER SESSION.					
Materia Medica	Dr. Farre and Dr. Brunton ..Tu. Th. S., 10; W., 11.30	Dr. Powell..Tu. Th. S., 9.45	Dr. Dickinson..M. W. F., 3	Dr. Habershou.... Tu. Th. F., 3	Dr. Garrod..Tu. W. Th. F., 8 A.M.
Botany	Rev. G. Henslow..M. W. F., 10	Dr. Dowson.. Tu. Th. S., 11	Mr. Child..Tu. Th. F., 12	Mr. C. Johnson..Tu. Th. S., 11.30	Mr. Bentley..M. Tu. Th. F., 12.15
Midwifery	Dr. Greenhalgh..Tu. W. F. S., 8.30 A.M.	Dr. J. W. Black..M. W. Th., 3	Dr. J. Clarke..M. W. F., 9	Dr. Braxton Hicks..Tu. W. Th. F., 8.45	Dr. Playfair..Tu. W. Th. F., 9
Forensic Medicine	Dr. R. Southey..M. Th. S., 9	Dr. Poore..M. W. F., 9	Dr. Wadham..Tu. Th. S., 9	Dr. Taylor..Tu. Th. S., 10	Dr. Ferrier .. M. Tu. W. F., 12.15
Practical Chemistry	Dr. Russell..M. Tu. F., 11	Mr. Heaton and Mr. Francis ..M. F., 10 to 1 ..Tu. Th., 4	Dr. Noad..M. W. Th. F., 10	Dr. Debus....M. W. F., 10 to 1	Mr. Bloxam.... M. W. Th., 10.15
Comparative Anatomy	Dr. Church (Winter)....M. Th., 11		Dr. Cavafy (Sum.)....M. F., 4.30	Dr. Pye-Smith (Sum.).. M. F., 1.30	Mr. Rymer Jones (Sum.).. Tu. F. S., 10 15
Practical Physiology and Histology	Mr. Symons	Dr. Silver and Mr. Bruce, M.B.	Dr. Cavafy....Tu. Th. S., 10	Dr. Pye-Smith (Win.)..M, Th. S., 1.30	Dr. Prichard (Win.)....Tu., 11.15; (Sum.)..M. W. F., 4
Pathology and Morbid Anatomy	Dr. Gee (lect.).... W., 9.30; (demons.) 1; Surgical Registrars, 2.30	Dr. T. H. Green (Sum.) Tu. F., 3; W., 4	Dr. Dickinson (Win.).. Th., 3	Dr. Moxon & Dr. Fagge, daily, 2.30 (Win.); S., 9 (Sum.)	Dr. Beale (Sum.)..Tu. Th., 4
Psychological Medicine	Dr. Claye Shaw (Sum.) .... Th., 12	Dr. W. J. Hunt..(Sum.) M., 12	Dr. Blandford..(Sum.) Tu., 3	Dr. Dickson (Sum.) M., 10	Dr. Sheppard (Sum.)..W., 4
Hygiene	Dr. Southey (Jan., Feb.) .. F., 3.30	With Forensic Medicine	With Medicine	Dr. Fagge (Sum.)..Th. S., 12.15	Dr. Guy
Practical and Operative Surgery	Mr. Willett..M. W. F., 2.30; Mr. Langton & Mr. Marsh	Mr. Canton and Mr. Clarke, Th., 4	Mr. Pick (Sum.)..M. W. F., 3	Mr. Durham (Sum.)....M. Th., 3	..
Ophthalmic Medicine and Surgery	Mr. Power (vis.) .. Tu. Th., 1.30; (lect.) Tu. W., 12.45; Mr. Vernon (vis.) Th. S., 1.30; (dem.) W., 2	..	Mr. R. B. Carter (vis.)..Tu. W. S., 2; Win. (lect.) W. 10	Mr. Bader (vis.)..W. S., 1.30; (out-p.)..Tu. F., 12 (lect. Sum.) F., 3	Mr. Soelberg Wells .. (vis.) Tu. Th. S., 1; (lect.)(Sum.) M. S., 9; (clin.)(Win.) alt. M. 3
Dental Surgery	Mr. Coleman ..(vis.) F., 9, (lect.) F., 10.30	Mr. Fairbank.. (vis.) M. W. F., 10; lect. in Sum.	Mr. Vasey (vis.) Tu. S., 9; Th., 1; (lect.) Sum. W., 10	Mr. J. Salter..Th., 12	Mr. Cartwright..Tu. F., 10; (clin.)(Win.) alt. Tu., 10.30
Aural Surgery	Mr. T. Smith..F., 2.30	..	Mr. Dalby	Mr. Hinton	..
Diseases of Skin	Dr. Duckworth..F., 1.30	..	Dr. Barclay (Sum.)..Th., 2	Dr. Fagge..Tu., 12 (Win.)	Dr. Duffin..Tu.
Vaccination	Dr. Gee & Dr. Duckworth, W.	Mr. R. W. Dunn	Obstetric Assistant..Th., 10	Dr. Phillips	..
Miscellaneous	*Natural Philosophy*: Dr. Hensley. *Orthopædic Surgery*: Mr. Willett..F., 12.30	*Case-taking*: Dr. Powell *Auscultation*: Dr. Green, W., 3	*Orthopædic Surgery*: Mr. Brodhurst (vis.) M. W. F., 2; (lect.) Win. Tu., 10 *Physiological Chemistry*: Mr. S. W. Moore..(Win.) M. W. F., 10	*Experimental Philosophy*: W., 12 (Win.)	*Diseases of Throat and Laryngoscope*: Dr. Johnson, W., 3 *Tutor's Class*: (Win.)..M. W. F., 5; (Sum.) daily, exc. S., 9

GUIDE TO LONDON HOSPITALS AND MEDICAL SCHOOLS: 1872-73.

For further particulars regarding each Hospital and Medical School, see pp. 305 et seq.

London Hospital.	St. Mary's Hospital.	Middlesex Hospital.	St. Thomas's Hospital.	University College and Hospital.	Westminster Hospital.
Dr. Fenwick and Dr. Woodman..M. W. Th., 4	Dr. Lawson..M. W. S., 12	Mr. Lowne..M. W. F., 4	Dr. Ord and Dr. J. Harley.. M. W. F., 4	Dr. Sharpey.. daily, exc. S., 10	Dr. Maclure..M. W. F., 4
Mr. Rivington ..M. Tu. Th. F., 3	Mr. Norton..M. Tu. Th. F., 2.45	Dr. R. Liveing and Mr. Morris..M. W. Th. F., 10	Mr. Mason and Mr. Wagstaffe ..M. Tu. Th. F., 3; S., 1	Mr. Ellis..daily, 12	Mr. Pearse..Tu. W. Th. F.,9
Mr. Adams, Mr. Tay, and Mr. McCarthy....10 to 3, exc. W. and S. aft.	Mr. E. Owen and Mr. Gawith.. daily, 9 to 5, exc. S., 10 to 1	Dr. R. Liveing ....daily, 11 to 4	Mr. Mason, Mr. Wagstaffe, Mr. Rainey, Mr. W. Anderson..daily, 9 to 3	Mr. Ellis, Mr. G. D. Thane, and Mr. W. Price, M.B.	Mr. Davy, Mr. Cooke, and Mr. Ramsay, daily, 10 to 1
Dr. Letheby and Dr. Tidy.. M. W. F., 10.30	Dr. Wright..M. Tu. Th. F., 9	Mr. Heisch ..M. Tu. F. S., 11	Dr. Bernays..W. Th. F., 11	Dr. Williamson..daily, exc. S.,11;(exerc.)Tu.W.Th F.,9	Dr. Dupré..Tu. Th., 3; F., 3.30
Dr. H. Davies, Dr. Ramskill, and Dr. Down (bef. Chr.) ..M. W. Th., 9.15; (after) Th., 9.15; Tu. F., 4	Dr. Chambers and Dr. Broadbent.. M. W. Th., 4	Dr. Greenhow..M. W. F., 9	Dr. Peacock and Dr. Murchison..M. Th. S., 2	Dr. Reynolds....daily, exc. M., 9	Dr. Anstie..M. Th. F., 3
Mr. Hutchinson and Mr. Couper..Tu. F. S., 9	Mr. J. R. Lane and Mr. Gascoyen..Tu. F., 4; W., 3	Mr. De Morgan..Tu.Th.S.,9	Mr. Le Gros Clark and Mr. S. Jones..M. F., 5; Th.,12	Mr. Marshall.. Tu. W. F., 4	Mr. Holthouse .... Tu. W. Th., 3
Dr. Davies..Tu. F.,8.30	Dr. H. Joncs..M. Th.,1.15	Dr. H. Thompson..Tu. Th. S., 1	Dr. Peacock	Sir W. Jenner, Bart.	Dr. Basham..M. Th., 1.30
Dr. A. Clark..M. Th., 1.30	Dr. Sieveking..Tu. F., 1.15	Dr. Greenhow..Tu. Th. S., 1	Dr. Bristowe	Dr. Reynolds	Dr. Fincham..W. S., 1.30
Dr. Ramskill..W. S., 1.30	Dr. Broadbent..W. S., 1.15	Dr. R. Liveing ..M. W. F., 1.30	Dr. Clapton	Dr. Wilson Fox	Dr. Radcliffo..Tu. F., 1.30
Dr. Down..Tu. F., 1.30			Dr. Murchison	Dr. Ringer	
Dr. H. Jackson..M. Th.,1.30				Dr. C. Bastian	
Dr. Head..Tu. F., 1.30	Dr. Meadows..Tu. F., 9.30	Dr. H. Davis(in-p.)..Tu. F., 1.30; (out-p) W. S., 1.30	Dr. Barnes	Dr. Graily Hewitt .. Twice weekly	Dr. F. Bird..Tu. F., 3
Dr. M. Mackenzie..W.S.,1.30	Dr. Cheadle..Tu. F., 1	Dr. Cayley..M. W., 8.30	Dr. Stone	Dr. F. T. Roberts	Dr. Anstie..M. Th., 1
Dr. Sutton..M. Th., 1.30	Dr. Lawson..W. S., 1	Dr. John Murray .. Tu., 4; F, 8.30	Dr. Ord	Dr. J. Williams (*obst.*)	Dr. Gibb..Tu. F., 1
Dr. Fenwick..Tu. F., 1.30	Dr. Shepherd..M. Th., 1		Dr. J. Harley		Dr. Sturges..W. S., 1
Dr. Woodman..Tu. F., 1.30	Dr. Wiltshire (*obs.*)	Dr. R. King..Th., 8.30; S., 4	Dr. Payne		Dr. Potter (*obst.*)..Tu. F., 1
Dr. Palfrey(*obs.*)..W.S.,1.30			Dr. Gervis (*obst.*)..S., 1		
Mr. Hutchinson..M.Th.,1.45	Mr. S. Smith..M. Th., 1.15	Mr. De Morgan..M. F., 1	Mr. Le Gros Clark	Mr. Erichsen	Mr. Holt..M. Th., 1.30
Mr. Maunder..Tu. F., 1.30	Mr. Walton..W. S., 1 15	Mr. Nunn..Tu. F., 1	Mr. Simon	Mr. Marshall	Mr. Holthouse..W, S., 1.30
Mr. Conper..W. S., 1.30	Mr. J. R. Lane..Tu. F., 1.15	Mr. Hulke..M. Th., 1	Mr. S. Jones	Sir H. Thompson	Mr. Pearse
Mr. Rivington..M. Th., 1		Mr. Lawson	Mr. Croft	Mr. Berkeley Hill	
				Mr. C. Heath	
Mr. J. Adams..Tu. F., 1.30	Mr. Gascoyen..M. Th., 1	Mr. Morris, M. F., 1; (*cancer*)..Th. 1.30	Mr. Mac Cormac	..	Mr. Cowell..M. Th., 1
Mr. Tay..M. Th., 1.30	Mr. A. T. Norton..W. S., 1	Mr. A. Clark..Th. S., 1	Mr. F. Mason		Mr. Davy..Tu. F., 1
Mr. McCarthy..M. Th., 1.30	Mr. E. Owen..Tu. F., 1		Mr. H. Arnott		Mr. T. Cooke..W. S., 1
Mr. Reeves..Tu. S., 1.30					
Physicians(Wiu.), Assistant Physicians (Snm.), in rotation twice weekly.	Dr. H. Jones..M.	The Physicians..F., 3	The Physicians, after or during visits	Sir W. Jenner and Dr. Roynolds..M. Tu. Th. F.,1 to 3	The Physicians..weekly
The Surgeons	Dr. Sieveking..alt. F.	The Surgeons..M., 3	The Surgeons, after or during visits	Dr. W. Fox..twice weekly	The Surgeons..weekly
	Dr. Broadbent..alt. S.			Mr. Marshall and Sir H. Thompson..M. W. S., 1 to 3; Mr. Erichsen..weekly; Dr. G. Hewitt fortnightly	
	Mr. S. Smith..Th.				
	Mr. H. Walton..alt. S.				
	Mr. J. R. Lane..alt. Tu.				
Dr. Head..2nd F. in mo.; Dr. Palfrey..alt. Tu.	Dr. A. Meadows..alt. F.	Dr. Hall Davis..Tu., 10	Dr. Barnes..W., 5		..
Wednesday, 2	Wednesday, 1.30	Wednesday, 1	Wednesday, 1.30; Saturday, 9.30	Wednesday, 2	Tuesday, 2
Dr. Prosser James..Tu. Th. F., 4	Dr. Cheadle ..Tu. W. F. S., 12	Dr. Thorowgood..M. W. F., 4	Dr. Clapton..M. W. F., 8	Dr. Ringer.. M. 9; Tu. W. Th. F., 10	Dr. Sturges..M. Th. F., 3
Mr. Baker..M. W. F., 11	Dr. Trimen..M. W. F., 9	Mr. Hensman..M. W. F.,10	Rev. J. W. Hicks, M.D.	Mr. Oliver..daily, exc. S., 8 A.M.	Mr. Bennett..M. W. F., 9.30
Dr. Head..M. W. Th. F., 3	Dr. A. Meadows..daily, exc. S., 9	Dr. Hall Davis..M. W. F., 9	Dr. Barnes..Tu. W. Th. S.,8	Dr. Graily Hewitt.. Tu. W. F. S., 9	Dr. F. Bird..Tu. Th. F., 4
Mr. Rodgers and Dr. Tidy—daily, exc. S., 10	Dr. Randall..M. Tu. Th., 10	Dr. Divers..Tu. Th. S., 9	Dr. Stone and Dr. Gervis .. Tu. S., 12; F., 8	Dr. Maudsley .. Tu. W. Th. F., 10	Dr. Gibb and Dr. Lee..Tu. W. F., 3
Dr. Letheby..M. Th. S., 9	Dr. Wright ..M. Th., 11.30; S., 9 A.M.	Mr. Heisch..M. Tu. F., 11	Dr. Bernays..Tu. Th. S., 11	Dr. Williamson (elem.), Tu. W.Th. F.,11; (sen.),M.S.,10	Dr. Dupré..Tu. Th. S., 10
Mr. A. Sanders, Tu. Th., 11	Mr. St. G. Mivart (Snmmer) W. F., 10	Dr. Murie (Sum.)..Tu.Th.,4	Mr. Stewart (Sum.)..M. W., 11.30	Dr. Grant(Win.)..daily, exc. S., 3	Mr. Carter Blake (Sum.).. W. S., 11
Dr. Fenwick and Dr. Woodman..M. W. Th., 4	Dr. Shepherd (Win.) Tu. W. F., 10	Mr. Lowne (Sum.) ..Tu. W. Th., 3	Dr. Ord and Dr. Harley (Sum.)..M. Th. F., 1	Dr. Burdon Sanderson(dem.) daily, exc.S., 9; (lect.) S.,11; Laboratory, daily, 9 to 4	Dr. W. H. Allchin (Win.) .. Th., 12
Dr. Sutton (Win. and Sum.) Th., 12.30	Dr. Cheadle (Win.) Tu. F., 12	Dr. Cayley and Dr. Murray (Win.)..M. Th., 4	Dr. Bristowe..Th., 4	Mr. Beck (Surg.), Jan. Feb. Mar.,M.Th.,4; Dr.Bastian (Snm.) M. W. F., 4	Dr. Lee (Win.) .. S., 9; Dr. Allchin and Mr. Ramsay 2 P.M.
..	With Forensic Medicine	Dr. H. Rayner	Dr. Payne & Mr. Arnott, F.,1	Dr. Sankey (Snm.).. M. Tu. W, 3; (clin.), Tu. 2	Dr. Sutherland..Tu. W. F., 3
With Forensic Medicine	With Forensic Medicine	..	Dr. W. R. Williams	Dr. Corfield (Sum.), Tu. F., 12	..
Mr. Maunder (Sum.)	Mr. Gascoyen	Mr. Hulke, Mr. Lawson, and Mr. Morris	With Forensic Medicine	Mr. Hill (Oct. Nov. Dec.).. M. Th., 4; Mr. Heath.. (Snm.) daily, 2	Mr. Davy (bandaging, etc., (Sum.)..F., 12
Mr. Hutchinson lect. (June) Tu. F., 8 A.M.; Mr. J. Adams and Mr. Tay, W. S., 9	Mr. Walton.... Vis. M. Th., 1.30; lect. (Sum.) Th., 2 45	Mr. Hulke (vis.)....Tu. F., 8.30; (clin.)..alt. Tu., 3	Mr. Croft & Mr. Mac Cormac ..(Win.) M., 1; (Sum.) M. Th., 2	Mr. W. Jones.. (vis.) M. W. F., 1; lect. (Sum.) Tu. Th; (clin.) alt. weeks	Mr. Cowell
Mr. Barrett (vis.) ..Tu., 10; lect. (March) 5	Mr. H. Hayward .. Tu. Th. S., 9.30	Mr. Tomes and Mr. Turner, daily 9	Mr. Liebreich....(Win.) M. Th., 3; (Sum.) M., 3	Mr. Ibbetson (Winter).. M. Th., 4; (clin.) W., 10	Mr. J. Walker ..W. S., 9.15
Mr. Rivington and Mr. Reeves..S., 9	Mr. Allen (loct.) F., 3; (vis.) Tu. F., 2	Mr. A. Clark..M., 1	Mr. Elliott	..	..
Mr. McCarthy..W., 9; Mr. Hutchinson (lect.) (Sum.)	Dr. Jones and Dr. Cheadle ..Tu. Th., 1.30; Dr. Cheadle (lect.) Th., 3 (Snm.)	Dr. R. Liveing (Sum.).... Th, 4	..	Dr. Tilbury Fox..(vis.) S., 9; (clin. lect.) alt. S., 4	..
Assist. Obst. Phys. and Resident Accouchenr	Mr. Snmnor	Dr. W. Pearse	..	Mr. G. L. Cooper or Mr. W. Pearse	Dr. W. Pearse
Diseases of Throat: Dr. M. Mackenzie (Sum.)	*Diseases of Throat:* Mr. Norton .. W. S., 12.30	*Laryngoscopic Demons.:* Dr. J. Murray	*Physics and Natural Philosophy:* Mr. Stone (Win.)..Tu., 4		*Natural Philosophy:* Mr. Brooke (Sum.)..Tu.,3
Acoustics: Dr. Tidy		*Parasitic Diseases:* Dr. Cobbold	*Geography of Disease:* Mr. Haviland (Win.)		

In-p., 8.30 to 9.30 A.M.; out-p., daily, 12.30.

1 and 2 daily.

1 & 2 daily.

[*Continued from page* 301.]

matriculation examination* will be reckoned as equivalent to the entrance examination and the Hilary examination of the Junior Freshman year.

The medical course and examination for the Licence in Medicine is the same as for the Degree of M.B. A Licentiate in Medicine, on completing his course in Arts, and proceeding to the Degree of B.A., may become a Bachelor in Medicine, on paying the Degree fees, without further examination in medicine. Fee for the *Licet ad Examinandum*, £5; for the Licence in Medicine, £5.

The surgical course and examination necessary for the Licence in Surgery, are the same as for the Degree of Master in Surgery. Fee for the *Licet ad Examinandum*, £5; for the Licence in Surgery, £5.

Examinations.

Candidates for Degrees and Licences in Medicine and Surgery are required to pass an examination in the following subjects previously to their Degree examination: Descriptive Anatomy; Botany, Materia Medica and Pharmacy; Chemistry; and Physics. Two Medical Scholarships, of £20 each for two years, are awarded to the best answers at the previous examinations, on certain conditions. Candidates for Degrees and Licences in Medicine and Surgery are examined at the bedside.

Qualifications in State Medicine.

Doctors of Medicine, who wish to obtain from the University a certificate of qualification in State Medicine, can do so on passing an examination in a limited course of the following subjects: 1. Law; 2. Engineering; 3. Pathology; 4. Vital and Sanitary Statistics; 5. Chemistry; 6. Meteorology; 7. Medical Jurisprudence.

QUEEN'S UNIVERSITY IN IRELAND.

THIS University grants the Degrees of Doctor in Medicine and Master in Surgery. It includes three Colleges—The Queen's Colleges of Belfast, Cork, and Galway—each of which possesses a Faculty of Medicine. The curriculum of medical study extends over a period of four years, and is divided into two periods of two years each. The first period comprises attendance on Chemistry, Natural History, Anatomy and Physiology, Practical Anatomy, Materia Medica and Pharmacy. The second period comprises attendance on Anatomy and Physiology, Practical Anatomy, Theory and Practice of Surgery, Midwifery and Diseases of Women and Children, Theory and Practice of Medicine, Medical Jurisprudence. At least two of the above courses of lectures must be attended in some one of the Queen's Colleges; the remainder may be taken, at the option of the candidate, in any University, College, or School, recognised by the Senate of the Queen's University. Candidates are required before graduating to have also attended in one of the Colleges of the Queen's University Lectures on Experimental Physics and on one Modern Language, and to have passed the Matriculation Examination. They are further required to attend, during the first period, Practical Chemistry in a recognised laboratory, and the practice during six months of a recognised Medico-Chirurgical Hospital, containing at least sixty beds, together with clinical lectures delivered therein; and to have attended, during the second period, a recognised Midwifery Hospital, with the clinical lectures therein delivered, for a period of three months; or a Midwifery Dispensary for the same period; or ten cases of labour, under the superintendence of the medical officer of any hospital or dispensary where cases of labour are treated; and eighteen months' practice of a recognised Medico-Chirurgical Hospital containing at least sixty beds, and in which clinical instruction is delivered.

There are two University examinations—one comprising the subjects of study in the first period, the other the subjects of the second period. The University examinations are held twice in each year, in June and September. Candidates who commence their medical studies elsewhere are admitted to the first University examination before proceeding to College. Further information will be found in the *Queen's University Calendar;* or may be obtained by application to the Secretary, Queen's University, Dublin Castle.

THE ARMY AND NAVY MEDICAL SERVICES.

THE Regulations to be observed by candidates for admission to the Medical Services of the Army or Navy are identical, with a few slight exceptions.

1. Every candidate desirous of presenting himself for admission to the Army or Navy Medical Service must be unmarried, and not under 21 nor over 28 years of age. He must produce a certificate from the district Registrar, in which the date of birth is stated; or if this cannot be obtained, an affidavit from one of the parents or other near relative, who can attest the date of birth, will be accepted. He must also produce a certificate of moral character [from the parochial minister, if possible].*

2. The candidate must make a declaration that he labours under no mental or constitutional disease, nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a medical officer in any climate.† He must also attest his readiness to engage for general service, and to proceed on foreign service when required to do so.

3. The candidate must be registered under the Medical Act of 1858 as licensed to practise Medicine and Surgery in Great Britain or Ireland.

4. Certificates of registration, character, and age, must accompany the schedule when filled up and returned.

5. Candidates will be examined by the Examining Board in the following subjects: Anatomy and Physiology; Surgery; Medicine, including Therapeutics, the Diseases of Women and Children, Chemistry and Pharmacy, and a practical knowledge of drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.) The eligibility of each candidate for the Army or Navy Medical Service will be determined by the result of the examinations in these subjects only. Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany with special reference to Materia Medica, and the number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of science.‡

6. After passing this examination, every candidate will be required to attend one entire course of practical instruction in the Medical School at Netley, on—1. Hygiene; 2. Clinical and [Naval and§] Military Medicine; 3. Clinical and [Naval and§] Military Surgery; 4. Pathology of Diseases and Injuries incident to [Naval and§] Military Service.

7. At its conclusion, the candidate will be required to pass an examination on the subjects taught in the school. If he give satisfactory evidence of being qualified for the practical duties of an Army or Naval Medical Officer, he will be eligible for a Commission as Assistant-Surgeon.

8. During the period of his residence at the Netley Medical School, each candidate will receive an allowance of 5s. *per diem* with quarters, or 7s. *per diem* without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the Regulation undress uniform of an Assistant-Surgeon, but without the sword).

9. All candidates will be required to conform to such rules of discipline as the Senate may, from time to time, enact.

[10. After completing three years' full-pay service, Assistant-Surgeons will be allowed to be examined for the rank of Surgeon, but no Assistant-Surgeon can be promoted to the rank of Surgeon until he shall have served five years, two of which must have been in a ship actually employed at sea.§]

NOTES CONCERNING THE HOSPITALS AND MEDICAL SCHOOLS IN LONDON.

IN addition to the Tables of the Classes, etc., and hours of attendance, given at pages 302 and 303, we subjoin Abstracts of the Programmes issued by the several Medical Schools. We have extracted those points of information which are of most interest to the student, in addition to those given in the tables. It will be seen, that many of the Schools make arrangements by which the course of instruction required by the

* The following are the subjects of examination. Homer's *Iliad*, Books I, II (omitting Catalogue of Ships), III; Lucian's *Dialogues* (Walker's edition); Xenophon's *Anabasis*, Books I, II, III; Virgil, *Æneid*, Books I, II, III; Sallust; Horace, *Satires;* Latin Prose Composition; English Prose Composition; English History; Modern Geography; Arithmetic; Algebra, to the end of Simple Equations; Euclid, Books I, II, III.

* Army Regulations.

† His physical fitness will be determined by a Board of Medical Officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. [A moderate degree of myopia would not be considered a disqualification, provided it did not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes existed.—*Army.*] Every candidate must also be free from organic disease of other organs, and from constitutional weakness or other disability likely to unfit him for military or naval service in any climate.

‡ [Marks will also be given to candidates who are willing to pass an examination in French or German.—*Army.*]

§ Naval Medical Service.

Examining Boards for the general practitioner can be compounded for, by paying a sum either at once or in periodical instalments. For the information of those who may wish to attend separate classes in any school for one or more sessions, we give the respective fees demanded in each school. To avoid repetition, and save space, the titles of the classes are indicated by letters, thus:

a. Anatomy and Physiology.
b. Descriptive and Surgical Anatomy.
c. Anatomical Demonstrations.
d. Chemistry.
e. Medicine.
f. Surgery.
g. Materia Medica.
h. Midwifery and Diseases of Women.
i. Botany.
k. Forensic Medicine.
l. Practical Chemistry.
m. Comparative Anatomy.
n. Pathology and Morbid Anatomy.
o. Dental Surgery.
p. Ophthalmic Surgery.
q. Operative Surgery.
r. Practical Physiology or Histology.
s. Mental Diseases.
H.P. Hospital Practice.

ST. BARTHOLOMEW'S HOSPITAL.—Aggregate Fee, £105, or three instalments of £36 15s. each in the first winter, first summer, and second winter.—For general subjects for students of Dental Surgery, £52 10s.; or, first winter, £26 5s.; first summer, £26 5s.—Separate Classes: *a* and *b*, single, £7 7s.; perpetual, £10 10s.; *c*, one course, £3 3s.; one session, £5 5s.; *d*, *e*, *f*, *r*, single, £5 5s.; perpetual, £7 7s.; *g*, *h*, single, £5 5s.; perpetual, £6 6s.; *i*, *k*, single, £3 3s.; perpetual, £4 4s.; *l*, single, £2 2s.; *m*, *n*, *o*, *p*, *s*, single, £2 2s.; perpetual, £3 3s. (the lectures on Dental and on Ophthalmic Surgery and on Mental Diseases, are free to students of the Hospital); *q*, one course, £4 4s. H.P., Medical—6 months, £12 12s.; 2 years, £18 18s.; unlimited, £26 5s. Surgical—6 months, £15 15s.; 12 months, £21; unlimited, £26 5s. House-Physicianships and House-Surgeoncies, £26 5s. Dresserships—3 months, £12 12s.; 6 months, £18 18s.; 12 months, £26 5s.

The Anatomical Museum, and the Museum of Materia Medica and of Botany, are open to students daily from 10 A.M. to 4 P.M.—The Reading Room is open every day; during winter, from 10 to 5; summer, 9 to 5; vacations, 10 to 2.30. Subscription to Library, one year, £1 1s.; 4 years, £2 2s.

College.—Students are admitted to residence in the College on the recommendation of a medical officer of the Hospital, which may be obtained on adducing satisfactory evidence of good moral character. The entrance-fee is £2 2s. All information regarding the College may be obtained on application to the Warden, Mr. W. Morrant Baker.

Exhibitions, Scholarships, and Prizes.—Jeaffreson Exhibition: £20 yearly, tenable for two years. Confined to students of less than six months' standing. Examination on October 21, 1872: Subjects, those of Preliminary Education appointed by the General Medical Council. —Seven Scholarships are awarded. Two Senior Scholarships, value £50 and £25, in Medicine, Surgery, and Materia Medica and Therapeutics. Two Senior Scholarships, of the same value, in Anatomy, Physiology, and Chemistry. Three Junior Scholarships, of the value of £50, £30, and £20, will be awarded after the general examinations at the end of the summer and winter sessions.—Wix Prize, for the best essay on "The Evidence to be deduced from Holy Scripture that the Study and Use of the Healing Art are in accordance with the Will of God."—Hichens Prize: subject of examination, Bishop Butler's *Analogy*.—Bentley Prize, for the best report of not less than twelve medical cases occurring in the wards of the hospital during the previous year. —Foster Prize, for Practical Anatomy—Senior.—Treasurer's Prize, for Practical Anatomy—Junior.—The Kirkes Gold Medal for Clinical Medicine.—The conditions under which the exhibitions, scholarships, and prizes are awarded, will be found in the prospectus of the College.

Appointments.—Four House-Physicians and four House-Surgeons (who must be qualified to practise) are appointed annually. Fee, £26 5s. Each of these officers is provided with rooms, and receives a salary of £25. Two Midwifery Assistants are appointed every six months, and are provided with rooms.—An Ophthalmic House-Surgeon is appointed for six months.—Sixteen Dressers to the surgical in-patients and the surgical casualty department are selected each year from the students of the second year. Other dresserships may be obtained by payment of the usual fees.—The Clinical Clerks to the medical in-patients, and the Clerks to the Physician-Accoucheurs, are chosen from the most diligent students.—There are also Clerks to the Assistant-Physicians and the Assistant-Surgeons in the special departments.

Examinations.—Students preparing for their examinations are arranged in classes, and examined by the lecturers and demonstrators.

An examination of all students of the first year is held at the close of the first winter and first summer sessions.

CHARING CROSS HOSPITAL.—First year: *a*, *b*, £4 4s.; *c*, *g*, £3 3s.; *d*, £5 5s.; *i*, *l*, £2 2s.; H.P., £10 10s.; Matriculation, £2 2s.—total, £36 15s. Second year: *a*, *b*, *c*, *k*, *n*, £2 2s.; *e*, £4 4s.; *f*, *h*, £3 3s.; H.P., £10 10s.—total, £31 10s. Third year: *e*, *f*, £2 2s.; H.P., £10 10s.—total, £14 14s. Matriculated students receive a deduction of eight per cent. H.P.; matriculated students, for full period required by Examining Boards in London, £31 10s.; non-matriculated students, either medical or surgical, 3 months, £6 6s.; 6 months, £10 10s.; 12 months, £15 15s.; full period, £21; both, medical and surgical, 3 months, £10 10s.; 6 months, £15 15s.; 12 months, £21; full period, £3 10s. For a longer period, £5 5s. for each additional winter, and £3 3s. for each additional summer session.

Gentlemen who enter for their entire medical education at Charing Cross Hospital (matriculated students) enjoy certain privileges.—Students who enter from other medical schools for the remainder of their education are allowed to matriculate. Students (non-matriculated) may enter for one or more separate courses, or to the Hospital Practice. Such students are admitted to the Library on terms proportioned to the period for which they enter.

Scholarships, Medals, and Prizes.—The Llewellyn Scholarship of £25, open to all matriculated students who have just completed their second year. Examination at the end of the second summer session, in Descriptive and Surgical Anatomy, Physiology, Materia Medica, Medicine, Surgery, Midwifery.—The Golding Scholarship, £15 a year, tenable for two years, open to all matriculated students who have just completed their first year. Examination at the end of the first summer session, in Descriptive Anatomy, Physiology, Materia Medica, and Chemistry.—The following Medals are awarded annually: The Gold Medal for General Proficiency; the Governor's Clinical Silver Medal; Silver and Bronze Class Medals and Certificates of Honour in all the classes.—Free scholarships are awarded to sons of professional men of reduced circumstances and position, or of gentlemen in a corresponding station of society. Two of the free scholarships are annually placed at the disposal of the authorities of the Royal Medical Benevolent College.

Appointments.—The office of Medical and Surgical Registrar is opened to students of Charing Cross Hospital who are doubly qualified; salary, £50 a year, tenable for two years. The offices of House-Physician, House Surgeon, and Resident Accoucheur, with six months' rooms and commons in the Hospital, are awarded to senior students (qualified men being preferred), after competitive examination.—Clinical Clerks and Dressers are appointed by competitive examination for three months.—A Pathological Assistant is appointed for three months.

The *Library* contains the standard medical and surgical works and the current medical periodicals, and is furnished with a cabinet of Materia Medica and Osteological Preparations. It is open daily from 9.30 A.M. to 4.30 P.M.

ST. GEORGE'S HOSPITAL.—Perpetual Fee, £105,* or £115 10s. from those who have paid by instalments.—Aggregate Fees, £42 for first year, £42 for second year, and £10 10s. for each succeeding year.† Lectures and Hospital Practice for Diploma in Dental Surgery, £45 (none of these fees include Practical Chemistry).—Separate Classes—*a*, *b*, *e*, *f*, single, £6 6s.; perpetual, £7 7s.; *d*, single, £6 6s.; perpetual, £8 8s.; *g*, *k*, single, £4 4s.; perpetual, £5 5s.; *h*, single, £5 5s.; perpetual, £6 6s.; *i*, single, £3 3s.; perpetual, £4 4s.; *l*, single, £4 4s.; *n*, single, £5 5s. H. P.—Physicians', 6 months, £8 8s.; 3 years, £16 16s.; perpetual, £25 4s.; Surgeons', 6 months, £15 15s.; 3 years, £21; perpetual, £42.

Medical Tutor.—The studies of the pupils will be superintended by a medical tutor. Fee, £1 1s. *per annum*, and £5 5s. in addition for instruction in the special subjects required for each examination at the University of London.

Hospital Appointments. — House-Physicians, House-Surgeons, an Assistant House-Physician, and an Assistant House-Surgeon, half-yearly, from among the perpetual pupils. The House-Physicians and House-Surgeons hold office for twelve months, and reside and board in the hospital free of expense.—An Obstetric Assistant, who must be a legally qualified practitioner, is appointed annually. He resides and boards in the hospital, and receives a yearly salary of £100.—An Ophthalmic Assistant, an Orthopædic Assistant, a Curator of the Pathological Museum, a Medical and Surgical Registrar, and a paid Demon-

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* Perpetual Pupils are entitled to admission to the practice of the Physicians and Surgeons, to all the Lectures (except Practical Chemistry), to compete for all Prizes and Exhibitions, to hold the appointments of House-Physician, House-Surgeon, and Assistant House-Surgeon, and to become Clinical Clerks for two periods of three months each, and Dressers for two similar periods. This payment must in all cases be made at the time of entry.

† By payment of these Fees, a Pupil is entitled to hold the offices of Clinical Clerk and Dresser, but not to become House-Physician or House-Surgeon, or to compete for the "William Brown Exhibition" and the "Clinical" Prizes.

strator of Anatomy, are appointed annually from among the senior pupils. The Curators and Registrars each have a salary of £50. One of the pupils is appointed to assist the Curator in performing *post mortem* examinations.

Clinical Instruction.—The pupils of the hospital are divided into classes under the superintendence of the physicians and surgeons in rotation, and are placed in charge of cases as clerks and dressers.

A course of Lectures on Diseases of the Brain will be given in the winter session by Dr. Lockhart Clarke.

The *Library* and *Reading Room*, and the *Museum*, are open daily. Annual subscription to Library, 10s. 6d.

Exhibitions and Prizes.—The William Brown Exhibition, for general fitness and moral conduct, £40 *per annum*, tenable for three years.—Sir Charles Clarke's Prize, interest of £200 annually, for good conduct.—The Thompson Silver Medal for the best clinical report (with observations) of medical and surgical cases (not more than twenty in each department) observed during the preceding year.—Sir Benjamin Brodie's Clinical Prize in Surgery, for the best report (with notes) of not more than twenty surgical cases in the hospital during the preceding twelve months.—Dr. Acland's Clinical Prize in Medicine, for the best record of not more than twelve cases of disease treated in the preceding twelve months.—The Henry Charles Johnson Memorial Prize, for Practical Anatomy.—Treasurer's Prize, for proficiency in clinical examinations in three Medical and three Surgical cases.—General Proficiency Prizes, £10 10s. for students of each year.

GUY'S HOSPITAL.—First year, £40; second year, £40; third year, £20; each succeeding year, £10. Perpetual ticket, £105. Materials used in practical courses are charged extra. Separate courses: *a*, *b*, *c*, *d*, *e*, *f*, *h*, *q*, each course, £5 5s.; *g*, *i*, *k*, *l*, *m*, *r*, *s*, each course, £4 4s.; Natural Philosophy, £4 4s; H.P., either medical or surgical, 3 months, £10 10s.; 6 months, £15 15s.; perpetual, £26 5s.

Prizes.—Voluntary examinations are held as follows. 1. At entrance, in Elementary Classics, Ancient and Modern History, and Mathematics. The first three of the successful candidates receive £25, £20, and £15. The entrance examination will commence on October 7th. 2. At end of first session, in Anatomy, Physiology, Chemistry, Materia Medica, Botany, and Comparative Anatomy. Three prizes of £30, £25, and £10 10s. 3. At end of second year, in Anatomy and Physiology, Medicine, Surgery, Midwifery, Chemistry, and Therapeutics. Two prizes of £35 and £30. 4. At end of third year, in Medicine, Surgery, Midwifery, and Medical Jurisprudence. Two prizes of £40 and £35. Honorary certificates are given to those gentlemen who pass creditable examinations. Special certificates are given to gentlemen who have attended 100 cases of Midwifery.—Two Gold Medals given annually by the Treasurer to students who have completed the third and not exceeded the fourth year, for proficiency in Clinical Medicine and Clinical Surgery.

Clinical Instruction.—Two wards, containing together forty beds, are especially devoted to clinical teaching in Medicine. The Surgeons lecture upon selected cases during the winter, and the Assistant-Surgeons in the summer. The Obstetric Physicians, and the Ophthalmic, Dental, and Aural Surgeons, also give clinical and practical instruction.

Every facility and encouragement is given for clinical study and reporting. All students have opportunities of becoming Ward-Clerks to the Physicians and Surgeons.

Under the superintendence of the Registrars, accurate records are taken and preserved of all cases admitted.

Pupils' Appointments.—All these appointments are given according to the respective merits of the candidates, and without payment.

Four House-Physicians are appointed by the Treasurer in each year. They hold office for six months each—three months as junior, three as senior. Six House-Surgeons and twelve Obstetric Residents every year. The former hold office each for four months, the latter for two months. The Senior House-Physician, House-Surgeon, and Obstetric Resident, reside in the hospital, and are boarded free of expense.—The Clinical Assistants are selected from those students who have been medical ward-clerks.—The Dressers are selected from those who have been surgical ward-clerks. They hold office for six months each. During their weeks of special duty, they reside in the hospital, and board free of expense.—The Dressers in the Eye-Wards hold office for four months each.—The Assistant-Surgeons' Dressers and Dressers in the Surgery are appointed for three months.—Dressers are appointed to the Dental and the Aural Surgeon respectively for two months.—The *Post Mortem* Clerks are selected from students who have completed their second year. They hold office for two months each.—Extern Obstetric Attendants are appointed monthly to attend the cases of Midwifery, in addition to the casual attendants.—The Reporters or Ward Clerks are chosen from those students who have been diligent in their earlier studies.—Clerks to the Assistant-Physicians and Assistant-Surgeons are also appointed.—A special honorary certificate is given to every gentleman who has diligently performed the duties of the various offices.

School Department.—There are two Lecture Theatres, Museums of Anatomy, Pathology, and Comparative Anatomy, Model-rooms, Dissecting-rooms, a Museum of Materia Medica, Chemical Laboratories, and a Library.—The Museum of Human Anatomy is divided into anatomical and pathological departments. The anatomical department contains about 2,000 preparations of the various organs and tissues. The pathological department is divided into twelve sections, and contains upwards of 5,000 specimens, with more than 2,000 drawings.—The Museum of Comparative Anatomy contains 2,000 specimens.—In the Physiological Laboratory, experiments are prepared for practically illustrating the lectures on Physiology.—The Museum of Materia Medica contains specimens of the drugs in general use.—A Laboratory is adjacent.—The Laboratory for Practical Chemistry is open during the summer months.—The Library contains upwards of 5,000 volumes, and is open to the students daily from 10 A.M. to 4 P.M.

The Pupils' Physical Society meets on alternate Saturdays, at seven in the evening. A prize of £10 from the funds of the Society is given at the end of the session to the member who sends in the best essay and report of cases. A second prize of £10 is given to the member who is judged to have read the best essay before the Society.

KING'S COLLEGE AND HOSPITAL.—Aggregate Fee for Matriculated Students, £105.* This payment covers two courses of Anatomy, Medicine and Surgery, and one course each of Physiology, Practical Physiology, Chemistry, Practical Chemistry, Obstetric Medicine, Botany, Forensic Medicine, Materia Medica, Pathological Anatomy, as well as attendance at the Hospital for a period of three years from the beginning of the first Winter Session. The payments may be made by payment of £100 on entrance; or £52 10s. on entrance, £42 at the beginning of the second winter session, and £10 10s. at the beginning of the third winter session. For each additional year, £10 10s. For right to attend perpetually on Hospital Practice and all the courses of lectures above mentioned, with Comparative Anatomy, £120 in one payment; or £60 on entrance, £40 at the beginning of the second winter session, and £30 at the beginning of the third winter session. Separate Classes, *a*, *b*, *d*, single, £7 7s.; unlimited, £10 10s.; *e*, *f*, single or unlimited, £7 7s.; *g*, *h*, *i*, *k*, single, £4 4s.; unlimited, £5 5s.; *l*, single, £4 4s.; perpetual, £7 7s.; *m*, single, £3 3s.; unlimited, £4 4s.; *n*, single, £2 2s.; unlimited, £3 3s.; *p*, single, £3 3s.; *r*, single, £5 5s.; two courses, £8 8s. Tutor's Class, £3 3s. H.P.—Three years' course, matriculated students, £31 10s.; not matriculated, £42; perpetual, matriculated students, £42; not matriculated, £52 10s. Medical practice—3 months, £6 6s.; 6 months, £10 10s.; 18 months, £15 15s.; perpetual, £21. Surgical practice—3 months, £10 13s.; 6 months, £15 15s.; 12 or 21 months, £21; perpetual, £26 5s.

Clinical Instruction is given in the wards and by lectures in the medical and surgical departments; also in the Diseases of Women and Children, in Dental Surgery, in diseases of the Eye, in Throat-Diseases and in Skin-Diseases.—Demonstrations and practical instruction in Morbid Anatomy are given in the *Post Mortem* Theatre.—Students may obtain practical instruction and certificates in Vaccination by the payment of a small fee.—Special instruction is given in Medical Chemistry and the Microscope by the Physicians.

The *Museums* of Anatomy, Materia Medica, Natural History, etc., are open daily from 10 till 4.

Resident Medical Officers, *Clinical Clerks*, *and Dressers*, are chosen by examination from matriculated students who are pupils at the hospital.

A permanent record of every case received into the hospital is kept by the Sambrooke Medical and Surgical Registrars.

Scholarships and Prizes.—Two Warneford Scholarships, £25 *per annum* for three years, for the encouragment of previous education; and one Warneford Scholarship of £25 *per annum*, for two years, for resident medical students.†—College scholarships given yearly to ma-

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* Students are recommended to add £3:3 for Medical Tutor's fee; and £5:5 for those preparing for the Preliminary Scientific Examination of the University of London Attendance on the Medical Tutor is compulsory on resident students during their first year.

† Two Scholarships, of the value of £25 per annum each, to be held for three years, will be given in October 1872. Candidates must be matriculated students of the Medical Department, and also perpetual pupils of the Hospital. Their first winter session must commence in October 1872. The examination will be in the following subjects. 1. Divinity: Old Testament History from Abraham to Solomon; The Gospel of St. Luke in Greek; The Prayer Book, its general history and structure. 2. The Greek and Latin Classics: Xenophon, *Memorabilia*, book ii; Ovid,

triculated students—one of £40 for two years, open to students of the third and fourth year; one of £30 for one year, open to students of the second year; three for £20 for one year, open to students of the first year.—The Daniell Scholarship, £20 *per annum* for two years—Sambrooke Registrarships, annual value £50, tenable for two years.—Leathes' Prizes: Interest of £300, applied in purchase of a Bible and Prayer-Book, as annual prizes to two matriculated students.—Warneford Prizes: £40 in medals and books, to two matriculated students.—Class Prizes: Books of the value of £3, and certificates of honour, are awarded annually for proficiency in each of the several subjects taught in the classes.—Two Medical Clinical Prizes, one of £3 for the winter session, and the other of £2 for the summer session; and two Surgical Clinical Prizes of the samc value.—Todd Medical Clinical Prize: Bronze Medal and Books to the value of £4 4s.—Jelf Medal, to the candidate of the senior scholarship examination who is second in order of merit.—Tanner Prize, value £10, for proficiency in Diseases of Women and Children, and in Obstetrics.

Associates of King's College.—At the end of each winter session, the professors recommend to the Council the names of medical students to be elected associates.

Residence.—Rooms are provided within the College for a limited number of matriculated students. The cost of the academical year varies from £50 to £60. Some of the professors, etc., receive pupils into their houses. There is a dining hall in the college.

London Hospital.—Aggregate Fee, £90, payable in two instalments of £45 each, at the commencement of the first and second years. Perpetual fee for lectures alone, £50; for both lectures and Hospital Practice, £100, payable in two instalments of £50 each, or two of £45 each, and one of £10. Composition fee for gentlemen who have spent their first year elsewhere, £70, payable in two equal instalments. Students who have paid the general aggregate fee can become perpetual at any time by paying the additional £10. Extra fees: Practical Chemistry (apparatus, etc.), £2 2s.; Library, £1 1s.; Practical Pharmacy, £4 4s. Separate classes: *a*, *h*, one session, £4 4s.; unlimited, £6 6s.; *b*, *c*, one session, £5 5s.; unlimited, £8 8s.; *d*, one session or unlimited, £7 7s.; *e*, *f*, one session, £5 5s.; unlimited, £6 6s.; *g*, *i*, *k*, *m*, *r*, one session, £3 3s.; unlimited, £4 4s.; *l*, one course to students of school, £2 2s.; to others, £3 3s.; *n*, one year, £3 3s.; perpetual, £6 6s.; *o*, one course, £2 2s.; Diseases of Throat, and Diseases of Eye, each, one course, £2 2s.; unlimited, £3 3s..—H.P.—Medical: 6 months, £6 6s.; period required by Apothecaries' Hall, £12 12s.; unlimited, £21. Surgical: 6 months, including 3 months' dressership, £8 8s.; 12 months, including 6 months' dressership, £12 12s.; 18 months, including 12 months' dressership, £18 18s.; 3 years, including 12 months' dressership, £26 5s.; 3 years, including 2 years' dressership, £31 10s.; 12 months' dressership after the expiration of the above 3 years, £8 8s.

The Anatomical and Pathological Museum, the Materia Medica Museum, and the Library, are open daily.

Scholarships and Prizes.—Seven scholarships will be offered for competition. 1 and 2. Two Buxton Scholarships, value £30 and £20, will be awarded in October, after examination in the subjects of preliminary education.* These scholarships are open to full students of less than three months' standing. 3. A scholarship at the end of the winter session, value £20, to a first year's student: subject, Human Anatomy. 4. A scholarship, value £25, to a first or second year's student, at the end of the winter session: subjects, Anatomy, Physiology, and Chemistry. 5, 6, 7. Hospital Scholarships, value each £20, for proficiency and zeal in Clinical Medicine, Surgery, and Obstetrics.—The Duckworth Nelson Prize, value £10, at the end of the winter session, 1873, open to all students who have not completed their education: subjects, Practical Medicine and Surgery.—Money prizes to the value of £60 *per annum* to the most meritorious of the dressers in the out-patient rooms.—Special certificates to those gentlemen who have faithfully performed their dutics in the hospital, and to those who have distinguished themselves at the examinations.

Appointments.—A Resident Medical Officer, qualified to practise Medicine, who receives £75, is appointed for twelve months. He is eligible for re-election, and then receives £100. A Junior Resident Medical Officer is appointed every six months. Four Medical Assistants, one for each Physician, are appointed every three months. Every student is expected to act as Clinical Clerk. A Resident Accoucheur is appointed for six months.—Four House-Surgeons are elected, usually for six months.—Any student may enter his name on the list as a Dresser. Two Dressers reside and board in the hospital every week.—Two Clinical Assistants are appointed every three months for the medical and two for the surgical out-patients and patients in the special departments. They are eligible for re-election. Each receives £40 *per annum.*—A Medical Registrar and a Surgical Registrar are appointed annually; the former receives 25, the latter 35, guineas.—An Assistant-Dentist, *Post Mortem* Clerks, and two Proscctors of Anatomy, are also appointed.—Full pupils, and those who, having commenced elsewhere, pay the general fee to the hospital and college, are eligible for all scholarships, prizes, and appointments.—Students who have commenced elsewhere, but who, at or before the beginning of the second winter session, become pupils of the hospital and college by paying the composition fee, will be eligible for the Dresserships, for three months as House-Surgeon, and for the offices of Ward Clerk, *Post Mortem* Clerk, Maternity Pupil, Clinical Assistant, and Registrar.

All the appointments are open to students without fee. The holders of all resident appointments are provided with rooms and board free of expense.

Clinical Instruction.—Two medical wards, containing together thirty beds, have been set apart for clinical teaching. The Clinical Professor will meet his class twice a week. Bedside instruction will also be given by the physicians not on special clinical duty. Students requiring signatures for medical practice must attend the Clinical Professor.—Dr. Davies will hold in the summer a class for Practical Auscultation and Percussion.—In the out-patient department, the Physicians and Assistant-Physicians impart instruction each visit.—The Surgeons make clinical observations on their cases, and a clinical lecture is given once a week.—Mr. Hutchinson gives clinical instruction in the operating theatre every Monday and Thursday, from 2 to 3 P.M.

Special Departments.—There are departments for instruction in Obstetric Medicine and Surgery, Vaccination, Diseases of the Eye and the Use of the Ophthalmoscope, Diseases of the Ear, Diseases of the Skin and of the Throat, Syphilis and Local Contagious Diseases, and Mental Diseases. Students desirous of obtaining a practical knowledge of Mental Diseases can attend, without additional fee, the practice of Dr. Millar at the Bethnal House Asylum.

St. Mary's Hospital.—Aggregate Fee, £89 5s. in instalments, or £84 in one sum.—Fee for all lectures required for ordinary examinations, £52 10s.; for hospital practice, £36 15s.; for lectures and hospital practice, £89 5s.—unlimited attendance on hospital practice and all lectures, £105 in instalments, or £99 15s. in one sum.—Separate classes, *a*, *i*, *k*, *r*, one course, £3 3s.; unlimited, £4 4s.; *b*, one course, £6 6s.; unlimited, £8 8s.; *c*, £1 15s. first and second sessions; *d*, one course, £5 5s.; unlimited, £7 7s.; *e*, *f*, *g*, *h*, one course, £4 4s.; perpetual, £6 6s.; *l*, *n*, one course, £3 3s.; *m*, one course, £2 2s.; unlimited, £3 3s.; *o*, *p*, and Aural Surgery, one course, £2 2s.—H.P.—Medical: 3 months, £5 5s.; 6 months, £7 7s.; 12 months, £12 12s.; 18 months, £15 15s.; unlimited, £21. Surgical: 3 months, £6 6s.; 6 months, £9 9s.; 12 months, or time required by College of Surgeons, £21; unlimited, £31. Practical Pharmacy: 3 months, £3 3s.; 6 months, £6 6s.; 12 months, £10 10s.—Vaccination, £1 1s.—Library fee, £1 1s.

Special Courses are given on Ophthalmic, Aural, and Dental Surgery; also clinical demonstrations on Diseases of the Skin and of the Throat. The students are carefully trained to the use of the Microscope.

Hospital Appointments are open to the pupils without additional fee. Three Resident Medical Officers are appointed for twelve months, and an Obstetric Officer for six months; all live free of expense in the hospital.—A Demonstrator of Anatomy is appointed, with a salary of £50 a year; and a Medical Tutor with a salary of £100 a year.—A Resident Registrar is appointed, with a salary of £100 a year; he holds office for two years, and may be re-elected.—All general students must act as clinical clerks and dressers for six months during the last two years.

Clinical Lectures twice a week by the Physicians and Surgeons. The students are divided into three classes, each committed to the charge of a Physician and Surgeon for a definite period. The attendance of the students is noted at each visit.

The *Medical Tutor* gives elementary practical instruction on medical

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Metamorphoses, book xv; and *Epistolæ ex Ponto*, book ii. 3. English Language and History: Shakespeare, *Henry VIII*; English History of the Tudor Period. 4. Mathematics: Arithmetic: Algebra, as far as and including Quadratic Equations; Euclid, book i; book ii, except props. 8, 9, 10; book iii. 5. Modern Languages: French, Racine, *Athalie;* German, Goethe's *Egmont*. For further particulars, see the King's College Calendar. The days of Examination are September 26, 27, 28, and 30.—One Scholarship will be awarded at the close of July, 1873, of the value of £25 per annum, to be held for two years.

* The subjects of examination will be:—1. The English Language, including Grammar and Composition. 2. Arithmetic, including Vulgar and Decimal Fractions. 3. Algebra, including Simple Equations. 4. Geometry—first Two Books of Euclid. 5. Latin—Cæsar, *De Bello Gallico*, Book II. 6. One of the following subjects at the discretion of the Candidate: (*a*) Greek—Xenophon's *Anabasis*, Book I: (*b*) French—X. B. Saintine's *Picciola*; (*c*) German—Schiller's *Wilhelm Tell*; (*d*) Natural Philosophy—Mechanics, Hydrostatics, Pneumatics.

and surgical cases, and examines practically students who are preparing for their final examinations.

Scholarships and Prizes.—A Scholarship in Natural Science, value £40, for three years, to be awarded at the beginning of the winter session; and an Exhibition of £20 for one year to the second candidate in order of merit.—A prize of £4 4s. in Anatomy and Histology, and three of £2 2s. each in Chemistry, Practical Chemistry, and Materia Medica and Botany, to first year's students.—A Scholarship in Anatomy, value £20, for one year; a prize of £4 4s. for Anatomy and General Physiology; and a prize of £2 2s. for Midwifery; to students of the second year.—Prizes of £3 3s. each in Medicine and in Surgery, and one of £2 2s. in Comparative Anatomy, for third year's students.—A prize of £4 4s. for Clinical Medicine and Clinical Surgery to students of the third and fourth years.—A Scholarship in Pathological Anatomy, value £20, tenable for one year, to a student who has completed the third winter session.—Two Prosectors are appointed annually, who each receive a certificate and £5.

The *Reading Room* and *Library* is open daily. A fee of £1 1s. (perpetual) is paid on entrance by each student.—The *Museum* is open daily to students.

MIDDLESEX HOSPITAL.—Aggregate Fee, £90 in one sum;* or in instalments of £35 at the beginning of the first and second sessions; £20 at the beginning of the third session; and £10 for each additional year, or separate fees for the hospital practice or lectures attended. Students who have completed one year in the University of Oxford or of Cambridge are admitted on payment of £55 in one sum, or in two instalments of £35 and £20 at the commencement of the first and second winter sessions; for each additional year, £10.—Aggregate Fee for hospital practice alone, £42.—Separate Classes—*a*, *c*, *d*, *e*, *f*, single, £6 6s.; unlimited, £8 8s.; *b*, without dissection, single, £8 8s.; unlimited, £12 12s.; with dissection, single, £10 10s.; unlimited, £14 14s. *g*, *h*, *i*, *k*, single, £4 4s.; unlimited, £5 5s.; *l*, *m*, *s*, single, £3 3s.; *n*, single, £3 3s.; unlimited, £4 4s.; *q*, single, £6 6s.; *r*, single, £4 4s.—H.P.—Unlimited, £26 5s.; or in instalments of £10 10s. each at commencement of first and second years, and £5 5s. for each subsequent year. Medical or surgical practice separately, one year, £8 8s.; three months, both, £7 7s.; either, £5 5s. Registration fee (occasional students), £1 6s.; Vaccination, £1 1s.; Dental practice (occasional students), £5 5s.; Pharmacy, without dispensing, 3 months, £4 4s.; with dispensing, 6 months, £5 5s.; 12 months, £8 8s.

Appointments, etc.—Two House-Surgeons are appointed annually, in April and October. Candidates must be 21 years of age, and must have obtained certificates of proficiency as in-patient dressers. The Junior House-Surgeon succeeds to the office of Senior House-Surgeon only if he have performed his duties satisfactorily. Each House-Surgeon pays a fee of £21; if he have not been a surgical pupil of the hospital, he pays £31 10s. Three Resident Physicians'-Assistants are appointed annually. They must have a legal qualification. Each Resident Physician's-Assistant pays £10 10s. on appointment; he must either be a medical pupil of the hospital, or pay half the fee for twelve months' medical practice. A Resident Obstetric Assistant is appointed for six months. He pays £10 10s. Clinical Clerks and Dressers are appointed for six months. The appointments are so arranged that every student may take both a clerkship and a dressership at some period. Each student must be an out-patient clerk and out-patient dresser for six months respectively before being eligible to an in-patient clerkship or dressership.

The *College Tutor* assists all general students of the hospital, especially those who are preparing for examination.

Clinical Lectures are delivered regularly by the Physicians and Surgeons, and by the Physician-Accoucheur and the Ophthalmic Surgeon.—Special instruction in Diseases of the Skin is given during the summer session.

Scholarships and Prizes.—Two Broderip Scholarships, value £30 and £20, tenable for two years, to students who have completed the third winter session, for reports or comments on selected medical and surgical cases.—Two Entrance Scholarships, value £25 and £20, tenable for two years,† open to all gentlemen commencing their medical studies at the hospital in October 1872.—The Governors' Prize, value £21, to the student who, at the end of the third winter session, shall have been most diligent in the wards and have attained the highest proficiency in the periodical examinations.—Two Clinical Prizes of £6 6s. and £4 4s. to the candidates who stand third and fourth in the competition for the Broderip Scholarships.—These are open to competition amongst students who have completed their second, and not exceeded their third, winter session.—Written periodical class examinations are held, and must be attended by all general students.—Class Prizes are given in each subject.—A Prize is also given for the best Dissection during the winter session.

The *Museum* is open to students daily from 9 to 5. It contains above 5000 specimens.—Admission to the Library and Reading Room is included in the fee paid by general students. Occasional students may use the Library on payment of £1 1s.

ST. THOMAS'S HOSPITAL.—Aggregate fee (giving unlimited admission), £105 in one sum; or £40 each for the first and second years; £20 for the third; and £10 for each succeeding year. Special entries may be made to any course of lectures or to the hospital practice. Practical Physiology (materials) £1 1s.; Practical Chemistry (materials) £1 11s. 6d.; Library, £1 1s.

Prizes.—The William Tite Scholarship, consisting of the interest of £1000 consols, awarded every third year and tenable for three years; and College Prizes for each year's students, of £20, £15, and £10 each winter, and £15, £10, and £5 each summer.—The Cheselden Medal, annually, for Surgery and Surgical Anatomy.—The Treasurer's Gold Medal, annually, for general proficiency and good conduct.—The Grainger Testimonial Prize, value £20, biennially, to third or fourth year's students, for a Physiological Essay.

Appointments.—Clinical Clerks and Dressers, and Obstetric Clerks, are selected according to merit; the Dressers and Obstetric Clerks are provided with rooms and Commons free of expense.—House-Physicians, House-Surgeons, and Resident-Accoucheur are selected according to merit from gentlemen who have obtained their diplomas, and are provided with rooms and commons.—A Medical and a Surgical Registrar are appointed from among gentlemen who have completed their studies in the school. Each Registrar, on completing his Annual Report to the satisfaction of the physicians or surgeons, receives £40.—Students have access to the Library and to the Museums of Anatomy and Pathology, and of Materia Medica and Pharmacy.—Laboratories under the direction of the Physiological and Chemical Lecturers are provided.—There are special departments, for Diseases of Women and Children, Diseases of the Eye, Skin, and Teeth, and for Vaccination.—Special courses on Mental Diseases are given by Dr. Rhys Williams; and on the Geographical Distribution of Disease, by Mr. Haviland.—A limited number of Students can reside with some of the officers of the hospital.

UNIVERSITY COLLEGE AND HOSPITAL.—Aggregate Fees, £105 15s.; or first winter session, £37 6s.; first summer session, £11 11s.; second winter session, £32 1s.; second summer session, £7 7s.; third winter session, £11 4s.; third summer session, £7 7s. Separate Classes: *a*, session, £7 7s.; first half session, £4 4s.; second, £3 3s.; perpetual, £9 9s.; *b* with *c*, entire session, £7 7s.; half session £4 4s.; perpetual to Lectures, with three years' Practical Anatomy, £10 10s.; Practical Anatomy after the third year, every winter session, £1 1s.; Practical Anatomy without Lectures for three summer months, £2 2s.; *d*, whole course, £7 7s.; half course, £4 4s.; second half course, £3 3s.; perpetual, £9 9s.; *e*, whole course, £6 6s.; half course, £3 3s.; perpetual, £9 9s.; *f*, session, £5 5s.; half session, £3 3s.; perpetual, £6 6s.; *g*, *h*, *n*, single, £4 4s.; perpetual, £6 6s.; *i*, *k*, single, £3 3s.; perpetual, £4 4s.; *l*, elementary and senior courses, single, (each), £4 4s.; perpetual (each), £7 7s.; summer matriculation course, £4 4s.; *m*, Comparative Anatomy, £4 4s.; Zoology, £4 4s.; perpetual to both, £9 9s.; *o*, *p*, single, £2 2s.; *q*, single, £4 4s.; *r*, session, £7 7s.; perpetual, £9 9s.; Palæo-Zoology, single, £1 1s.; Mental Diseases, £2 2s.; Organic Chemistry, £2 2s.; Use of Surgical Apparatus, single, £1 11s. 6d.; perpetual, £2 2s.; Hygiene and Public Health, single, £1 1s.; Physiological Laboratory, first month, £2 2s.; each succeeding month, £1 1s.—H.P.—Perpetual, £27; one year, £10; six months, £7. Practical Pharmacy, six months, £5 5s.; three months, £3 3s.—Students may attend the practice of the Middlesex Hospital on paying a sum which, with their previous payments for hospital practice, will make up £30.

Scholarships, etc.—Three Entrance Exhibitions, value £30, £20, and

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* The aggregate fee admits to the Library, to one course of Practical Chemistry and two courses of Dissections, to all the lectures, and to the instruction of the tutor: it includes also all charges for Clinical Clerkships and Dresserships.

† The Examination will take place on September 27th and following days, and the result will be declared on October 5th. The following are the subjects for Examination. *Latin.*—Passages for translation into English, short passages for translation from English into Latin, and questions in Grammar and Ancient Geography.—*Greek.*—Easy passages for translation into English; questions in Grammar and Ancient Geography.—*French or German.*—Passages for translation into English, short passages for translation from English into French or German, and questions in Grammar.—*Mathematics.*—Arithmetic, Algebra up to and including Quadratic Equations, and Euclid, books i, ii, iii.—*Natural Philosophy.*—*Chemistry.*—*Botany.*—*Zoology.*—Huxley's Classification of the Animal Kingdom; Rudiments of Animal Physiology. Candidates will be examined in any three, and not more, of the above subjects which they may select; but only one Modern Language and two out of the last three subjects are permitted.

£10 *per annum*, tenable for two years, to gentlemen who are about to commence their first winter's attendance.*—The Atkinson-Morley Surgical Scholarship, £45 tenable for three years, for proficiency in Surgery.—The Sharpey Physiological Scholarship, annual value about £95.—The Filliter Exhibition of £30, annually in July, for Pathological Anatomy.—Dr. Fellowes's Clinical Medals, one Gold and one Silver, with Certificates of Honour, at the end of the session.—The Liston Gold Medal, with Certificates of Honour, at the end of the session, for reports and observations on the Surgical Cases in the Hospital.—The Alexander Bruce Gold Medal, for proficiency in Pathology and Surgery.—The Cluff Memorial Prize, every second year, for Anatomy, Physiology, and Chemistry.—Gold and Silver Medals or other Prizes, as well as Certificates of Honour, after competitive examinations in the classes.—Prizes to the value of £10 in the class of Hygiene.

Libraries and Museums.—The general Library, the Medical Library, the Museums of Anatomy and Pathology, of Comparative Anatomy, of Materia Medica and Chemistry, of Geology, and of Natural Philosophy, are open daily. There are also a Chemical and a Physiological Laboratory.

Clinical Instruction is given by the physicians and surgeons in the wards and in the out-patient department, and by lectures and examinations. Dr. Wilson Fox, the Holme Professor of Clinical Medicine, delivers Clinical Lectures, and trains the pupils in the practical study of disease. Lectures are given twice a week by Mr. Erichsen, the Holme Professor of Clinical Surgery; once a fortnight or oftener by Mr. Marshall and Sir Henry Thompson. Clinical Lectures on Midwifery and the Diseases of Women are delivered once a fortnight; also on Ophthalmic Surgery and on Diseases of the Skin. Arrangements are made for practical instruction in Vaccination.

Private Instruction.—Gentlemen may obtain assistance in their studies within the College, on application to the respective Professors.

Residence of Students.—Several gentlemen connected with the College receive students to reside with them; and in the office of the College there is kept a register of persons who receive boarders.

Offices.—Physicians' Assistants, House-Surgeons, Midwifery Assistants, Physicians' Clerks, Surgeons' Dressers, Ophthalmic Surgeons' Assistants and Ward-Clerks are selected from among the pupils without additional fees. The Physicians' Assistants, the Obstetric Assistant, and the House-Surgeons reside in the Hospital, paying for their board. Six Dresserships at the Royal Free Hospital have been placed at the disposal of the College.

WESTMINSTER HOSPITAL.—Aggregate Fee, £70; or in instalments of £35 at the commencement of the first year, £30 at the commencement of the second year, and £10 at the commencement of the third year.—Perpetual Fee to all Lectures and Hospital Practice, £75 on entry, or in instalments of £40 each at the commencement of the first and second years.—Lectures and Hospital Practice for any single year, £35.—Separate Classes:—*a*, *b*, *d*, *e*, *f*, single, £5; perpetual, £7; *c*, single, £2; perpetual, £3; *g*, *i*, *k*, single, £3; perpetual, £4; *h*, single, £4; perpetual, £5; *l*, *m*, *r*, single £2; Natural Philosophy, single, £1.—Vaccination, £1 1s.—Practical Pharmacy, 3 months, £5; six months, £8.—H.P.—Period required by Colleges and Society of Apothecaries, £26; perpetual, £30. Medical or Surgical separately, each, six months, £8; twelve months, £12; eighteen months, £15; perpetual, £20. Students can attend, without additional fee, the practice of the Royal Westminster Ophthalmic Hospital and of the National Hospital for Paralysis.

There are separate departments for Diseases of the Eye and of the Skin, and for Diseases of Women.

The Anatomical Museum is constantly open to the students. There are also a Pathological Museum and a Materia Medica Museum.—The Reading Room is open daily.

Arrangements have been made for the residence of students.

Appointments.—All these are made without fee.—House-Physicians and House-Surgeons are appointed by competition, and are provided with board and lodging free of expense.—An Assistant House-Surgeon is appointed from among the senior students. He is provided with commons at the hospital table.—Clinical Clerks and Dressers are appointed in rotation.—A Resident Obstetric Assistant is appointed.

Prizes.—Prizes each £5 5s., first and second year's students, for General Proficiency.—A prize of £2 2s. (offered by Mr. Davy) to the first year's student who is most regular and diligent in the Dissecting Room. Certificates of Honour in each Class.—Scholarship in Anatomy and Physiology, value £21, to student of second year (to be styled Assistant Demonstrator). After the second year, prizes of £5 5s. each for Clinical Medicine and Clinical Surgery.—Chadwick Prize for General Proficiency, £21, to the most meritorious student or students of any year not exceeding the fifth.

NOTES CONCERNING THE PROVINCIAL AND SCOTCH HOSPITALS AND MEDICAL SCHOOLS.

UNIVERSITY OF OXFORD.—The instruction in Natural Science is carried on at the Museum, where there is practical instruction in Physics, Chemistry, and Anatomy and Physiology, together with courses of lectures by the several professors; viz.—Regius Professor of Medicine—H. W. Acland, M.D., LL.D., F.R.S.; Geometry—H. J. S. Smith, M.D., F.R.S.; Natural Philosophy—Rev. B. Price, M.A., F.R.S.; Experimental Physics—S. Clifton, M.A., F.R.S.; Chemistry—W. Odling, M.B., F.R.S.; Physiology—G. Rolleston, M.D., F.R.S.; Zoology—J. O. Westwood, M.A., F.L.S.; Geology—J. Phillips, M.A.; Botany—M. Lawson, M.A.; Mineralogy—N. S. Maskelyne, M.A., F.R.S.; Lee's Reader in Anatomy—J. B. Thompson, B.A.

Large collections illustrate the several subjects; there is a pathological series, including the collection of Schroeder Van der Kolk, in the medical department, and a medical laboratory. The Radcliffe Library, containing nearly 20,000 scientific volumes, is open to all students daily from ten to four, and on certain evenings during term. There are also lectures and practical instruction in Botany at the Botanical Gardens; and clinical instruction at the Infirmary.

UNIVERSITY OF CAMBRIDGE.—The following courses of lectures will be delivered during the ensuing year. *Michaelmas, Lent, and Easter Terms.*—Chemistry and Practical Chemistry, by Mr. G. D. Liveing.—Medical Clinical Lectures: (Michaelmas) Dr. Paget (Regius Professor); (Lent) Dr. Latham; (Easter) Dr. Bradbury.—Surgical Clinical Lectures: (Michaelmas) Mr. Lestourgeon; (Lent) Mr. Carver; (Easter) Dr. Humphry. *Michaelmas and Lent Terms.*—Zoology and Comparative Anatomy, by Mr. Newton. Anatomy and Physiology, by Dr. Humphry. Practical Anatomy, by Dr. Humphry and Mr. Carver. Practical Physiology, by Dr. M. Foster. Materia Medica and Therapeutics, by Dr. Fisher and Dr. Latham, Tu., Th., S., 9 A.M. *Michaelmas Term.*—The Laws of Heat, by Mr. Liveing. *Lent Term.*—Principles and Practice of Physic, by Dr. Paget (Regius Professor). *Easter Term.*—Botany, by Mr. Babington.

The dissecting-rooms and museums of anatomy are open daily during the vacations as well as in the terms, and the professor and demonstrator are in attendance to assist and direct the students. A course of Practical Histology and a course of instruction in Practical Anatomy are given during the long vacation.

The Chemical Laboratory is open daily from 10 A.M. till 6 P.M.; and the professor will attend to give instruction at the times above specified, and at such other times as he may from time to time appoint. The Museum of Materia Medica at Downing College is open daily to all medical students. The physicians will attend at Addenbrooke's Hospital on Mondays, Wednesdays, Thursdays, and Fridays, for medical instruction, at 10 A.M.; and the surgeons on Tuesdays, Thursdays, Fridays, and Saturdays, at 11 A.M., for surgical instruction.

In order to obtain certificates of attendance on the medical practice and medical clinical lectures, pupils must have attended the physicians' practice three times at least in each week, during term time, inclusive of the clinical lecture, and must also have taken notes of such cases as may be assigned to them by the physician; and for the certificate of attendance on the surgical practice and clinical lectures, pupils must have attended the surgeon's practice three times in each week, inclusive of the clinical lecture. Pupils are recommended to attend the physicians' and the surgeons' practice concurrently.

Opportunities for clinical instruction in mental diseases will be afforded at the County Asylum, Fulbourn, by Dr. Bacon, during the Michaelmas and Lent terms.

Attendance on the lectures on Botany, Chemistry, Materia Medica, Anatomy, Physiology, and Dissections, is recognised by the Royal College of Surgeons of England as a sessional course. Students entered to the practice of the hospital are admitted to the clinical lectures without additional fee,

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* The subjects of examination are the following. Latin and Greek—Translation into English of passages from Cæsar and Xenophon; Translation of short English sentences into Latin. French or German—Translation into English of passages from Bossuet's *Discours sur l'Histoire Universelle*, or of passages from Schiller's *Geschichte des dreissigjährigen Krieges*. Mathematics and Natural Philosophy—the subjects required for the Matriculation Examination of the University of London, with the addition of Acoustics (Nature of Sound). The next examination will take place on September 26th and 27th, 1872.

BIRMINGHAM.—QUEEN'S COLLEGE.—Aggregate Fee for all lectures required, £52 10s., payable in two equal instalments at entrance and at commencement of second year.—Separate Classes, *a*, *b*, *c*, *f*, single, £5 5s.; perpetual, £8 8s.; *c*, *d*, *h*, single, £4 4s.; perpetual, £6 6s.; *g*, *i*, *k*, *l*, single, £3 3s.; perpetual, £5 5s.; *m*, *o*, *p* (not included in composition fee), single, £3 3s.; two courses, £5 5s.—Rooms and board, £50 *per annum*, payable in three instalments.—Caution money, £2.—H.P.—*General Hospital:* Medical and Surgical Practice, 6 months, £10 10s.; a year, £15 15s.; perpetual, £31 10s.—*Queen's Hospital:* Fees the same as at the General Hospital, with £2 2s. for department of Midwifery and Diseases of Women.

Clinical Instruction.—Clinical Lectures and lectures in special departments are given at both Hospitals. At the Queen's Hospital, there are wards for Diseases of Children and Venereal Diseases.

Appointments.—General Hospital: Resident Medical Assistant, and Resident Surgical Assistant, each for 12 months; two Resident Dresserships, tenable 6 months: all after examination, and with board and lodging. *Queen's Hospital*: Resident Physician's Assistant and Resident Surgeon's Assistant, every six months after examination; board and lodging. No fee for clerkships or dresserships.

The Museums of Anatomy and Pathology, and the Library, are open to the students.

Prizes.—The Sands Cox Prize, value £20, annually, to students who have completed their curriculum, after examination in Medicine, Surgery, and Midwifery.—Warden's Prize, £5 5s., to the most proficient student of the first year.—The Percy Prize, books of the value of £5 5s., for the best examination in German.—Medals and Certificates of Honour, annually, in each class after examination.

Clinical Prizes.—General Hospital: Surgery, first year, two prizes of £3 3s. and £2 2s.; Surgery, second and third years, and Medicine, second and third years, one prize of £5 5s. in each subject, each year.—*Queen's Hospital:* second year, two prizes of £3 3s. and £2 2s. in Medicine, and the same in Surgery; third and fourth years, two prizes of £5 5s. and £3 3s. in Medicine, and the same in Surgery.

BRISTOL MEDICAL SCHOOL.—Perpetual Fees to Lectures (except Comparative Anatomy), £57 15s. Separate Classes: *a*, *b*, *e*, *f*, single, £5 5s.; perpetual, £8 8s.; *d*, single, £5 5s.; perpetual, £7 7s.; *g*, *h*, single, £4 4s.; perpetual, £6 6s.; *i*, *k*, *l*, single, £3 3s; perpetual, £5 5s.; *m*, single, £4 4s.; *n*, single, £3 3s.; perpetual, £4 4s.—H.P.—*Royal Infirmary.* Surgeon's pupil, 1 year, £12 12s.; 2 years, £21; 3 years, £26 5s. Dresser (extra fee), 1 year, £12 12s.; 2 years, £21; 3 years, £26 5s. Physician's pupil, 3 months, £8; 1 year, £15; 18 months, £20; perpetual, £25. Entrance Fee, £5. Library, £1 *per annum*. Apprenticeship to House-Surgeon, including five years' residence, and attendance on Hospital Practice, £315.—*General Hospital.* Medical or Surgical Practice, 6 months, £6; 1 year, £10; perpetual, £20. Extra Fee for Clinical Clerk or Dresser, £5 5s. for six months. Library Fee, £1 1s. *per annum*. Resident pupils, £100 for the first year; £60 for each subsequent year; or 5 years, with apprenticeship, £260.

Clinical Instruction, etc.—Clinical Lectures are delivered at the Royal Infirmary and the General Hospital.

The Royal Infirmary and the General Hospital each contain a Library and a Museum.

Prizes.—Prizes and Certificates of Honour will be distributed at the end of the winter session, after examination in all the subjects of each year.—Prize and Certificates of Honour for Practical Anatomy.—*Royal Infirmary.* Suple's Medical Prize, and Suple's Surgical Prize, each a gold medal value £5 5s. and about £7 7s. in money. Clarke's prize (interest of £500) to the prizeman of the third year in the Medical School, if he have attended the Royal Infirmary. The Pathological Clerk, at the end of his term of office, will receive a prize of £3 3s., if his duties have been performed satisfactorily.—*General Hospital.* Guthrie Medical Scholarship and Clarke Surgical Scholarship, each £15, annually. Sanders Scholarship (interest of £500) for proficiency in Medicine and Surgery.

LEEDS SCHOOL OF MEDICINE.—Aggregate Fee for Lectures required by examining bodies, £46 4s. Entrance Fee to Library and Reading-Room, £1 1s. Separate Classes: *a* (including practical course), 1st session, £5 5s.; 2nd session, £5 5s.; *d*, *f*, 1st session, £4 4s.; 2nd session, £3 3s.; *b*, 1st session, £6 6s.; 2nd session, £5 5s.; *e*, 1st session, £5 5s.; 2nd session, £3 3s.; *g*, *h*, 1st session, £4 4s.; 2nd session, £2 2s.; *i*, *k*, 1st session, £3 3s.; 2nd session, £1 11s. 6d.; *l*, each course, £3 3s.; *m*, each course, £2 2s. Vaccination, £1 1s.—H.P.—Leeds Infirmary, Medical or Surgical, each—a winter session, £7 7s.; a summer session, £6 6s.; 12 months, £12 12s.; 18 months, £15 15s.; 3 years, £21.

Clinical Lectures are delivered by the Physicians and Surgeons of the Infirmary.—Courses of Practical Surgery and Practical Physiology are given.—Demonstrations of Skin-Diseases, Ophthalmoscopic Demonstrations, and Demonstrations of Aural Diseases, are given.—The West Riding Lunatic Asylum at Wakefield is open for the study of Mental Diseases, and a course of lectures will be given during the summer.—Students can also attend the practice of the Leeds Public Dispensary and the Fever Hospital.—There are several Resident Appointments at these Institutions. The School Buildings comprise Lecture-Rooms; Anatomical, Physiological, Pathological, Chemical, Botanical, and Materia Medica Museums; Laboratories; Dissecting Rooms; Library, etc. There is a large and well-fitted Chemical Laboratory, where instruction in Practical Chemistry is given. The fees are: 1 month, £4 4s.; 2 months, £7 7s.; 3 months, £10 10s.; 4 months, £13 13s.; 5 months, £15 15s.; 6 months, £17 17s.; 9 months, £21.

Hospital Appointments.—Every student in turn must hold the offices of Clinical Clerk and Dresser. Four House-Surgeons are elected from among the senior students who have shown industry and skill as Dressers and Clinical Clerks.

Prizes.—At the close of each Session, Silver and Bronze Medals, Books, and Certificates of Honour, are presented according to merit.—The Hardwick Clinical Prize, value £10, is given annually for the best reports of medical cases, and the Surgeons' Clinical Prize of £10, for the best reports of surgical cases, during the winter session.—The Thorp Scholarship in Forensic Medicine (£10) at the close of each summer session.—Two Chemical Scholarships are offered annually for proficiency in Chemistry.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—Aggregate Fee for Lectures, £47 5s., or in two equal instalments. Separate Classes, *a*, *b*, *e*, *f*, first and second courses, each £4 4s.; third course, £2 2s.; *c*, *l*, each course £3 3s.; *d*, first course, £5 5s.; second and third, each £2 12s. 6s.; *g*, *h*, first course, £4 4s.; second and third, each £2 2s.; *i*, *k*, *n*, first course, £3 3s.; second and third, each £1 11s. 6d.; *m*, first course, £2 2s.; second and third, each £1 1s.; *o*, each course, £2 2s.; *p*, each course, £1 1s.; Dental Mechanics, each course, £2 2s. Vaccination, £1 1s. Practical Pharmacy, £2 2s.—H.P.—*Royal Infirmary*, Medical—6 months, £5 5s.; 12 months, £6 6s.; Surgical, 6 months, £6 6s.; 12 months, £8 8s.; perpetual to both, £33 12s.—*Northern Hospital:* perpetual, £31 10s.; a year, £12 12s.; 6 months, £9 9s.; 3 months, £6 6s. For either the medical or the surgical practice separately, half the above fees.

Appointments: Royal Infirmary.—Six Dressers and six Clinical Clerks are elected annually. Two *Post Mortem* Clerks are appointed for six months. Four Apprentices are admitted to reside and board in the Infirmary for one, two, or three years, on payment of 70, 130, or 190 guineas.

Clinical Lectures are given weekly at the Infirmary. For the study of Mental Diseases, a class will be formed to attend the practice of the Rainhill Asylum.

There are a Museum containing specimens of Morbid and Comparative Anatomy; a collection of Wax Models and a collection of Materia Medica; Library; and a Reading Room.

Exhibitions and Prizes.—Royal Infirmary Medical Scholarship, value £42, consisting of a Gold Medal, value £10 10s., and six months' free board and residence, with Dressership and Clerkship in the Royal Infirmary.—Four Exhibitions, value £31 10s. each, consisting of free board and residence in the Royal Infirmary for six months, with Dressership.—Medals and Certificates of Honour in the various classes.—Clinical Prize in May 1873, value £5, for the best report of twelve surgical cases in the Infirmary.

MANCHESTER ROYAL SCHOOL OF MEDICINE, INCORPORATED WITH THE OWENS COLLEGE.—Aggregate Fee for Lectures, £42. Separate classes for one course, *a*, *b*, *d*, *e*, *f*, *g*, *h*, *k*, *l*, *n*, £4 4s.; *c*, *i*, £3 3s.; *p*, £2 2s. [In Practical Chemistry, there is an additional charge of 10s. 6d. for chemicals.]—H.P., Royal Infirmary, composition fee, £42, or two instalments of £22 each; or Medical Practice, £18 18s.; Surgical, £31 10s.; Practical Pharmacy, 3 months, £3 3s.; 6 months, £5 5s.

Connected with the School are Museums of Human and Comparative Anatomy and of Materia Medica, and a Chemical Laboratory.

Appointments.—Each student is required to fill the offices of Dresser and Clinical Clerk in the Royal Infirmary. Two House-Surgeons and four Physicians' Assistants are appointed annually, with board, residence, and salary.

Prizes.—In addition to three scholarships, value £20, £15, and £10 for perpetual students, prizes for General Proficiency, and Certificates of Honour for regularity of attendance and general good conduct, will be given at the end of each session.—Medical and Surgical Clinical

Prizes, value of each £6 6s., are given for reports of cases.—A sum of £500 has recently been presented by Mrs. Dumville for the foundation of prizes in memory of her late husband. A Gilchrist Scholarship of £50 *per annum*, tenable for three years in the College, to the candidate standing highest in the Matriculation Examination of the University of London in June 1873.

Sheffield Medical School.—Aggregate Fee for Lectures, £40. Separate classes: *a* and *b*, first course, £6 6s.; second course, £4 4s.; *d*, each course, £4 4s.; *e*, *f*, first course, £4 4s.; second course, £2 2s.; *g*, *h*, *i*, *k*, *l*, each course, £3 3s.—H.P., Sheffield General Infirmary, Medical or Surgical, 6 months, £6 6s.; 12 months, £10 10s; Perpetual—Medical, £15 15s.; Surgical, £21.

Further opportunities for practice may be obtained at the Sheffield Hospital and Dispensary, and at the Sheffield Hospital for Diseases of Women.

The *Infirmary* contains a Museum of Pathology, a Library, and a *Post Mortem* Theatre, with Microscopes and all the appliances for clinical research.—The Library of the Medical School is open to students.

Prizes to the amount of £30, and Certificates of Honour, are given annually.

University of Durham College of Medicine, Newcastle-on-Tyne.—Fee for all the Lectures (except Practical Pharmacy): one payment, £52 10s.; two payments, each £28 7s.; three payments, each £21. Single courses, £4 4s. each. Chemistry and Practical Physiology are excepted from the courses included in the composition fee. Vaccination, £1 1s. H.P., Newcastle Infirmary: 3 months, £4 4s.; 6 months, £5 5s.; 12 months, £7 7s. Perpetual fee, £17 17s.; or by instalments, first year, £7 7s.; second year, £6 6s.; third year, £5 5s.

Two Resident Clerks, and four Resident Dressers and four Non-resident Dressers, are elected half-yearly. They are provided with board and apartments free.

Midwifery can be attended at the Newcastle Lying-in Hospital, and Diseases of the Eye at the Eye Infirmary.—Lectures on Psychological Medicine will be given at the Dunston Lodge Asylum.—The Chemical Laboratories are open daily throughout the year, from 10 to 5 o'clock. Students can attend laboratory practice and receive instruction in analysis for—6 days weekly, £31 10s. *per annum*; 4 days, £21 *per annum*; shorter periods, by arrangement.—The Libraries and Museums are open daily.

Pharmacy.—Special arrangements have been made for instruction in Pharmacy. The curriculum will consist of courses of lectures in Botany, Materia Medica, Chemistry, and Pharmacy. Fee for curriculum, perpetual, £6 6s.; separate courses, each £4 4s.

Prizes.—A medical Scholarship, annual value £25, tenable for four years, in October 1872, to students who have been registered at Durham.—The Dickinson Memorial Scholarship, value £15 annually, after the first examination of a licensing board.—A Silver Medal and Certificates of Honour in each class.

University of Aberdeen.—The fee to each class in the Faculty of Medicine is £3 3s., except Practical Anatomy and Demonstrations, for which the fee in each session is £2 2s. Matriculation fee, both sessions, £1; summer session alone, 10s.

Royal Infirmary, Aberdeen.—Perpetual fee, £6; or first year, £3 10s.; second year, £3. Clinical Medicine and Clinical Surgery, each £3 6s. Pathological Anatomy, £2 2s.—The General Dispensary and the Lying-in and Vaccine Institution, and the Eye Institution, are open daily.—Clinical instruction is given in the Royal Lunatic Asylum for three months in the year.

University of Edinburgh.—Annual Fee for each subject required in the ordinary curricula, £4 4s.; except Anatomical Demonstrations, £1 1s.; Practical Pharmacy and Dispensary, each £2 2s.; Practical Anatomy and Practical Chemistry, each £3 3s.—Every Student, before entering with any Professor, must produce a matriculation ticket for the ensuing session, for which a fee of £1 is paid at the beginning of each winter session.—The Library is open every lawful day during the winter session, from 10 A.M till 4 P.M.; on Saturdays, till 1 o'clock.

Medical Fellowships, etc.—The Falconer Memorial Fellowship, value £100, tenable for two years, open to Graduates in Science or Medicine of the University of not more than three years' standing. The next appointment will be made in October 1873. The Syme Surgical Fellowship, value about £100, tenable for two years, open to Bachelors of Medicine of not more than three years' standing, who shall present the best Thesis on a Surgical subject, giving evidence of original research. The first competition takes place in 1874. Ettles Medical Scholarship, value about £40, to a Graduate in Medicine. Sibbald Scholarship, value about £40, tenable for four years. The next vacancy will be in 1875. Abercromby Bursary of £20, tenable for four years, to students who have been brought up in Heriot's Hospital, during their medical curriculum. Two Gray Bursaries, each of the value of £30, may be held during the curriculum in Medicine. Sibbald Bursaries, open to the sons of duly registered medical men practising, or who may have practised in Scotland, and to the sons of parents who are or who may have been householders in Edinburgh. They are of the value of £30 each, tenable for four years, and available for the Faculty either of Arts, Law, Medicine, or Divinity. The Hope Chemistry Prize, value £100, open to all students of the University not more than twenty-five years of age, who have worked for eight months, or for two summer sessions, in the chemical laboratory. Neil Arnott Prize, of about £40, awarded to the Candidate who shall pass with the greatest distinction the Ordinary Examination in Natural Philosophy for the degree of M.A. The successful candidate must continue to prosecute his medical studies in the winter session succeeding the award. The Ellis Prize for the best Essay on some subject of Animal or Vegetable Physiology, open to students or graduates of five years' standing. Value, proceeds of sum of £500 accumulated for three years. Goodsir Memorial Prize, shortly to be founded in commemoration of the late Professor Goodsir.—Gold Medals are given on the day of Graduation to Doctors of Medicine whose Theses are deemed worthy of that honour.

Edinburgh Royal Infirmary.—Fees: 6 months, £3 3s.; 1 year, £5 5s.; perpetual, £10 10s. Clinical Medicine and Clinical Surgery, each £4 4s. for the course.—No fees for any medical or surgical appointment. Four Resident Physicians and four Resident Surgeons are appointed; they live in the house for six months free of charge. Candidates must be registered as legally qualified practitioners. Non-resident Clinical Clerks are appointed. Each surgeon appoints from four to nine Dressers for six months. Assistants in the Pathological Department are appointed by the Pathologist.—Instruction is given in special departments.

School of Medicine, Edinburgh.—The courses qualify for examination for various diplomas and licences, and for degrees in those years in which University residence is not required.

Fees.—For the first of each Winter Course of Lectures, £3 5s.; second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh, the perpetual fee is £2 4s. Second Course of Midwifery, £1 3s. Practical Chemistry and Practical Anatomy, each £3 3s. Anatomical Demonstrations, £2 2s.; when taken along with Practical Anatomy, £1 1s.; perpetual, 4 4s. Analytical Chemistry, £2 a month, £5 for three months, or £10 for the session of six months. Vaccination, £1 1s. Summer courses of Clinical Surgery, Clinical Medicine, Practical Anatomy, Operative Surgery, and Diseases of the Eye, each £2 2s.—The minimum fee for the education for the double qualification of Physician and Surgeon from the Royal Colleges of Physicians and Surgeons of Edinburgh, including the examination fee, is £90 4s., payable by yearly instalments; for the single diploma of either Physician or Surgeon, including the examination fee, £80.

Practical Instruction.—Royal Infirmary, noon daily; perpetual, £10; annual, £5 5s.; separate payments for two years entitle the student to a perpetual ticket.—Sick Children's Hospital: three months, £1 1s.; perpetual, £2 2s.—Dispensary: Royal Public Dispensary and New Town Dispensary, each, first six months, £3 3s.; three months, £2 2s.; each subsequent three months, £1 1s.—Practical Midwifery: Royal Maternity Hospital, Royal Public Dispensary, £1 1s.; New Town Dispensary, £1 3s.—Diseases of the Eye, Ear, and Teeth: Dispensaries, and the Edinburgh Eye Infirmary.—Practical Pharmacy: Royal Public Dispensary, New Town Dispensary, six months, £3 3s.

University of Glasgow.—Fees, each course, £3 3s.; except Lectures on the Eye, £1 1s.

Glasgow Royal Infirmary.—Fees, 1st and 2nd year, each £3 3s.; 3rd year, and perpetual, £1 1s.; 6 months, £2 2s.; 3 months, £1 11s. 6d. Vaccination, £1 1s.; Practical Pharmacy (6 months), £3 3s. Clinical Lectures in Medicine or Surgery: 1st and 2nd winter courses, each £3 3s.; 3rd course, £1 1s.; summer course, £1 11s. 6d.

Glasgow Eye Infirmary.—Fee, 6 months, £2 2s.; to students who are attending or have attended the Lectures on the Eye in the University, £1 1s.

Instruction may also be obtained at the Glasgow University Lying-in Hospital and Dispensary for Diseases of Women and Children;

and at the Dispensaries for Diseases of the Skin and Ear; and the Royal Lunatic Asylum, Gartnavel, is open to students on payment of a small fee.

GLASGOW—ANDERSON'S UNIVERSITY.—Fees for all the Lectures required for the Diplomas of Physician and Surgeon, £30. Class Fees for each Course of Lectures: 1st session, £2 2s.; 2nd session, £1 1s.; afterwards free. Anatomy Class Fees, for Lectures and Demonstrations: 1st session, £4 4s.; 2nd session, £4 4s. The Dissecting-room is free for two sessions to those who attend both courses of Anatomy. After the second year, the fee for Practical Anatomy is £1 1s. per session. There is a Matriculation Fee of £1 1s. at the beginning of each Winter Session.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 14TH, 1872.

PROJECTED MEDICAL MICROSCOPICAL SOCIETY.

WE referred last week to the intended formation of a medical student's microscopical society for practical cultivation of the microscopical work in which medical students are specially interested. The particulars are as follows. "It is proposed to form a society for the sole investigation of microscopical subjects in intimate relation with man, both in health and in disease. The objects of the proposed society will be the reading and discussion of papers; the exhibition of specimens; the formation of a cabinet; the exchange of specimens; etc. A preliminary meeting, of which due notice will be given, will be held early in October, for the formation of the society; and it is hoped that all qualified medical gentlemen and registered students interested in the movement will attend. All questions with regard to fees, hour, and place of meeting, subjects admissible for papers, etc., will be settled at the preliminary meeting. Communications should be addressed to Mr. J. W. Groves, St. Bartholomew's Hospital." Mr. T. Charters White, honorary secretary of the Quekett Microscopical Society, writes to us as follows on the subject.

"I see in your last number an announcement of the contemplated formation of a Medical Microscopical Society; and, while fully concurring with its promoters in the desirability of a rallying point round which medical microscopists could gather their forces, I cannot help feeling that the formation of fresh microscopical societies is to be regretted as a source of weakness instead of strength that would arise from union with those already existing. While, therefore, I would not say a word in opposition to those who might think otherwise, I would suggest that, could a medical section be grafted on to either the Royal Microscopical Society or the Quekett Microscopical Club, it would be attended by many advantages. It might be contended that the high subscription and entrance-fee of the Royal Microscopical Society would prove a barrier to many, and especially to students; but the same objection could not be urged against union with the Quekett Microscopical Club, whose subscription, with no entrance-fee, is only ten shillings *per annum*. If, now, a medical section, open to the members generally at their option, could be instituted in connexion with this Club, it would offer these advantages to all who joined. The Club meets, by the kind permission of the Council of University College, twice in each month during the year *rent free;* the attendance of members at these meetings averages about 100; the number of members of the Club has been more than 500 for the last three years, about one-eighth of them being medical men; it comprises many careful and accurate observers, whose practical minds are ever ready to carry out any suggestions for the furtherance of microscopical study. I conceive, therefore, that the union of the medical histologists of London with such men might be productive of many good results, and that without difficulty, as it would only be necessary to institute a special evening each month for the meeting of the medical section, and the thing is done, the machinery being already in existence; thus strength would be gained, instead of that weakness the multiplication of such societies must engender. Dr. Beale, our late President, entirely concurs in the views I have expressed, and has long hoped that a medical section might be added to our Club, in which physiological and medical microscopical questions might be considered. As the preliminary meeting of the proposed society is announced for about the middle of October, it would be as well that the subject should be fairly considered by those especially interested; and, therefore, may I ask your kind insertion of this suggestion as a contribution towards the thorough ventilation of a most valuable proposition."

The suggestion is worthy of careful consideration; but, on the other side, it may be considered that the Quekett Microscopical Society is already large and active enough, and that the addition of a section might rather encumber than aid the society. We are greatly in favour of independent initiative and individual effort to meet individual wants. A medical student's microscopical society would avail itself of the material and means of the microscopical laboratories of all the schools, probably in turn, and would engage the sympathies and assistance of all the teachers and demonstrators in succession. It would enlist the activity and emulation of all the senior and past students and younger practitioners who have a turn for microscopic work, and would add a new zest and give a fresh impulse to the work of the schools. We incline to a quite separate and quite inexpensive method of affiliated organisation.

OPENING OF THE MEDICAL SCHOOLS.

THE subjoined is a list of the Medical Schools in England and Scotland, with the date of their opening, and the names of the gentlemen appointed to deliver introductory addresses. Where no name is inserted, it is to be understood that there is no special introductory lecture.

St. Bartholomew's Hospital—October 1st.
Charing Cross Hospital—Dr. J. Watt Black—October 1st, 8 P.M.
St. George's Hospital—Mr. Rouse—October 1st, 2 P.M.
Guy's Hospital—Dr. Pye-Smith—October 1st, 2 P.M.
King's College—Dr. Playfair—October 1st, 4 P.M.
London Hospital—Mr. J. Hutchinson—October 1st, 3 P.M.
St. Mary's Hospital—Mr. A. T. Norton—October 2nd, 3.30 P.M.
Middlesex Hospital—Dr. Thorowgood—October 1st, 3 P.M.
St. Thomas's Hospital—Mr. Croft—October 1st, 2 P.M.
University College—Mr. C. Heath—October 1st, 3 P.M.
Westminster Hospital—Mr. Pearse—October 1st, 3 P.M.
Bristol Medical School—October 1st.
Birmingham (Queen's College)—Mr. Bracey—October 1st, 3 P.M.
Leeds School of Medicine—Dr. Heaton—October 1st, 4 P.M.
Liverpool Royal Infirmary School of Medicine—Mr. W. M. Banks—October 1st, 3 P.M.
Manchester Royal School of Medicine—October 1st.
Newcastle College of Medicine—Dr. W. C. Arnison—October 2nd, 2 P.M.
Sheffield School of Medicine—Mr. T. H. Morton—October 1st, 4 P.M.
Aberdeen University—October 30th.
Edinburgh University—Sir A. Grant, Bart., LL.D.—November 1st.
Edinburgh School of Medicine—Dr. Angus Macdonald—November 1st, 11 A.M.
Glasgow University—Dr. Leishman—October 21st.
" Anderson's University—Dr. J. G. Wilson—October 29th, 12 noon.

The Dublin Medical Schools open their Dissecting-Rooms on October 1st, but lectures do not begin until the end of the month.

PROFESSOR TYNDALL will start for America in October. He will probably remain several months, lecturing in the principal cities.

A NUMBER of Indian officers, chiefly those who were connected with the Looshai Expedition, have been gazetted to the distinction of K.C.B. and C.B. Among them is Surgeon-Major F. F. Allen, Bengal Army.

IN London, last week, only six deaths were referred to small-pox, against fifteen and eight in the two previous weeks, and of these, four were unvaccinated cases.

OF the Volunteer force about to visit Belgium, Surgeon P. Hinckes Bird, of the 2nd Middlesex, is to be chief medical officer, and Dr. Helsham, of the 19th Surrey, is to be the second medical officer. Eight others are to follow. The force will be in four battalions, with the usual appointments of captains and subalterns to each company.

THE library of the Royal Medical and Chirurgical Society is re-opened this day.

NOTWITHSTANDING recent dreary statements, it is satisfactory to see that, compared with the other large towns of the United Kingdom, Edinburgh, according to the Registrar-General's statistics, continues very healthy, its rate of mortality during last month being only 20 per 1000.

MEDICAL SCHOOL DINNERS.

THE custom of celebrating in social form the 1st of October will this year be again followed by several of the schools both in the metropolis and in the provinces. The past and present students of the Middlesex Hospital will meet on the occasion at St. James's Hall, Mr. Nunn, surgeon to the hospital, in the chair. The triennial dinner of the Westminster Hospital School will take place at the Pall Mall Restaurant the same evening, Dr. Basham, physician to the hospital, in the chair. The biennial dinner of the old students of St. Mary's Hospital will be held at Willis's Rooms on Wednesday, October 2nd, the day of opening at this school; Mr. Spencer Smith, surgeon to the hospital, in the chair. The annual dinner of the St. George's Hospital School will take place on October 1st; Mr. Shaw Stewart, treasurer of the hospital, in the chair. At the Leeds School of Medicine, the lecturers and friends will dine together on October 1st; and the annual dinner of the Liverpool Royal Infirmary School of Medicine will take place at the Adelphi Hotel, on October 1st, at 7 P.M., Dr. Waters, physician to the Royal Infirmary, in the chair.

MEDICAL EDUCATION OF WOMEN IN ST. PETERSBURG.

A MINISTERIAL order, approved by the Czar, providing for the medical education of women, has lately been issued. Its object is the establishment of a course of instruction in the Royal Medico-Chirurgical Academy of St. Petersburgh, for women destined to act as midwives and to treat the diseases of their own sex and of children. The principal regulations are as follows. A special four years' course is opened in the Imperial Academy of Medicine, for the complete education of midwives. Instruction in the subjects included in the course is to be imparted by the professors, who are to receive extra payment from funds specially provided for the course. The female students can avail themselves of the material for instruction belonging to the Academy. Women above twenty years of age, who have gone through the course of study at the female gymnasium, or have received a corresponding education, are admissible as pupils; and, on entering, must undergo a preliminary examination in general knowledge. The instruction is to be given apart from the male students; the theoretical lectures in class-rooms set apart for the purpose, and the practical instruction in the hospital wards at times when the male students are not there. At the end of each year, the students are to be examined preparatory to their advancement to a higher course of instruction. The last examination, for the granting of diplomas, is to take place after the end of the course of study, in the presence of all the members of the Academy, and of persons who may be invited. At this examination the candidates will be examined in all the branches, a knowledge of which is required for a diploma in medicine. Only a slight amount of knowledge, however, will be required with regard to theoretical and practical surgery, and diseases of the eye and nervous system; but a full and comprehensive acquaintance with the diseases of women and children will be demanded.

NEW YORK DEGREES.

WE are unable to say what may be the meaning of the annexed paragraph, which is cut from the *Liverpool Mercury;* but it will at least inspire an increased distrust in New York and American degrees generally, and exercise an injurious influence over the European status of New York graduates. It is unnecessary to say that there is no chartered association in this country called the British Medical Reform Association, and we were not aware that there were any private persons who so styled themselves, although, of course, there is nothing to prevent Mr. Holloway or Mr. Morison, or any concourse of cabmen or costermongers from so styling themselves if they please. There are no authorised or chartered examining bodies in this country of the kind intimated; and if there be any such state examinations in New York, it will render more difficult than ever the task of distinguishing between acceptable and unacceptable diplomas of transatlantic origin. The following is the paragraph referred to.

Progress of Medical Reform: Eclecticism in the University of New York: Emulation of English Doctors.—Gentlemen,—By an Act of the legislature of the State of New York, passed on the 16th of May last, all candidates (native and foreign) are now required to undergo an examination into their knowledge of eclecticism—functions performed in England by the British Medical Reform Association, and by its board of examiners only. After clauses appointing examiners in eclectic medicine, and directing the special mode of inquiry into each candidate's knowledge of all the new systems of medical treatment, the third clause of the late Act provides for a knowledge of homœopathy, hydropathy, and botanic practice as follows:—"Such examinations shall be in therapeutics, according to each of the systems of practice represented by the several medical societies of this State." The State medical societies here alluded to as legally constituted are allopathic, homœopathic, and eclectic, which last includes hydropathy and medical botany, as well as all other remedies. This is the most liberal and important step ever taken by any regular, orthodox, legitimate university, not only in the science of medicine, but in the history of the world.—MEDICUS.

No foreign degrees, however, are at the present moment registerable; and in the current state examinations and diplomas of this kind, the recent determination of the editors of the *Medical Directory* to decline the task of going beyond legal limits of recognition will be the less surprising.

A CAUTION.

A VERY old way of robbing doctors has lately been successfully practised by a man named William Sheridan, who is now committed for trial. His plan was to call on a doctor when he knew he was out, and then ask permission to write him a note. Whilst supposed to be writing his note, he would steal stamps, barometers, cases of instruments, etc. He pleaded in defence, at the police court, that he was suffering from delirium tremens, and knew not what he was doing. But still medical men, or rather their servants, should be on their guard against madness with so villanous a method in it.

THE PLEA OF INSANITY.

THE Indians in California are, according to the *Philadelphia Medical Reporter*, learning the emotional insanity plea in extenuation of their little irregularities. A man in Trinity Centre, California, was recently shot at by a presumedly friendly Indian; and, upon demanding the cause, the Indian bounded off with the rifle, crying out, "Me heap crazy! Me too much crazy! Me too much crazy!"

PRESERVED MILK.

ACCORDING to Dr. Edward Smith's recent communication to the British Association, the condensed milk, so abundant in the market, is made from skimmed milk. An analysis of Newnham's condensed milk, which we published at the beginning of 1871, showed that that preparation, at any rate, was not made from skimmed milk, but from unskimmed milk. A recent analysis of the condensed milk of the Anglo-Swiss Company shows that it also is prepared from unskimmed milk. The percentage of fat in the contents of a tin of Anglo-Swiss milk was found by Mr. Wanklyn to be 9.9. Possibly, Dr. Smith's investigations have been carried out on samp les supplied for workhouse consumption. We await, however, his explanation of the discrepancy between his results and those of other observers.

WHY THE GERMANS EAT SAUER-KRAUT.

THE reason why the most learned people on earth eat sauer-kraut may be found in the following extract from a work entitled *Petri Andreæ Matthioli Senensis medici commentarii in sex libros Pedacii Dioscoridis de Materiâ Medicâ. Venetiis, ex officinâ Valgrisianâ* MDLXV. *Traduit de Latin en Français, par M. Antoine du Pinet. Lyon,* MDCLV. Pré-

face, p. 13, ligne 30. "Finally, in order to omit nothing which can add to the knowledge of simples, it must be noted that Nature, mother and producer of all things, has created various simples, which have a sympathy or natural antipathy to each other; which is a very considerable point in this matter, and has no like as a mystery and secret. And thus it has seemed to me good to hint a word about it, and principally of those which are used in medicine. To commence, then, with the oak and the olive: these two trees hate each other in such sort that, if you plant one in the hole from which the other was dug, it will die there; and, even if you plant one near the other, they will work each other's death. The cabbage and the vine do the like; for it has been seen that, if you plant a cabbage at the foot of a vine, the vine will recoil and draw itself way. And thus it is no marvel that the cabbage is very useful to sober topers, and that the Germans eat it commonly in a compost to safeguard themselves from their wine."

THE AUTUMN MANŒUVRES: HEALTH OF THE TROOPS.

We are enabled to furnish the following summary of the sanitary history of the campaign. The Northern Army Corps took the field on August 27th, with a clean bill of health. From that date up to the present (September 11th), the following is the state of the sick-list: Total admissions to hospital, 151; discharged to duty, 29; sent to base-hospital at Aldershot, 83; remaining under treatment in the field-hospitals and with their regiments, 39. In addition to the above, two men died suddenly from disease of the heart. The majority of the cases were of a trifling nature—sore feet, chafing, injuries by accidents, diarrhœa, and a few cases of rheumatism. On the whole, the health of the troops has been excellent. The weather, though moist, was favourable for marching, there being no dust. It is strange that, notwithstanding the damp and exposure, there have been so few cases of catarrh.

TORQUAY SEWAGE.

After many months' deliberation on the many plans submitted to them, the Torquay Local Board have come to a decision respecting the disposal of the sewage of the town. The conclusion arrived at by the Board is, that the proper mode to be adopted is the plan recommended by Mr. Bazalgette, whereby the sewage will be taken by a tunnel under Silver Hill and the Lincombes, and then discharged into the tidal currents of the Channel at Hope's Nose, which is situated just at the entrance of the bay. It was also decided to borrow £30,000 to carry out the work.

CHOLERA-RESEARCHES AT MEEAN MEER.

The power of medicines to prevent as well as to cure disease is a subject which has hitherto received too little attention at the hands of the medical profession, but is nevertheless of the greatest practical importance, and any researches bearing upon it must be at all times warmly welcomed. Especial interest, however, attaches to some recent experiments made by Assistant-Surgeon Downie at Peshawur, from the attention which has been drawn to the unhealthy character of that station and of Meean Meer by the recent outbreak of cholera at the latter place. These experiments, recorded a few months ago in the *Indian Medical Gazette*, were instituted for the purpose of ascertaining whether the constant administration of medicines had any effect in preventing the occurrence or shortening the duration of the malarious fevers which are prevalent at the two places already mentioned. The substances tested were quinine, quinidine, arsenic, and chiretta; and each of these was administered every morning to a certain number of men, in doses of two grains of the sulphate of either alkaloid, two minims of liquor arsenicalis, or one ounce of infusion of chiretta. The results seemed to show that both the cinchona alkaloids and arsenic lessen the liability to fever and shorten its duration; for, while 60.6 per cent. of those treated with chiretta were admitted to hospital, and remained in it for an average period of 6.82 days, the admissions from those treated by arsenic, quinine, and quinidine, were 22.4, 31.4, and 34.7 per cent., and the time in hospital 5.48, 4.9, and 4.9 days respectively. An additional presumption in favour of the prophylactic power of these remedies was afforded by the fact that the admissions from a detachment stationed at an outpost near Peshawur were four times as numerous as at head-quarters, where the prophylactic treatment was in force, although, as a rule, the outpost was the healthier place. The total number treated was 424; and, as Dr. Downie very properly remarks, this is too small a number to allow positive conclusions to be drawn from the experiments; but the results are such as to render a more extensive trial of the remedies very desirable. For the purpose of making this effectively, Dr. Downie suggests that arsenic and quinidine (which, on account of their low price, are to be preferred to quinine) should be regularly issued by Government to three of the six native regiments in garrison during the unhealthy season of the year. Quinidine should be supplied to one half of each regiment, and arsenic to the other half; and their use alternated, if necessary. A comparison between the health of the three regiments thus treated and that of the other three, under similar conditions, but not receiving the remedies, would at once show the value of the prophylactic treatment. In the interest of scientific medicine, we can only hope that Dr. Downie's suggestion will receive at the hands of the authorities the attention it deserves.

AUTUMN MANŒUVRES.

[FROM OUR SPECIAL CORRESPONDENT.]

MEDICAL ARRANGEMENTS OF THE NORTHERN ARMY CORPS.

In treating of this subject, I propose to divide the arrangements into those of the front, which may be called the *primary;* those of the line of communication, which may be called the *intermediate;* and those of the base, which may be styled the *ultimate.*

First, with regard to the *primary.* These may be subdivided into the army corps, the divisional, the battalion, the bearer detachment, and the field-hospitals. The Northern Army Corps numbers somewhere about 15,000, of all arms of the service. With the head-quarters of the commander of the corps is located the principal medical officer, Inspector-General Fraser, C.B. He has the supervision of the whole, receives all returns of the sick, and advises on all matters appertaining to his department. His staff is of the smallest possible, being limited to one non-commissioned officer of the army hospital corps. He should at least have one medical officer as secretary, and two mounted orderlies. At present, he has to carry his own messages.

At the head-quarters of each division there is a principal medical officer. In the army corps there are two divisions; thus there are two medical officers—Surgeons-major Shelton and Franklyn. The staff of each consists of one non-commissioned officer and one orderly of the army hospital corps. The duties are various and arduous; and on their activity and efficiency will, in a great measure, depend the carrying out of the medical arrangements. They receive all returns and reports from the medical officers of their respective divisions, and transmit them to the principal medical officer of the army corps. They select the positions for the field-hospitals. They make all arrangements for the transport of sick and wounded from the field and to the base of operations. In addition, they are the sanitary officers of these divisions. With each, there should be at least one mounted orderly in addition to the present staff.

The battalion-staff consists of one medical officer, one hospital orderly, and one regimental orderly. The equipment is one field-companion and a water-bottle, to be carried by the hospital orderly; one field-stretcher, to be carried by the regimental orderly; and one ambulance-wagon supplied from the field-hospitals attached to the brigade. The duty of the medical officer is to see the sick, to attend all accidents, and to send on to the nearest field-hospital such cases as will not be fit for duty in a day or two. The hospital orderly is one of the trained orderlies of the regiment, and is skilled in the care of sick and ambulance duties; but the other orderly has not received any such training. Where the medical officer is an assistant-surgeon, as is very often the case, he is not mounted; thus he has to trudge all day after his regiment, which unfits him for work at the conclusion of the march. The ambulance-wagon is in charge of the medical officer. This arrangement, though very good for the line of march in a peaceable country, would not suit for actual warfare. The medical officer would have no alternative but to take the wagon into action with him, where it should not be, and where these wagons were, during

the autumn manœuvres last year, conspicuous objects for shot and shell. The ambulance-wagon should be in charge of a corporal belonging to the bearer detachment, on which it should fall back as soon as the action commences.

The bearer detachment I shall next attempt to describe. But, before doing so, I shall first have to search for it, and I fear it will be a search in vain. The *Krankenträger*, of which we have heard so much in the Franco-German war, has not here even a skeleton. The army hospital corps are well and systematically instructed in such duties at Netley, and would, I venture to assert, compare favourably with those of any other country in the world; but an expected, but long delayed, warrant for the reorganisation of the corps has reduced its strength so much, that the Director-General, after gleaning men from every station in the United Kingdom, could barely muster enough to man the field-hospitals. As a makeshift, the duty is done by the field-hospitals, there being attached to each two extra hospital orderlies with ambulance-wagons and stretchers to meet the contingency, and a certain amount of it would be done by the battalion-staff. Thus, we are in the same condition in which we were at the Alma, when the sailors and landsmen had to be pressed in to do the duty without any training or preparation—anything but "skilled labour." How is the missing link to be supplied? Very simply. Increase the strength of the army hospital corps. This is a trained nucleus. It only requires to be expanded. Form a company to correspond with each field-hospital, with an officer of the army hospital corps in command of it for discipline, and a due proportion of medical officers. Equip it with appliances and ambulance conveyances, to render first assistance and transport the sick and wounded from the field of action to the field-hospitals.

Of the primary arrangements, it now only remains to describe the field-hospitals. There are three to each division; and, as there are two divisions, the total number is six with the army corps. Each hospital is capable of accommodating forty-five patients. The staff is the following: one surgeon, two assistant-surgeons; of the army hospital corps, one sergeant-compounder, one sergeant-wardmaster, six orderlies, one steward, one cook; and to these have been added two trained regimental orderlies, to allow the transport duty, before alluded to, to be performed. The equipment is, three marquees, six bell-tents, forty-five sets of bedding, two sets of canteens, two sets of medical comfort boxes, one box of fracture-apparatus, three spades, three pick-axes, three axes, one saw, six reaping-hooks, one medical field-companion, one set of medical field-panniers, two store-waggons, five ambulance-wagons, fourteen stretchers, nineteen horses, with drivers from the Army Service Corps. In each division, there are three infantry brigades; and one field-hospital is located with each, and encamps in rear of it. This, however, is only for convenience. A hospital will receive the sick of any brigade. On the line of march, the hospital and staff are placed in front of the brigade-baggage, and are under the charge of the baggage-master. This, no doubt, is the proper place for the heavy baggage of the hospital; but the light portion of the baggage and the staff should accompany the troops. However, more of this hereafter.

The intermediate arangements are easily described. They may be subdivided into the transport, temporary hospitals, and reserve depôts. The transport from the front towards the base is performed by the field hospitals. Assistant-surgeons and orderlies, with ambulance-wagons, take the patients to the nearest railway station, and convey them by train to Aldershot. Those patients who require transport in the reclining position are not moved from the stretcher on which they are carried in the ambulance-wagon. The stretcher, with the patient, is carried into the compartment of a second-class carriage, and rested on two cross-bars laid from one seat to the other. A compartment thus arranged carries two stretchers, with a patient on each. A temporary hospital has been established at Pewsey. This is merely for the reception of patients in case they could not be transmitted by rail. A depôt of reserve stores has also been established at Pewsey, from which the field-hospitals can be replenished. The transport of sick and wounded along the line of communication to the base should not be conducted by the field-hospital staff; the bearer detachment should perform this duty.

The ultimate arrangements are at Aldershot. The existing regimental hospitals are amalgamated, not with a general hospital, but only so far as that some three or four are under one medical officer. They are still separate and distinct establishments, so that a medical officer has to furnish three or four separate returns. This is a system which may last for a fortnight; but, as a system in time of war, it would break by its own weight, and is another proof how ill adapted the regimental system is for war, however admirable it may be for times of peace.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, September 5th, 1872.

Barron, Frederick William, Peterborough
Giffard, Douglas William, Guernsey
Rutherford, William, Ballinasloe, Ireland
Staines, John Francis, Southampton Row, W.C.

The following gentlemen also on the same day passed their primary professional examination.

Evans, Henry, Guy's Hospital
Jackson, Henry, Middlesex Hospital

As an Assistant in compounding and dispensing medicines.

Burgess, Wallett James, Duke Street, Portland Place

MEDICAL VACANCIES.

THE following vacancies are announced:—

BRENTFORD UNION, Middlesex—Medical Officer for the Twickenham or No. 9 District: £80 per annum, and extra fees.
CARLISLE DISPENSARY—House-Surgeon: £80 per annum, residence, coal, gas, and attendance.
CARPENTERS' COMPANY ASYLUM, Twickenham—Surgeon.
DONEGAL UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Dunkineely Dispensary District: £100 per annum, and fees.
EVESHAM UNION, Worcestershire—Medical Officer for the Workhouse: £30 per annum, and midwifery fees.—Medical Officer and Public Vaccinator for District No. 1: £52 per annum and extra fees.—Medical Officer and Public Vaccinator for District No. 2: £50 per annum, and extra fees.
GLASGOW ROYAL INFIRMARY—Extra Physician to the Dispensary.
GUY'S HOSPITAL—Assistant Surgeon.
HENLEY UNION—Medical Officer, Nettlebed District: £80 per annum, and extra fees.
HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square—Consulting-Physician.
LANCASTER INFIRMARY—House-Surgeon: £100 per annum, apartments, coal, gas, and attendance.
LEYBURN UNION, Yorkshire—Medical Officer for the West Leyburn District: £20 per annum.
LIMERICK UNION, co. Limerick—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Annacotty Dispensary District: £100 per annum, and fees.
MATER MISERICORDIÆ HOSPITAL, Dublin—Assistant Physician.
MEATH INFIRMARY, Navan—Apothecary, Secretary, and Registrar.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Two Entrance Scholarships: £25 and £20 per annum, for two years.
NEATH UNION, Glamorganshire—Medical Officer and Public Vaccinator for the Llangonoyd District: £15 per annum, and extra fees.
OKEHAMPTON UNION, Devon—Medical Officer for the North Tawton or No. 3 District: £50 per annum.
QUEEN'S COLLEGE, Galway—Professor of Materia Medica.
SALFORD and PENDLETON ROYAL HOSPITAL and DISPENSARY, Manchester—District Surgeon: £80 per annum, board and lodging.
ST. GEORGE, Hanover Square—Medical Officer of Health: £350 per annum.
ST. PANCRAS SCHOOLS, Leavesden—Resident Medical Officer.
STAFFORDSHIRE GENERAL INFIRMARY—Assistant to the House-Surgeon: £25 per annum, board, lodging, and washing.
TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser: £80 per annum, and residence.
TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.
TUNBRIDGE WELLS INFIRMARY AND DISPENSARY—Out-door Dispenser: £90 first year.
WATERFORD—Apothecary to the District Lunatic Asylum, the Lever Hospital, the Lying-in Hospital, and the Blue Coat School.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*CLARKE, J. Lockhart, M.D., F.R.S., appointed Consulting Physician to the Provident Medical Institution and Lying-in Charity, *vice* *C. J. B. Aldis, M.D., deceased.
O'NEILL, James P., L.K.Q.C.P., elected Attending Medical Officer of the Provident Medical Institution and Lying-in Charity, *vice* C. Beviss, M.D., retired.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGES.

*DAVIDSON, Alexander Dyce, M.D., of Aberdeen, to Jean Una, daughter of Francis EDMOND, Esq., of Kingswell, Aberdeenshire, on September 4th.
LIVESAY, William, M.B., of Sudbury, Derbyshire, to Elizabeth, daughter of *T. SHAPTER, M.D., of Exeter, at St. Sidwell's, Exeter, by the Rev. Canon Blackall, assisted by the Rev. H. D. Shapter, uncles of the bride, on Sept. 3rd.
WILL, John C. O., M.D., of Aberdeen, to Christina, only surviving daughter of the late William THOMSON, Esq., of Colquhoun, at Edinburgh, on September 4th.

DEATHS.

SHAW, Charles William, L.K.Q.C.P.I., at Castle Blagney, aged 25, on September 2nd.
SLAYTOR, Charles Pantin, Esq., Surgeon, of Stockland, Devonshire, aged 51, on August 26th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

EXPECTED OPERATIONS AT THE HOSPITALS.

WEST LONDON HOSPITAL, Tuesday, September 17th, 2 P.M. Lithotomy and Lithotrity, by Mr. Teevan.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. MARKHEIM.—Book not received. Please forward another copy.

MR. ROBERTS (Keighley) writes an excellent letter in the *Keighley News* on the benefits of vaccination. We would advise him to supplement it by using the striking argument adduced recently by Dr. Haughton. It would be desirable that those interested in the local public health should reprint and distribute his letters.

DR. CARTWRIGHT REED'S suggestion shall be borne in mind.

BALMFORTH *v.* BUCKLEY AND FLETCHER.

SIR,—The letter of Mr. William Cobbett inserted in your JOURNAL of Saturday last calls for some remarks, which I trust you will allow me to make through the medium of your JOURNAL. I have called Dr. Fletcher's attention to such letter; and, in reply, he says that Mr. Southam, on meeting him in the street one day, did certainly say that he (Mr. Southam) had received a letter from Messrs. Cobbett and Wheeler (which letter he produced, but did not hand to Dr. Fletcher), and that Dr. Fletcher must advise Mr. Buckley to refer the matter; but Dr. Fletcher said he should not interfere to dictate to Mr. Buckley what course he should pursue. No mention whatever was made of any action against Dr. Fletcher, nor any suggestion that he should consent to a reference. The conversation on that occasion related exclusively to Mr. Buckley.

Now for the facts within my own knowledge. On the 3rd of July, Mr. Whitworth and myself waited upon Mr. Cobbett to obtain his consent to an examination of the plaintiff on behalf of the defendants; but that was not, as stated by Mr. Cobbett, the only object of our visit; nor is he correct in stating that he was the one to introduce the subject of the reference. Upon our arrival at Mr. Cobbett's office, he was engaged; and thereupon we saw Mr. Pratt, who had the management of the cases, and mentioned to him our wish to have an examination of the plaintiff, and that we also wished to know if they were still prepared to refer the cases. Mr. Pratt replied that, as their offer of a reference had been declined in the first instance, he did not think their client would be willing to adhere to it now. Mr. Whitworth thereupon stated that, although there had been some mention of a reference, it had been made in such an informal manner that he did not consider himself entitled to entertain it; while I stated that, so far as my client was concerned, no offer whatever had been made to refer. This statement I have, during the continuance of the action, repeated on several occasions, and it never received any contradiction until the matter was noticed in your JOURNAL. After waiting some time, we saw Mr. Cobbett. He promised at once to arrange for an examination of the plaintiff; but with respect to a reference, which was mentioned by Mr. Whitworth, he expressed similar views to those expressed by Mr. Pratt. He certainly then did express surprise that the offer had not been accepted in the first instance. My reply was that no offer had been made to my client; and Mr. Whitworth repeated that he had not considered the offer an official one. It is not true that both Mr. Whitworth and myself intimated that we were not authorised to accept a reference. On the contrary, Mr. Whitworth pressed for it very warmly; while all that I said was that, as the offer had not been made to my client, I had not yet ascertained his views upon the subject. It was arranged that Mr. Cobbett should see his client, and let us know at once whether he was willing to refer. In writing to Messrs. Cobbett and Wheeler on the evening of the 4th of July, with reference to an appointment for the proposed examination, I said: "I shall also be glad to know your client's views with reference to the arbitration suggested yesterday." To this paragraph of my letter I never received any answer. I afterwards saw Mr. Pratt, and pressed him for an answer as to the plaintiff's views with respect to a reference, but received for reply that Mr. Cobbett himself had seen the plaintiff, and he (Mr. Pratt) could not tell me with what result. As neither Mr. Whitworth nor myself received any communication from Mr. Cobbett, we waited upon him together for the express purpose of learning the result of his interview with his client. He was not in; and, after waiting for some twenty minutes or so, we left a message for him, requesting him to let us know whether the plaintiff would refer. We learned where he had gone to, and walked along the road by which he must return, in the hope that we might meet him, which hope was realised. This is the "accidental" meeting in the street referred to by Mr. Cobbett. We told him distinctly that we had been waiting for him some time, and that we thought it possible we might meet him, and that we wished to know his client's decision as to a reference; and it was upon that occasion that Mr. Cobbett told us that his client objected to a reference, and that Mr. Southam had suggested that, if there was arbitration at all, it should be upon the principle that the defendants should admit their liability; but I distinctly and emphatically deny that the proposal to refer on our part was made at that interview, or that Mr. Cobbett said that we had hitherto declined to listen to such a proposition, or that he alluded to the strong pressure put upon him by Mr. Southam to refer. That the proposition to refer was not made then is proved by my letter of the 4th of July, which mentions it as having been made the previous day, which was considerably before the "accidental" meeting.

Mr. Cobbett has fallen into an error, also, with respect to my letter of the 19th of July. Such letter had no reference to the first examination of the plaintiff, which took place upon the 6th of July. When the first examination took place, Mr. Pratt mentioned to me that they intended to be present at it; but as I thought that it would be decidedly better that the solicitors of the respective parties should not be present, it was arranged between us that we should not attend. A second examination was arranged for the 19th of July, and on the morning of that day I received a note from Cobbett and Wheeler, stating simply that they intended to be present. To this note, mine of the 19th of July, of which Mr. Cobbett sends you copy, was written in answer. The letter of Messrs. Cobbett and Wheeler made no mention of a reference; and it was only upon perusing Mr. Cobbett's letter to your JOURNAL that I learn that Mr. Southam had invited his attendance, and with what object. If there had been the slightest intimation given to Mr. Whitworth and myself that our attendance at the examination would tend to bring about a reference, we should most certainly have been present. It is evident that we could not know what private communications were passing between Mr. Cobbett and Mr. Southam; and I think it will be admitted that my letter of the 19th of July, written in absolute ignorance of Mr. Southam's alleged object, by no means warrants Messrs. Cobbett and Wheeler's note of the same date to Mr. Southam.

The report from Mr. Beever, of which Mr. Cobbett has sent you a copy, is not the one which was produced in court upon the trial. I was not aware of the existence of such report, as it never saw daylight until you published the copy, but it in nowise contradicts my statement as to Mr. Beever's report.

I regret that I should have to trespass upon your space to such an extent; but the covertly offensive nature of the last paragraph of Mr. Cobbett's letter entitles me to ask you to give me the opportunity of a full explanation of the facts.

I am, etc., WM. HY. HEWITT.

8, Marsden Street, Manchester, September 4th, 1872.

THE PUBLIC HEALTH ACT.

SIR,—I beg to acknowledge the replies of the Poor-Law Medical Officers who have kindly responded to my appeal. Though I cannot come up to Dr. Rumsey in numbers, I can with satisfaction state that five-sixths of the answers were in favour of Mr. Stansfeld's clause, and these answers were all from Poor-Law Medical Officers. I am still quite at a loss to account for Dr. Rumsey's opposition to so great "a step in advance" to the "Poor-Law Service", considering (as I have always thought) that he was in favour of consolidation of appointments, and giving to those who do the work the credit and remuneration, which conditions I consider Mr. Stansfeld's Bill proposes to carry out.

I am, etc,,

September 1872. J. WICKHAM BARNES.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Sept. 7th; The Manchester Guardian, Sept. 11th; The Tewkesbury Record, Sept. 7th; The North British Advertiser, Sept. 7st; Saunders's News-Letter and Daily Advertiser, Sept. 10th; The Bath Express, Sept. 7th; The Jersey Express, Sept. 5th; The Homeward Mail, Sept. 4th; The Cambridge Express, September 7th; The Aberdeen Daily Free Press, September 6th.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Fraser, Edinburgh; Dr. Eastwood, Darlington; Dr. Wilson, Weymouth; Mr. Burgess, London; Mr. Bradley, Manchester; Dr. Henry Bennet, London; Mr. Soutter, London; Dr. Paget, Cambridge; A. R. G., Weybridge; Dr. F. J. Brown, Rochester; Dr. Rumsey. Cheltenham; Mr. F. Underhill, Tipton; An Associate; Mr. Bassett, Birmingham; Mr. Kisch, London; Dr. Attfield, London; Mr. Wickham Barnes, London: Mr. Winterbotham, Bridgwater; Mr. E. E. Campbell, Murton: Dr. Eaton, Cleaton Moor; Mr. Wood, Gateshead; Mr. J. A. Grindrod, Rochdale; Dr. Sansom, London: Dr. Gage Brown, London; A Member; Mr. W. Date, Crewkerne; Mr. Davidson, Carlisle; Dr. Markheim, Paris; Dr. Dalton, Cheltenham; Dr. Downey, Loughborough; Mr. White, London; Dr. Brunton, London: Dr. Desmond, Liverpool; Dr. Wilson, Exmouth; Dr. Fox, Birmingham; Mr. T. H. Hills, London; Dr. A. Robertson, Glasgow; Dr. Wilson, Cheltenham; Mr. Langston, London; Dr. Bree, Colchester; Mr, Mildren, Hayle; Mr. Groves, Worthing; Mr. Cowell, London; Mr. Billing, Harlsham; Mr. Wheatley, London; Dr. Charlton Bastian, London; Mr. Teevan. London; etc.

ABSTRACT OF LECTURES
ON
THE USE OF THE LARYNGOSCOPE.

Delivered at the London Hospital.

BY MORELL MACKENZIE, M.D.Lond.,
Assistant-Physician to the Hospital.

LECTURE III.

THE healthy larynx, as seen with the laryngoscope, has a very different appearance to that seen after death. The *rationale* of the formation of the image has already been explained; the special description of its individual parts will, therefore, be now undertaken. In some cases, on introducing the laryngeal mirror, only the epiglottis may be visible, with perhaps just the tips of the capitula Santorini at the posterior part; whilst in others, the entire length of the vocal cords, the ventricular bands (false vocal cords), the small cartilages of Wrisberg and Santorini, a portion of the cricoid cartilage, the rings of the trachea, and perhaps even the bifurcation of the bronchi below it, can be seen with perfect distinctness. The view varies in different cases between these two extremes. The epiglottis varies very much in appearance in

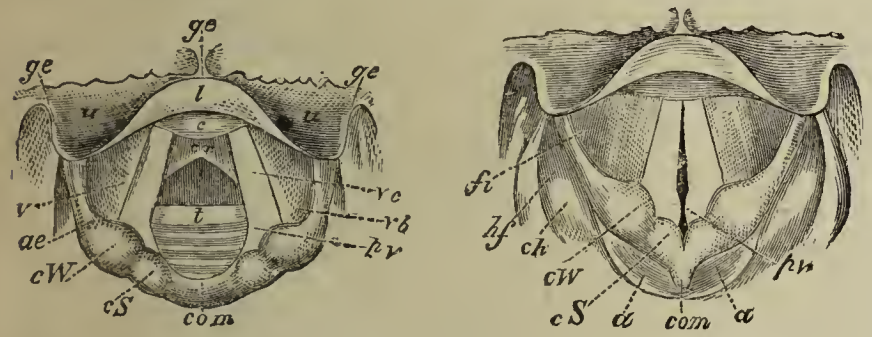


Fig. 9.—Laryngoscopic Drawing, showing the Vocal Cords drawn widely apart, and the position of the various parts above and below the Glottis, during quiet inspiration. *ge.* Glosso-epiglottidean Folds. *u.* Upper surface of Epiglottis. *l.* Lip of Epiglottis. *c.* Cushion of Epiglottis. *v.* Ventricle of Larynx. *ae.* Ary-epiglottic Fold. *cW.* Cartilage of Wrisberg. *cS.* Capitulum Santorini. *com.* Arytenoid Commissure. *vc.* Vocal Cord. *vb.* Ventricular Band. *pv.* Processus Vocalis. *cr.* Cricoid Cartilage. *t.* Rings of Trachea.

Fig. 10.—Laryngoscopic Drawing, showing the approximation of the Vocal Cords, and the position of the various parts in the act of vocalisation. *fi.* Fossa Innominata. *hf.* Hyoid Fossa. *ch.* Cornu of Hyoid Bone. *cW.* Cartilage of Wrisberg. *cS.* Capitulum Santorini. *a.* Arytenoid Cartilages. *com.* Arytenoid Commissure. *pv.* Processus Vocalis.

different individuals; for it may be large or small, broad or narrow, long or short. In most cases there is seen—1, a portion of its upper surface on either side (*u*); 2, its free edge and a small portion of its under surface turned up in the centre, and forming a kind of lip (*l*); and 3, another portion of its under surface, below and behind the lip, projecting as a rounded prominence—the cushion (*c*). The upper surface is of a dirty pinkish hue; the lip is of a decided yellow colour, though it has a slight shade of pink; and the cushion is invariably bright red. In some cases the whole of the under surface of the epiglottis is seen, and then it is of a bright red colour. This normal coloration of the under surface of the epiglottis is apt to be mistaken (by those unaccustomed to the use of the laryngoscope) for congestion of the mucous membrane. In some cases the epiglottis is broad, whilst in others it is extremely narrow; and whilst in some people only the upper surface can be seen, in others where the epiglottis is drawn tightly to the tongue, only the under surface is visible. In the centre of the free edge is a slight notch, which gives to the epiglottis, when seen in its entirety, its foliate appearance: but the free edge of the valve is more often turned upon itself, so that in the reflection the notch is lost sight of, and the border appears round. In some cases, on account of the inclination of the epiglottis, only the profile of its free edge is visible in the mirror. In these cases the valve is represented by a thin line. Above the epiglottis, the glosso-epiglottic folds (*g e*) may be seen, passing upwards and backwards to the tongue: the profile of the latter—that is to say, of its posterior superior border—is seen as a horizontal line, which, on account of the projecting papillæ, is somewhat uneven.

The ary-epiglottic folds (*a e*), which form the lateral boundaries of the upper laryngeal aperture, can be seen in the mirror extending obliquely downwards and backwards from the epiglottis to the arytenoid cartilages. Near the latter are the slight pinkish prominences of the cartilages of Wrisberg (*c W*), and a little beyond the cartilages of Wrisberg, in the same fold of mucous membrane, are two other small prominences, the capitula Santorini (*c S*), surmounting the arytenoid cartilages. The cartilages of Wrisberg generally appear round, but sometimes, especially in thin people, they have a triangular shape, the apex of the triangle being directed outwards. The capitula Santorini have a roundish shape in the healthy larynx. Both these cartilages are most distinct when the vocal cords are approximated; but the clearness with which these small laryngeal cartilages can be seen depends upon their degree of development, and also upon the amount of submucous areolar tissue surrounding them. Sometimes the cartilage of Wrisberg is not to be seen at all, whilst occasionally there are small cartilages between it and the capitula Santorini. The breadth of the ary-epiglottic folds varies in different people and in different states of the larynx, appearing broad when they are relaxed, that is in inspiration, and narrow when they are tense, as in the approximation of the cords, especially in the production of high notes. The ary-epiglottic folds have been well described by Störck, as having almost the colour of the gums. The cartilages of Wrisberg and Santorini are of a rather brighter and deeper colour than the rest of the mucous membrane.

The arytenoid cartilages (*a*) are easily recognised by the small cartilages of Santorini which surmount them: they can be best seen when the vocal cords are approximated. The mucous membrane covering them is generally of a rather redder tinge than that forming the ary-epiglottic folds. Between the arytenoid cartilages is a fold of mucous membrane—the inter-arytenoid fold or commissure—which is most apparent when the glottis is widely open (fig. 9, *com*). When the arytenoid cartilages are approximated, the commissure folds together, and is directed backwards (fig. 15, *com*). It is of a yellowish pink colour. The ventricular bands (*ob*), which were formerly called the false vocal cords, are the folds of mucous membrane which are seen below the ary-epiglottic folds, passing obliquely in the antero-posterior diameter of the larynx, from the arytenoid cartilages to the epiglottis. They are thick rather than prominent, and of a deeper red than the ary-epiglottic folds. Being rather thinner, and more prominent at their lower edge (which borders on the ventricle) than elsewhere, this part has a lighter tint when illuminated than the rest of the ligament. When the vocal cords are approximated, a small depression may be seen near the epiglottis between the ventricular bands below and the ary-epiglottic folds above, which I have called the fossa innominata (*fi*). The openings of the ventricles (*v*) can sometimes be seen, as dark lines, between the ventricular bands and vocal cords. They are best seen in the healthy larynx of a thin subject, especially when there is a slight disposition to spasm.

The vocal cords (*vc*), when visible, cannot be mistaken. They are seen as two pearly white cords, passing from the base of the arytenoid cartilages to the angle of the thyroid cartilage. On inspiration, they appear almost to touch each other at their anterior insertion, but to be separated from a quarter to half an inch posteriorly. On phonation, they become parallel, and appear to approximate. Each vocal cord is seen to terminate in the angle at the base of the arytenoid cartilages, called the vocal process (*vp*). On inspiration, this angle is directed outwards, and the glottis has a lozenge shape; but when the vocal cords approach one another, the angle is turned inwards. This process divides the intercartilaginous and interligamentous portions of the glottis.

Below the vocal cords, appears the broad yellow cricoid cartilage (*cr*), and below it, again, the rings of the trachea (*t*) are seen elevating the mucous membrane, which between them is of a pale pink colour. Occasionally two indistinct dark circles (the openings of the bronchi), on either side of a bright projecting line (the angle of division between the bronchi), indicate the bifurcation of the trachea. In some rare cases a ray of light may be thrown down the right bronchus.

Though external to the larynx, it is necessary to mention the hyoid fossa (*hf*), in which foreign bodies are extremely likely to be lodged. It is bounded on the inner side by the ary-epiglottic folds, and on the outer side by the inner surface of the thyroid cartilage. Projecting from the outer wall, and sometimes forming the floor of the fossa, the greater corner of the hyoid bone (*ch*) is sometimes seen glistening beneath the mucous membrane.

For the general practitioner, the armamentaria of laryngoscopy need not be extensive. Good laryngeal brushes, inhalers, both for atomised fluids and warm vapours, and a laryngeal electrode, are all that are

required. For atomised inhalation, Siegle's steam kettle, or Dr. Andrew Clark's handball spray-producer, answer well, and are both so well known that they do not need any description. For the inhalation of vapours, the "eclectic inhaler", made by Messrs. Maw, Son, and Thompson, is perhaps the best, as besides possessing certain special features of its own, it has all the good points of those previously invented.

I shall, I think, best conclude these lectures by a few remarks on the mode of applying remedies to the larynx, and an enumeration of the solutions, etc., which I find most useful.

For applying solutions to the larynx, squirrel's or camel's hair pencils, cut square at the end, and firmly attached to aluminium wire, bent at an angle of about 90 deg., will be found most suitable. Brushes of different lengths and of different sizes are required in different cases. For ordinary use, three brushes will be sufficient, and these are made of definite dimensions. The shortest size (No. 1) measures two inches in length from the angle to the end of the brush; the length in the medium size (No. 2), from the angle, is two and a half inches; and in the longest (No. 3), the length is three inches. The handles of these brushes (Nos. 1, 2, and 3) are, for convenience, coloured white, red, and black, respectively.

So many cases of acute and chronic inflammation of the larynx, successfully treated by topical remedies, have been related in the medical ournals, that it is scarcely necessary to bring forward here any proofs of the value of local treatment.

The various forms of laryngeal inflammation are for the most part analogous to similar morbid conditions in other parts of the body; and the practitioner, in the selection of particular remedies, will be guided by his general experience. I shall merely remark, therefore, that amongst the remedies I have found most efficacious are the following: solutions of perchloride of iron, 60-120 grains to ℥j; chloride of zinc, 20-30 grains to ℥j; sulphate of copper, 15 grains to ℥j; sulphate of zinc, 5 grains to ℥j; alum, 30 grains to ℥j; chloride of aluminium, 30-60 grains to ℥j; aluminate of iron, 30-60 grains to ℥j; carbolic acid (the crystals), 30 grains to ℥j; and tincture of iodine. The perchloride of iron and chloride of zinc are the solutions I use most largely. Glycerine will also be found a most useful solvent for these agents, as its consistence is better calculated to keep up prolonged and close contact between the remedy and the affected membrane. I seldom employ solutions of nitrate of silver as applications to the larynx, for whilst I have not found them more beneficial than other mineral astringents, they are much more likely to produce spasm and nausea. The alternation of topical remedies is often as efficacious in the cure of chronic laryngitis as it is in the treatment of chronic inflammation of other mucous passages. Solid nitrate of silver can only be safely applied to the larynx by means of the laryngeal cauteriser. This instrument consists of a piece of aluminium wire, bent at the same angle, and of the same length above and below the angle, as the laryngeal brush. The wire is roughened at its extremity, and then dipped into some nitrate of silver fused over the spirit-lamp. In this way a certain quantity of the nitrate adheres to the wire.

For faradisation of the vocal cords, a very simple instrument of my own invention is now generally used. The accompanying woodcut (fig. 11) sufficiently explains its method of action; the important feature being that the current does not pass beyond the handle until the operator, with his index finger, presses on the spring in the handle, when the electric current is conveyed to the part desired. By placing the extremity of the electrode on the arytenoid cartilages, both branches of the pneumogastric nerve are stimulated. This instrument is useful in functional aphonia and in most cases of vocal weakness, where there is no structural disease. In some cases, one application of internal electricity is sufficient to effect a permanent cure, whilst in others the shocks are required to be repeated daily on alternate days, or less frequently for several weeks. I generally introduce the electrode into the larynx three or four times at each sitting, keeping it in each time for a few seconds.

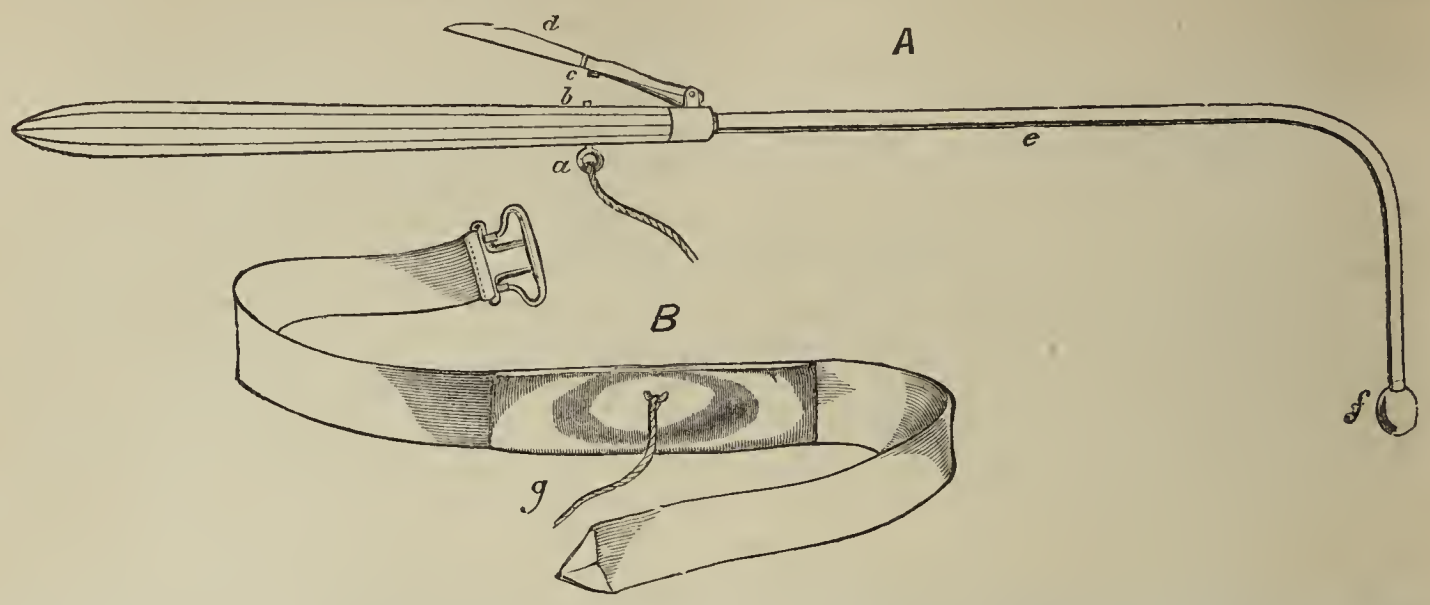


Fig. 11.—Electrode and Necklet. *A*. The Laryngeal Electrode. *a*, a metal ring by which the Electrode is connected by a chain either with a battery or a magneto-electric machine; *b*, the extremity of a wire communicating with *a*; *c*, metal point, which, when the ivory handle, *d*, is pressed upon, touches *b*. The current then passes along the wire, *e* (which is insulated in caoutchouc), to the sponge, *f*. The handle of the instrument is of wood or glass. *B*. The Necklet, which the patient wears. *g*, the chain by which the Necklet is connected with the apparatus producing the electricity.

THE CONTAGION OF SMALL-POX.*

By W. S. BRITTON, F.R.C.S.

I AM desirous of communicating to the Association the result of my observations as to the relative contagiousness of the different forms of small-pox. I have long been of opinion that that form of small-pox known as the "modified", in which the pustules are conical, without any depression of the centre, is not of the same contagious character as the "true" form, with the depression.

During the recent epidemic of small-pox, I held the appointment of surgeon to a large district in Marylebone, and had numerous opportunities of testing the correctness of my opinion, with the following results.

1. Every case of true small-pox—viz., that characterised by depression of the pustules—was removed to hospital as soon as a correct diagnosis could be arrived at, generally on the second day of the eruption; and all the usual precautions against the propagation of the disease in the patient's house were taken—that is, by the free use of disinfectants, destruction of the bedding, baking the clothes, and so on. Yet, in spite of these precautions, I found that, at some period within three weeks of the attack, the disease appeared in forty per cent. of the cases either in some other member or members of the family who had been in frequent communication with the patient, or in some person living in the same house, and who, therefore, had presumably been exposed to that special source of contagion.

2. On the other hand, about fifty cases of modified small-pox—that characterised by conical pustules, without any depression—came under my notice. These patients were not removed from their homes, but were allowed to mix with other members of their family without any restrictions; but in no one instance did the disease appear in any person so exposed to the influence of the disease. I conclude, therefore, that modified small-pox is not communicable.

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

CLINICAL REMARKS

ON A

CASE OF CONCUSSION FOLLOWED BY CHOREA AND DROWSINESS.

By C. HANDFIELD JONES, M.B.Cantab., F.R.S.,
Physician to St. Mary's Hospital.

J. S., aged 26, painter, was admitted December 9th, 1871. He stated that he had colic first six years ago, and again five weeks ago. He had no agitation then. He was always very excitable and quick tempered. In May 1869, he fell off a scaffold, and suffered concussion and injury of the spine, besides a large bruise on his thigh. He was in a hospital in London three weeks after this accident. On leaving, he walked, he said, three times round the hospital before he could make a start in the right direction for home, and then he was two and a half hours getting home to Park Lane, Upper Baker Street. He lay down on the bed, but the children distracted him, and he became worse. One day, while walking in Baker Street, he saw a child run over by a cab. A crowd collected, and he stood among them until he was desired by the police to move on. He found then that he could not move his legs, and had to get the aid of two persons to enable him to return home. The next day he applied to a public dispensary, where he was advised to go into a hospital, as he "could not walk without assistance; his head, arms, body, and legs, twisting and writhing like a toy made of India-rubber, causing his stomach great pain". The motive power seemed to come from his back, which very soon began to ache on exertion, and then he was glad to go home and lie down. When he was in bed his muscles would quiver; sometimes his arms, legs, and often his back, would spring up in bed almost upright; then it would gradually decrease, so that he could lie quiet. On getting up, his joints would feel very loose; his knees would give way under him, throwing him forward. He had never suffered in this way before. Some time after this he got a letter of admission to a convalescent hospital near Windsor (St. Andrew's). The shaking of the railway-carriage made him worse than ever; his difficulty of articulation was increased, and his unsteadiness. In fact, he could not put one foot before the other for a little time, and was unable, on his arrival at the station, to walk to the hospital. He was kept very quiet after he was admitted into the hospital, and otherwise judiciously treated, and gradually got better. In the course of a month every bad symptom was gone, and he was able to walk miles without the slightest inconvenience. He remained another fortnight, and when he came to work the only indication of his illness was a slight headache, an inclination to drowsiness, which he could shake off unless he had drank beer, and an inability to carry anything on his head. In the course of 1870, the sleepiness increased, and on ascending a ladder the back of his legs would quiver. At that time he began to be morose and melancholy; he would drop off to sleep as soon as he came home in the evening, sometimes before he had his tea, and never went out afterwards, and very rarely spoke to any one. In 1871, he had the gout in his right foot; his headache increased; and he would often go to sleep on a scaffold. He has known himself drop off to sleep on a standard ladder sixty feet from the ground. In October he began to feel very ill, had a spurious sort of hæmoptysis, soreness of his mouth and tongue, costiveness, inability to keep anything on his stomach, and aching of his joints like gout. He gradually became worse, and then came to St. Mary's.*

When I saw him, his condition was very much that of a choreic patient. His speech was much interfered with; it was not always easy to comprehend what he wanted to say. There was a good deal of jactitation. The registrar's note states that he could not keep a limb quiet. His grasping power was rather defective, but he could move both arms well. Sometimes the muscles of his arms and legs became rigid. He slept a good deal, and quietly. The heart's sounds were normal. His habits were temperate. He smoked little. The bowels were costive; face pallid. The agitation was induced by exertion. He could walk sometimes two hundred or three hundred yards before it came on, then his legs jumped and started about. He was ordered two drachms of succus conii in water three times a day; milk, beef-tea, and a warm bath.—December 11th. The bath produced an immediate effect in calming and steadying him. He was quite still now if allowed to be quiet, but if spoken to he began to twitch and yawn a good deal. Yesterday there was a notable amount of bloody sputa; to-day he had very little. He said that he slept day and night. On the 13th, he was ordered eight grains of hypophosphite of soda three times a day, and two drachms of cod-liver oil once daily. After a week's stay in the hospital, he reported himself much better, was able to walk about briskly, and did not feel sleepy in the day-time. On the 18th, as he had still much pallor, I gave him five grains of hypophosphite of soda and eight grains of citrate of iron and quinine in water three times a day. On the 20th December, he had a good deal of choreic agitation or unsteadiness; he had much difficulty in making the house-surgeon understand that he wanted a certificate. On the 21st he was ordered a drachm of succus conii in water three times a day, and 20 grains of saccharated carbonate of iron three times a day. On December 28th he was better; the palpitation of heart, with which he used to wake up, had ceased. He was still rather unsteady, but walked about well and went into the open air. On January 2nd, 1872, I examined the eyes with the ophthalmoscope, and detected nothing more abnormal than some white streaks on the left disc, and along some of the retinal vessels. On the 4th, he went out. He was seen again on the 19th, when he stated that he had been going on very well up to that morning; but, his child having been run over, he brought it to the hospital, and while he was there the choreic agitation returned in a most marked manner. He was ordered to take two-drachm doses of the succus conii again.

My notes do not state whether there was a blue line on the gums in this case or not; but his occupation, and the fact of his having had two attacks of colic, make it certain that his system was under the toxic influence of lead. This is further substantiated by the occurrence of gout, which Dr. Garrod has shown to affect with increased frequency those who work with this metal. The question then arises whether the choreic disorder can be referred to this cause. Mercurial tremor is of course a well known affection; but few writers, as Dr. Sanders states, admit that lead can act in the same way. It appears that artisans using lead only suffer from the ordinary disorders, but the case is different with regard to lead-miners. "Brockmann, from his experience in the Harz mountains, has described a species of lead tremor which affects the miners there, and which is almost identical with the mercurial shaking palsy, consisting, like it, of oscillating spasmodic contractions of the muscles, and consequent tremulous motion in various parts of the body. The tremor may be local, usually affecting only the upper extremities, or general. The latter form never results except from deeply rooted lead-poisoning" (Reynolds's *System of Medicine*, vol. ii, p. 215). It is apt to be the precursor of paralysis or cerebral disease. In J. S., however, you will observe that the irregular movements were clonic spasms, and not tremors; there was no continuous muscular twitching, but frequent movements of considerable extent. The character, then, of the muscular disorder, the circumstance that the patient was not a lead-miner, and that the toxic action of the metal was not carried to any great degree, incline me to believe that his choreic agitation was dependent rather on the spinal injury than on lead-poisoning. This view is confirmed by his having never suffered from any thing like chorea until shortly after his accident, and by the fact that, even before the chorea appeared, his locomotor power was markedly impaired, as was evidenced by the difficulty he had in going home from the hospital.

The remarkable drowsiness from which J. S. suffered after his accident, as well as his moroseness and melancholy, afford proof that his encephalon—probably his hemispheres—had suffered damage, and, owing to impaired nutrition, performed their functions badly. As concussion often produces impairment of the intellectual powers, I can see no improbability in the view that it may have in this instance impaired motor power also, having injured the corpus striatum and other associated centres, and rendered their tissue unstable. The coexistence of symptoms of defective power and of increased excitability, frequently observed, was well marked in this case. It is most probable that the damage occasioned by the injury was not of a kind readily demonstrable; for, if such had been the case, it would be difficult to account for the great improvement produced by the residence at the convalescent asylum, and subsequently by the conium.

The cessation of another form of muscular disorder—viz., the palpitation, while taking the conium, deserves notice. The remedies for this neurosis are by no means so satisfactory, that we can regard with indifference the offer of another which may prove more effective. The effect of emotional excitement on our patient was remarkable, and tends materially to assimilate his malady to ordinary chorea. The action of conium in this and similar instances seems evidently not to be merely sedative, but, as Dr. J. Harley describes it, recreative and restorative. Not only did it tranquillise the irritable motor centres, but it rendered them more capable of exertion, and restored the hemispheres from their paretic and languid state. My recent experience of conium inclines me

* The foregoing statements are taken from the patient's own account, which he wrote out at my request.

to hope that we possess in it a remedy of great value in many states of nervous system characterised by the blending of hyperexcitability and debility. I have said nothing of the gout, which he seems to have had, as a *causa mali*, for it seems to me quite improbable that it had anything to do with the production of the motor disorder or the drowsiness: they did not alternate with the articular affection.

Shortly, we may regard the case as one where the nervous centres were originally of rather infirm, unstable constitution, and subsequently had their nutrition impaired by injury received in a fall, so that they performed their functions feebly and unsteadily. The lead-poisoning may at the same time have contributed something to the deterioration of the nerve-force by acting injuriously on the nerve-cells, but it was by no means the principal cause of disorder.

It may be well to consider how this poor fellow would have fared if his concussion had been received in a railway collision, and he had sought compensation in a court of law. Would not suspicions have been expressed rather freely that he was malingering, or at any rate exaggerating considerably? and might he not have had difficulty in convincing the jury that his malady was genuine? It is quite right that all claims for compensation should be closely scrutinised; but mistrust may be carried too far, and I call your attention to this case as a proof that concussion may produce symptoms which, though very real, might be regarded with much suspicion by those who have chiefly given their attention to cases of severer injury.

REMARKS ON A CASE OF HÆMATURIA FROM THE PRESENCE OF THE BILHARZIA HÆMATOBIA.

By HENRY SIMPSON, M.D.,
Physician to the Manchester Royal Infirmary.

The publication of Dr. Cobbold's interesting paper in the JOURNAL of July 27th reminds me of a patient, suffering from the presence of the Bilharzia hæmatobia, who was under my care last year in the Manchester Royal Infirmary. He was seen by many of my medical friends, and I read a paper before the Medical Society of this city, on the History of the Bilharzia and the Phenomena due to its presence as a Parasite. This I had intended to send to the JOURNAL; but, as Dr. Cobbold's paper goes over much of the ground I traversed, and in a manner I cannot attempt to rival, I shall not do so. As, however, but few of these cases have been reported, and they still possess some of the interest of novelty, and of difficulty as regards efficient treatment, I may perhaps be allowed, as briefly as possible, to touch on some of the points of interest in the case.

The patient, William Ray, aged 20, presented himself as an out-patient about the end of January 1871, suffering from hæmaturia. Mr. Roberts, the physicians' assistant, learning that he had been in Egypt, and recollecting that this disease was endemic there, and connected with the presence of the Bilharzia, brought him to me. I at once examined the urine microscopically, and discovered the ova of the worm. The patient was slight but well built, as befitted his occupation, which was that of a jockey. He looked ill and weak, and was very anæmic, but his chief complaint was of the hæmaturia. He went to Egypt in February 1869, to follow his calling in the service of the Viceroy. The day after his arrival at Cairo, his leg was broken by a donkey he was riding slipping down and falling on him. In three months he left Cairo for Alexandria, where he remained nine months. He then spent six weeks in Cairo, after which he was in Alexandria until his return to England in November 1870.

The history of these cases is chiefly interesting so far as it may throw light on the introduction of the parasite into the body, and suggest preventive treatment.

Griesinger supposed that the young of the Bilharzia exist in the water of the Nile and in the fishes abounding in it, or even in the bread, grain, or fruit. Dr. Cobbold, however, in a paper published early last year, with which I infer that his views are still in accord, states that he thinks it more probable that the larvæ will be found in some of the gasteropod molluscs proper to the localities from whence the adult forms have been obtained. Unfortunately, his recent researches have not as yet proved this supposition to be correct, but it still, I think, suggests the direction for future inquiry. In my paper alluded to, I ventured to criticise the views put forth by Dr. Harley as to the probable mode of its introduction into the human system, as not in unison with those of the best observers. Perhaps I may quote the following sentence. "The view above given" (referring to Dr. Harley's paper) "is certainly opposed to what has been made out as to the development of other trematode worms, and I cannot but believe that it will be found eventually that man becomes infested with the parasite, not when it has just escaped from the egg, but when it has advanced to a stage beyond that of the ciliated embryo as we first see it, and that one or more intermediate hosts will be necessary before he is honoured by its presence."

Now, while my patient was at Alexandria, he drank water from a well; when he was at Cairo, he drank the water of the Nile. In both places, it was brought to the house in skins by Arabs. These men, by the way, used to wash their food, clothes, etc., in the spring at Alexandria. Generally he took the water filtered, but sometimes it was unfiltered. At Cairo, the Nile water was also brought in skins, and generally filtered, but occasionally, when thirsty, he took that also unfiltered. Before filtration, "it was sometimes very dirty-white in colour, and at other times clayey-looking." In Alexandria, he ate a good deal of water-cress, which he said was well washed. His living generally was good. I have no information as to his eating fish or shell-fish.

Now, the above details will not decide the source of infection. I incline to the belief that it was the unfiltered Nile water; but of course the water-cress, though said to be washed, might have conveyed small molluscs, etc., to the stomach.

It was not until January 1870, eleven months after reaching Egypt, that he noticed blood in the urine. It then came in single drops at the end of micturition, but gradually increased in quantity. A week after the appearance of the blood, he felt a burning sensation at the end of the penis after micturition, and a little pain during the act. He said that at one time a piece of clotted blood used to shoot out first, the urine then became clear, but never so clear as healthy urine, and towards the end of the flow it was freely mixed with blood. In August 1870, he had an attack of gonorrhœa, during which time he estimated that the quantity of blood, which was then much increased, amounted at the most to a pint in the twenty-four hours. This is probably an exaggeration, though not, I think, wilful.

During his stay in Egypt, he went under the care of three medical men from this country, none of whom appeared to recognise the cause of his complaint; as one treated him, according to the lad's statement, for inflammation of the kidney and irritation of the bladder, and the other two for stone in the bladder.

He had often great pain round the loins, especially in wet weather, and the testicles often swelled. During the twelve months of his illness he had lost colour, and his pallor was very noticeable when he was admitted, February 4th, 1871. His pulse was 72, small, weak, and irregular in rhythm. Nothing special had to be noticed as to the heart and lungs, except some irregularity in the action of the former. The tongue was slightly furred and moist, but apt to become dry at night. The appetite was generally fair, and the bowels somewhat confined. The abdomen was soft and normal in appearance. There were, however, slight fulness and tenderness on pressure at the epigastrium; and the liver extended a little below the ribs. The spleen was not enlarged. He complained of tenderness on the right side, where the lumbar and hypochondriac regions were grasped by the hand. There was, moreover, some tenderness on deep pressure over the hypogastrium. The desire to pass urine was rather troublesome, and he had frequently to get up three or four times in the night. In the twenty-four hours, he usually passed fifty to sixty ounces of urine, which contained a good deal of albumen, but no sugar. The reaction was acid, and the specific gravity ranged from 1007 to 1015. On standing, there was a dense and copious deposit, consisting chiefly of pus-cells, with blood-corpuscles dispersed among them, and here and there a small clot. Sometimes he passed urine into several vessels, in order that we might notice if the ova were more abundant at one period of micturition than at another. The following instance will sufficiently illustrate this.

Vessel No. 1. Urine of a pale greenish straw-colour. Deposit white and scanty, made up of pus, with numerous blood-corpuscles; but no ova observed.

No. 2. Slightly darker in colour; whitish deposit more abundant. This contained numerous ova and some escaped embryos.

No. 3. Dark brown in colour. Deposit very abundant, and containing numerous small blood-clots. Ova very numerous. In one small shreddy fragment, in which much blood was entangled, I counted twenty-two ova in the field at once, when using the one-inch object-glass. They were, therefore, much more abundant in the latter stage of micturition than the earlier, as, indeed, one would have expected; for the turbid portion of the urine would remain at the bottom of the bladder until the expulsive force, having drawn off the supernatant liquid, began to tell on the dregs.

During his stay in hospital, he never passed much blood at once, but

there was always a little; and, even when to the naked eye the urine was apparently free from it, numerous blood-discs were displayed by the microscope.

Dr. Cobbold has described the ova of the Bilharzia so carefully, that I will not occupy space by doing so. I am glad, however, to be able to prove that, as to the position of the spine, the first describers were not only not in error, but were free from exaggeration in depicting it occasionally as lateral. Generally, the ova which I observed were symmetrical in form, with the spine at one of the terminal poles—reminding one of the spike on Von Moltke's helmet, as seen in the photographs. Sometimes—but rarely, however—it was quite lateral, and growing from the broad face, and not from the narrow edge of the shell.

I may mention also another fact which has not been noticed, so far as I am aware, by previous observers, which is, that the anterior extremity of the embryo has no constant relation to the poles of the shell; the head sometimes being directed towards the spike, sometimes to the plain end.

Passing over all the interesting phenomena attending the escape of the embryo from the egg, and on which my observations accord with those of Dr. Cobbold, I will return to the clinical bearings of the question.

During his stay in the Infirmary, there was no marked change in the condition of the patient; but the hæmorrhage decidedly lessened. There is no doubt that the mucous membrane of the urinary passages had suffered from the inroads of the parasite; and that there was chronic pyelitis, most probably affecting the right kidney. Griesinger found the worm inhabiting the blood-vessels of the bladder, ureters, and kidneys, also the portal and mesenteric veins; and he states that he found empty egg-shells in the blood of the left ventricle. In many cases, the constitution becomes gradually undermined, and death results from pneumonia, diarrhœa, and other disorders. In some of the cases of pneumonia, it is not improbable, as Küchenmeister suggests, that embolism plays an important part.

As regards treatment, it is evident that we must be considerably hampered. The worm lives in the blood-vessels, and can only be acted on by soluble substances carried to it with the blood-stream, and necessarily in a state of considerable dilution. If, however, we can give a remedy sufficiently powerful to kill the parasite, will not the dead worms in the blood-vessels be almost more dangerous than the same guests when living? They will be more liable to be carried on by the blood-current—those in the systemic veins to the right heart, thence to be driven into the pulmonary capillaries, where they may give rise to inflammatory changes in the lungs. Those in the portal vein will, of course, be carried into the capillaries of the liver; and Griesinger strongly suspected some connexion between this parasite and hepatic abscess. The danger, moreover, of septic poisoning from the dead worms, must not be forgotten. Griesinger, our great authority as to these points, gives an illustration of the immense numbers in which they occur, when he says that the portal vein has been found filled with them.

The treatment adopted during the patient's stay with us was chiefly directed to the improvement of his general health. For some time he took quinine with perchloride of iron. For a short period I gave him small doses of turpentine, which, however, produced irritation of the urinary passages, and somewhat increased the hæmorrhage; and, in spite of my better judgment, I gave him some large doses of iodide of potassium, as there is some reason to believe that they have been useful in bringing about the death of hydatid cysts. No doubt the infusion of buchu, as recommended by Dr. Cobbold, would be useful in lessening the irritability of the bladder; but I must confess my scepticism as to the good effects likely to result from the treatment suggested by Dr. Harley. And I cannot but believe that, as to any direct treatment, we are powerless for cure, and must rely on judicious palliation.

On the whole, I think it is clear that the prospect of success lies rather in prevention than cure. It may be long before the people of any country will be so educated as to observe preventive measures; but governments might do something by diffusing a knowledge of what such measures should be, and the reasons for their adoption. The drinking water in Egypt, the Cape, and other countries where this parasite occurs, should of course be perfectly filtered. All vegetables should be well washed; but it would be safer to avoid all salads, and only to use vegetables boiled. All shell-fish should be abjured, or thoroughly cooked; and no fish, though dried or smoked, should be eaten without cooking.

Dr. Harley recommends that "water should be conveyed from its source to its destination in covered channels, so that the urinary and probably the fæcal products of those infested with the parasite may be prevented mixing with it." This is desirable for obvious reasons, but not for those given by Dr. Harley, whose views as to the development of the Bilharzia do not, as Dr. Cobbold very clearly indicates, seem to harmonise with those of the most eminent scientific observers. Our danger lies rather in the introduction of the parasite into the body in one of its intermediate stages between the ovum and the sexually perfect worm, than in swallowing the ova themselves. The question of its possible acclimatisation with us is one not merely of scientific, but of practical moment. Although an inhabitant of climates hotter than our own, we do not know as yet that our temperature is too low for its development, and we have in favour of it the fact that the lower forms of life are usually tolerant of widely diverse external influences. Bearing in mind, therefore, the enormous increase in the number of those who for business purposes, for pleasure, or in pursuit of health, dwell for a time in its present abodes, and then return to us, we may fairly assume that its ova will more or less frequently be freely scattered in our midst. So far as any evidence of which we are in possession at present is concerned, we have probably all the conditions necessary for its development, except temperature. This exception may turn out to be our safeguard, but as yet there is not sufficient proof of it; and we may well believe that it is not impossible, perhaps not even improbable, that the Bilharzia hæmatobia will find a home in this country. I am aware that Dr. Cobbold's experiments do not support this supposition; but, as he says, "the conditions under which the experiments were made departed in several respects from those that are presumably essential to success in the ordinary course of nature."

While in the Infirmary, my patient had several letters urging him to return to Egypt, which he was very wishful to do, and at length one stating that his passage was paid for, etc. This he could not resist; so he left, promising to write on his arrival at Cairo. A letter came in due time, in which he said that his general health had improved much on his journey.

I could only ascertain that he was acquainted with one case like his own, and this was in the person of a native soldier. His opportunities of inquiry would probably not be numerous, and of course the spur of scientific curiosity was wanting. It seems strange that the diagnosis of his case should not, so far as we could learn, be made out by the medical men who saw him, when we remember that, until recently, almost all we knew of the disease was derived from Egypt.

ON THE EXTERNAL AND INTERNAL ORIFICES OF THE UTERUS: THEIR ANATOMY, PHYSIOLOGY, AND PATHOLOGY.*

By J. HENRY BENNET, M.D.,
Late Obstetric Physician to the Royal Free Hospital, etc.

THE subject which I have taken for the present communication is so extensive, it can be viewed and discussed in so many different lights, that a volume might be written on it. My object, however, is merely to lay down a few general anatomical and physiological data, as a basis for treatment in pathological conditions. My hope is, that the discussion of these data at this meeting may establish a little order in the chaos of present practice at home and abroad.

Anatomically, there are two distinct cavities in the uterus; that of the body, the larger one; that of the cervix, the smaller one. It is in the cavity of the body of the uterus that conception and the development of the fœtus take place, whilst the cavity of the cervix is a species of antechamber which precedes and protects the more sacred internal precincts. The circular fibres of the body of the uterus converge towards the cervix, are continued throughout its entire extent, and form the greater part of its tissue, half an inch in thickness. These circular fibres of the cervix are endowed with vitality, and with contractility in the cervical canal, even in the non-pregnant state, as is seen on introducing a stick of nitrate of silver, or a solution of nitrate of silver, into the cervical cavity. Its entire extent instantly contracts, so that the uterine sound can no longer be introduced without an effort, although the canal may have been quite patulous before. These circular fibres, in the healthy uterus, surround and form an infundibuliform cavity in the central cervical region; whilst at the outer or vaginal outlet, and also where the cervix passes into the uterine cavity, they are in circular approximation, like the sphincter ani. They thus close the canal in both directions, and resist the effort to enter either cavity with sound or bougie, and that by a vital contraction. In a word, the cavity of the uterus is separated from the cavity of the cervix by a regular sphincter, a fact which I was the first to demon-

* Read in the Midwifery Section at the Annual Meeting of the British Medical Association at Birmingham, August 1872.

strate in 1848; and the cavity of the cervical canal is separated from the vagina by a second sphincter. I do not mean to assert that on dissection a separate band of muscular fibres, assuming the form of a sphincter, can be demonstrated, nor have I ever made such a statement. What I have asserted and do assert is, that the circular fibres which constitute the mass of the thick structure of the cervix uteri, or some of them, contract vitally and perform the functions of sphincters. I would remark that, anatomically, all the great cavities of the body have sphincters—the stomach, the intestinal canal, the bladder. For the uterus not to have one, would be an exception to this anatomical rule.

Physiologically, these sphincters open and close under physiological conditions. Before, during, and after menstruation, the os internum often opens to gentle pressure in cases in which it is impassible, except to force, in the interval of menstruation. In a much minor degree I notice the same fact with the healthy os externum. In all probability they both open, likewise, under the influence of sexual orgasm, thus facilitating the entrance of semen and conception.

On the other hand, the os internum constantly closes spasmodically on the contact of the cold uterine sound, so as to require more or less force for it to pass, and that in the healthiest female. A warm wax bougie of the same size will, however, often pass with gentle continued pressure. The contact of any astringent or irritating substance —alum, zinc, tannin, nitrate of silver—occasions, in a few seconds, such a contraction of the os externum as to effectually close the canal. Closure of the uterine orifices, indeed, is so much the rule in the healthy female, that an open patulous condition of either orifice may be considered to generally imply disease, inflammation, inflammatory hypertrophy, or a fibrous growth.

To me it appears that the above statements are facts, undeniable, uncontrovertible facts; and if so, it is of the most vital importance that they should be generally recognised. In actual practice, we constantly hear of serious operations performed on the uterus by eminent obstetricians or surgeons, founded on the non-recognition of these anatomical and physiological data. Such operations are based on the supposed existence of strictures, which, if I am anatomically right, often do not exist. A remarkable fact connected with the operations the abuse of which I criticise is, that one class of eminent practitioners, such as Sir James Simpson and Dr. Greenhalgh, very frequently divide the os uteri internum as the seat of stricture, and as the cause of uterine suffering of all kinds; whereas other practitioners equally eminent, Dr. Marion Sims and Dr. Emmet, for instance, I believe, think that the os internum proper is seldom in fault, and divide the os externum down to its vaginal attachments in all but exactly the same class of cases. Thus, the practice of each category stands condemned by that of the other.

The division of the os uteri internum for sterility, dysmenorrhœa, etc., was introduced by the late Sir James Simpson more than a quarter of a century ago, and I do not think that, up to the end of his career, he ever discriminated between physiological and morbid contraction of the os internum; or, in other words, that he ever adopted the above view long ago submitted by me to the profession. I certainly have known him, in consultation, declare females to be suffering from stricture, when they presented what I considered to be a mere physiological resistance to the introduction of the sound. Moreover, I have seen many females in whom he had clearly divided the os internum under the same conditions. Indeed, it is well known that the division of the os internum had become a matter of routine with our lamented colleague. I may add that it is so still with many of his followers at home and abroad. Thus, in 1864, Dr. Greenhalgh stated, in my presence, at the Obstetrical Society, that he had divided the os internum in several hundred cases within a few years.

Dr. Marion Sims, on the other hand, in his really valuable work on the *Surgery of Women's Diseases*, seems to think that the os uteri internum can generally be left to take care of itself, and proposes as a remedy for sterility, displacements, and chronic inflammations of the uterus, division of the entire cervical wall on both sides, down to its attachments to the vagina. In midwifery, we are taught to consider laceration of the cervix, during labour, down to its vaginal attachments, a serious complication, and I constantly find it the evident cause and origin of severe chronic inflammatory disease. Yet it is this condition, artificially induced—it is this surgical interference with the natural structure of the uterine neck—that is to remedy sterility, to remove secondary displacements, and to cure chronic inflammatory disease. For myself, I believe that this operation is totally powerless, as a rule, to remedy or even palliate these conditions. Dr. Sims says that he and his colleague, Dr. Emmet, have performed this operation more than five hundred times within a few years in their hospital at New York, and with satisfactory results; but these women should have been seen a year after the operation. No results obtained by uterine treatment of any kind can be accepted as permanent until after that lapse of time.

It must not, however, be thought that I deny congenital or pathological stricture of the uterine orifices. Far from it, I have myself in many cases cured severe congenital dysmenorrhœa or pseudo-membranous dysmenorrhœa by dilatation of the os internum. But I was not guided, in having recourse to such treatment, by the resistance of the os internum to the sound, an unreliable guide, as we have seen. I have resorted to it in congenital cases because there was no other apparent cause for dysmenorrhœa, but evident narrowness of the passages: in pseudo-membranous dysmenorrhœa, to give a freer exit to the pseudo-membranes; in pathological cases, in chronic inflammatory disease, because the removal of the morbid condition was not followed by spontaneous dilatation of the really narrowed orifice, and by disappearance of the dysmenorrhœa.

As to division of the os externum, I should feel disposed to limit it to those exceptional cases of conoid cervix in nulliparous women, which my friend Dr. Barnes has well described, and in which the orifice of the os internum is preternaturally small. With some women, its rational aggrandisement may certainly facilitate menstruation and conception. But I do not consider it a rational surgical procedure to dilate the cervix, by cutting it in two from apex to base. What surgeon has ever proposed to dilate stricture of the male urethra by dividing the glans or entire penis in two halves?

In conclusion, I would recapitulate by stating that I myself do not consider that there is any positive evidence of abnormal contraction of the os uteri internum if a small wax bougie, warmed and bent to the natural anterior curve of the uterus, passes, on gentle continued pressure, into the uterine cavity. I do not even consider that there is any such evidence on the non-passage of the uterine sound or of the small wax bougie. If there be no dysmenorrhœa, if free painless menstruation exist, the contraction may be vital; it may, and probably does in such cases, relax physiologically at proper times and seasons.

As to the os externum, I see no reason for surgical interference if a good sized wax bougie can be passed easily into the cervical canal. I must confess to being utterly unable to understand how dividing the structures of the cervix, how artificially producing an obstetrical laceration of the organ, can cure these varied diseases. In my opinion the operation, as a routine operation, is a surgical error, and yet it continues to be the routine practice of many eminent obstetricians, and that without the data on which it is founded being given.

In the year 1866, my friend Dr. Tilt read an able paper before the London Obstetrical Society, in which he tried to stem the current of irrational uterine surgery in this direction; but the state of practice appears to me to be nearly the same now as then. I constantly meet in consulting practice, both at home and abroad, females in whom division of one or other orifice has been carried out apparently in a routine spirit, as a mere remedy which may do good. I should wish to see this operation placed on a sound basis; and with that view, appeal to the members of the Association present to help me in clearing up and establishing the anatomical and physiological data on which alone such an operation can rightly rest.

I take advantage—I hope it will not be considered an undue advantage—of the opportunity afforded me by the reading of this paper to briefly narrate two cases which illustrate the subjects discussed yesterday in our section on the reading of the three able memoirs on the treatment of cancer of the uterus.

More than twenty years ago I was sent for by the surgeon of a provincial hospital to see, in consultation with him, the wife of the vicar of the town. She was a woman of about forty, mother of a large family, who had been pronounced to be undoubtedly labouring under advanced ulcerated cancer of the uterus by several obstetric and surgical celebrities. I found all the constitutional symptoms of such a condition; but the uterus was not fixed in the pelvis, whilst the cervix was fissured, lobulated, and the seat of fungoid-looking ulceration. I thought that all this mischief might be inflammatory, so had the patient brought to town, and by the help of potassa cum calce cured the morbid conditions. Health returned, and she is well and alive now.

The fame of this cure spread far and near, and for some years I did a considerable proportion of the consulting work of the town. On one occasion, however, I was sent for to see a lady fifty years of age, who had ceased to menstruate for two years, and in whom an uterine tumour had been casually discovered by the hand pressed on the hypogastric region. I found the uterus enlarged, as in the fourth month of pregnancy, ascending out of the pelvis, perfectly free from adhesions, movable in every direction, perfectly globular, no discharge from the vagina or cervical canal; merely slight hypogastric pains; general health and nutrition perfect. The sound passed four inches freely. I dia-

gnosed a fibrous tumour of the uterus; reassured the patient and friends; told them she might live twenty years; and on return home, unfortunately made the same statement to the family in town. Forty-eight hours after my visit, this patient was seized with peritonitis, and died on the second day. A *post mortem* examination was made, and a large encephaloid cancerous tumour was found in the uterine cavity. I need scarcely add that I ceased to be a prophet in the town in question. My glory departed, and I have never been sent for since. This fact teaches us the advisability of caution in the simplest of cases. I do not even now see how the error I made could have been avoided; but had I given a more guarded opinion, the results might not have been so serious to me in a professional sense. Again, was the peritonitis the result of the passage of the sound, or a mere coincidence?

THREE OBSTETRIC COMPLICATIONS.

By W. DRAPER, M.R.C.S., etc., York.

Of the three following cases, each of which seems to present some points of interest, the first represents a class much dreaded by private obstetricians, and justly so from the frequent untoward issue. The second case affords a good example of a condition not very common in pregnancy—"dropsy of the amnion". The third case is an illustration of "early rupture of the membranes", respecting which much has been said of late in this JOURNAL. I am inclined to think that the accident is by no means so uncommon as some recent writers in these pages seem to suppose: certainly the number of cases recorded during the last few months would favour the notion.

CASE I. *Entire Placenta Prævia.*—In October 1871, I was called to see Mrs. S., aged 25, who was in the ninth month of her second pregnancy. I found that she had sustained a sudden and violent loss of blood, but the hæmorrhage had ceased on my arrival. A digital examination of the uterus discovered the cervix in the ordinary condition at the ninth month of gestation. The os was slightly dilated, but not sufficiently so to admit the finger-end; the lower portion of the body of the uterus, as far as it could be reached, felt soft and pulpy; no fœtal presentation could be ascertained.

The patient was ordered to bed, and a firm abdominal bandage was applied; the flooding having ceased, further interference was deemed unnecessary. There was no uterine action. For the next four days there was no recurrence of hæmorrhage; but on the fifth day, at 6 P.M., I was sent for in haste, for the patient had suffered another very serious loss: the hæmorrhage, however, had again stopped on my arrival. There were no pains or other signs of labour. The os uteri now just admitted the finger. The vagina was plugged and the bandage reapplied. In spite of this treatment, the flooding recurred after a time. On removing the plug, four hours later, the os was dilated to the size of a florin, and blood was pouring freely from it. The placenta could now be distinctly felt presenting, and closely attached all round the lower segment of the uterus. There was still but very slight uterine action.

Feeling that there was no time to be lost, I dilated the os as quickly as possible with my fingers, until large enough to admit my left hand; and, having detached the placenta posteriorly, both feet were reached, and the child turned by the bimanual method of Dr. Braxton Hicks. Alarming gushes of blood followed the extraction of the breech and body; and on delivery of the head, which was quickly accomplished by means of the vectis, the hæmorrhage recurred with renewed violence. During the whole process of delivery there were but very slight pains; but tolerably good contractions followed the birth of the child. The placenta, which was firmly adherent, was detached and removed without delay, its extraction being accompanied by a further loss. This, however, was happily the last, for the uterus now contracted well under pressure.

The patient was of course much exhausted; but at my first visit a plentiful supply of beef-tea had been ordered to be in readiness, which, with brandy, was given unremittingly during the operation, and to this in a great measure do I attribute the patient's preservation. The child was still-born. The mother made a slow but good recovery.

CASE II. *Dropsy of the Amnion.*—Early in December of last year, I was requested by Mrs. P., aged 28, to attend at her third confiement, expected at the end of the ensuing February. At the time of the patient's visit, I remarked that her abdominal appearance indicated more advanced pregnancy, but she assured me that her calculation was correct. The following evening, however, I was called to see her, and found that there had been slight labour pains all the day. The os uteri was about two-thirds dilated, but so high in the pelvis as to be only just within reach of my finger. Through the os protruded the distended membranes, but no fœtal presentation could be discovered. After waiting for some time, and finding that only very slight progress was being made, I ruptured the membrane, and for what occurred I was not at all prepared. An enormous gush of clear fluid followed; so large was the quantity that the bed and floor were deluged. How much fluid escaped it was impossible to estimate accurately, but I should think from seven to eight quarts at least. After this extraordinary evacuation the uterus contracted well, and a foot presented at the os; the other foot was reached, and both were brought down. The funis was so short that its division was necessary before delivery could be accomplished. Shortly a female fœtus of most remarkable appearance was born. Its size was that of a small six months' child; the cervical vertebræ appeared to be entirely absent, the head being fixed on the shoulders without any signs of a neck. The face occupied the position of the vertex, and the parietal bones were apparently deficient. All the features were flattened and stunted; from the posterior part of the head protruded a large sac, evidently the membranes of the brain. The bag, when opened, was found to contain the brain and a large quantity of blood. The rest of the body was normal, though ill-developed. The placenta, being adherent, was peeled off the uterine wall, very little hæmorrhage occurring. The patient was extremely exhausted for some hours after recovery, but she made a favourable recovery.

CASE III. *Premature Rupture of the Membranes.*—In September last I was requested to see Mrs. B., who was in the sixth month of gestation of her third pregnancy. She had experienced some slight uterine pains for a few hours, when suddenly the membranes gave way, and the liquor amnii escaped. There was ample proof of this from the saturated condition of the bed-clothes. The os uteri was but very slightly dilated. An abdominal bandage was applied, and the patient kept quiet in bed. A small opiate was prescribed every four hours. The next day I found that there had been occasional slight uterine contractions during the night; but the patient was free from pain, and feeling quite well at my visit: there was, however, a little dribbling of water from the uterus, which continued for a few days. Uterine action did not recur until nearly a month later, when labour properly set in. When I was called, the os was sufficiently dilated to admit the finger easily, and the fœtal head could be distinctly felt, *uncovered* by membrane. There had been no escape of fluid before my arrival, nor was there any to the end of the labour. This fact confirmed the belief that the water had escaped previously. A fine healthy seven-months' child was born in due time. The mother did well.

ON THE OCCURRENCE OF AN UNUSUAL FORM OF PRURITUS DURING PREGNANCY.

By DAVID PAGE, M.B.Edin., Kirkby Lonsdale, Westmorland.

Women frequently suffer, towards the end of pregnancy, from the annoyance of local pruritus affecting the perineal region; but I am not aware that such a complication as that of a general pruritus, involving the whole cutaneous surface and the mucous surfaces of the upper outlets of the body, has been noticed, at least with any degree of special interest. For this reason, I have thought it worth the while to give the details of a case that came under my observation, with particular reference to the treatment which eventually proved successful as a palliative measure.

The patient, a lady aged 34, the mother of six children, of nervous temperament and fair health, was in the seventh month of utero-gestation, when I attended her for gastric disorder, indicated by heartburn and acidity. There was nothing in the nature of this attack to distinguish it from the ordinary dyspeptic symptoms common enough among puerperæ; and it apparently yielded to the action of bismuth and quinine. The gastralgia, however, was followed by a severe attack of facial neuralgia; and, as no relief attended the exhibition of strychnia, either alone in one-twenty-fourth grain doses three times a day, or combined with quinine, including the application of local sedatives, I judged it to be prudent to advise change of air. An excursion to the west coast of Scotland was fixed upon; and, within twenty-four hours after her arrival in Glasgow, the neuralgia, which had been most intense during the journey, ceased, and was superseded by the pruritus about which I now write, the invasion of which began with discomfort and restlessness during the night, owing to the itching of the skin. This was in the month of July last, and within eight weeks of her expected confinement.

On her return home, I found that the whole cutaneous surface was

affected with the most distressing itching, without any outward manifestation whatever; and the paroxysms, which ten days before had been chiefly at night, were now less intermittent, and present throughout the day. The incessant irritation and loss of sleep threatened to undo all the good effects of the change; the more so, that the pernicious mental reaction produced by the patient brooding over her misery, and dreading its results, probably aggravated the intensity of the pruritus in proportion to the amount of shock that the maternal instinct received; for I learned that, previously to her last confinement, three years ago, a similar train of neurotic phenomena had occurred, and, although of less duration and intensity, yet the pruritus had so prostrated both body and mind as to bring her to the verge of mania.

On July 30th, I prescribed fifteen grains of the bromide of potassium to be taken at bedtime, with the following lotion as a topical application, being one that I had frequently used with excellent results in pruritus of the perinæum: Borax, 200 grains; liquor morphiæ hydrochloratis ℥iss; glycerine ℥j; water to eight ounces. The weather at this time was delightfully dry, warm, and exhilarating; so daily sponging every morning on rising, light clothing, quiet and frequent exercise in the open air, coolness and free ventilation of the bedchamber, with a simple but nutritious dietary, were the several factors insisted upon as being likely to act beneficially.

On August 4th, the pruritus was as bad as ever. The remedies, giving no relief, were withdrawn; and, temporarily, elder-flower water, as a pleasant addition to the morning bath, was adopted; with glycerine for the varicose saphenous veins, in the neighbourhood of which the pruritus was especially intolerable; although I may remark that she had experienced the mere varicosity for the past ten years, which always disappeared after confinement.

On August 7th, I prescribed an emulsion of bitter almonds, with the addition of the dilute hydrocyanic acid of the *British Pharmacopœia*, to be sponged lightly over the parts most affected; and, with frequent applications during the day, and sometimes during the night, the pruritus became endurable. A week later, on August 16th, an attack of heartburn and loss of appetite supervened, complicating matters so as to render her miserable in the extreme. For this I gave her ten grains of the subnitrate of bismuth, four minims of the dilute hydrocyanic acid, with an ounce of infusion of chirayta, twenty minutes before meals, twice or thrice a day, with seeming benefit; but, unfortunately for any therapeutic credit, no sooner had the gastralgia gone than it was superseded by an attack of facial neuralgia, which lasted for ten days; and during this period the pruritus entirely vanished. Painful as the neuralgia was, the greater intermittency of its attacks afforded such intervals of comparative comfort, that my patient frequently expressed the hope that it might remain, rather than the pruritus should recur. The neuralgia, however, was in its turn superseded by the pruritus, which now involved the mucous surfaces of the mouth, throat, nose, and eyes; and this new feature proved so exquisitely distressing and completely preventing sleep, that I forthwith ordered hydrate of chloral in soporific doses at bedtime. On September 3rd, fifteen grains were given, increased next night to twenty, as the sedative action was insufficient. This quantity procured some sleep, from which my patient awoke refreshed, free from the pruritus, able to enjoy her breakfast, and pass a comfortable forenoon. Indeed, after the second night, she assured me that she had slept more soundly than she had done for three months past, as never a time elapsed without her being awoke either by the pruritus or the effects of her involuntary scratching even to laceration of the skin. The use of the emulsion of prussic acid and bitter almonds was continued, to allay the attacks which occurred during the day. I tried unction of aconite, but was obliged to stop its use, as it gave rise to disagreeable tingling sensations, without in any way relieving the pruritus.

On September 10th, delivery with natural labour took place with great facility; and the chloral draughts, which had been given up to this time, were suspended on the following day.

In the first attack of pruritus, to which I incidentally alluded, this affection ceased by degrees, finally disappearing by the third day after confinement; but in the present instance this did not take place till ten days later, although during that time the severity and consequent distress were incomparable to the same symptoms before parturition. Up to the present time, my patient has enjoyed excellent health.

The whole case exhibits, I think, the proteiform aspects generally characteristic of neuroses; and a neurosis of the vagus appears to have been the starting-point. The occurrence at the outset of heartburn, one of the common troubles of pregnancy, and the apparent efficacy of the remedies employed for its relief, received another interpretation when an attack of facial neuralgia supervened immediately on its cessation; while the interchangeability, again, of this affection with pruritus indicated a certain correlation to exist among them—a view most interestingly corroborated by a repetition of their first mode of manifestation.

The influence exerted by the gravid uterus can only be subordinate to an inherent predisposition to such neurotic affections; and, without any speculations as to what the nature of this predisposition may be, the interconnexion of the neuroses receives a probable explanation—firstly, in the relation existing between the nucleus of origin of the vagus, and the nucleus of origin of the sensory or ganglionic root of the fifth nerve, near the floor of the fourth ventricle; and, secondly, in the intimate and close connexion of their two nuclei with the grey matter of the cord continued in the medulla oblongata. For, inasmuch as the heartburn and itching of the throat depend upon the neurosis of the vagus, and the neuralgia and itching of the conjunctival, nasal, and buccal mucous surfaces are a neurosis of the fifth nerve, so the general cutaneous pruritus depends upon a neurotic affection of the nerves of common sensation.

REMARKS ON THE USE OF ERGOT IN CASES WHERE THERE IS WEAKNESS OF THE HEART.*

By JAMES THOMPSON, M.B., Leamington.

The action of ergot on the circulation of the fœtus has been often discussed, and various opinions have been expressed on the subject. The majority appear to believe that the action on the fœtus is fatal if prolonged beyond two hours, and in this I fully concur. I have never seen any remarks bearing on the action of ergot on the circulation of the mother, and some cases which have recently occurred have forcibly impressed this matter on me. The first case was in a fourth pregnancy, during which the subject had been repeatedly under my care for what she called "fits of benumbing." These attacks came on suddenly, she could not stand, and saw and heard indistinctly; this was followed by violent palpitation of heart and severe headache; the duration of these attacks was often two hours, more or less. An examination made after one of these attacks revealed great weakness of action, but no valvular deficiency. Tonics were given and she obtained much relief, and the frequency of the attacks was much decreased. When the confinement approached, much anxiety was entertained for her safety. Unfortunately there was partial placenta prævia, which caused some hæmorrhage,—checked by cold and rest successfully. Slight hæmorrhages occurred at intervals for two days, while the os dilated slowly. At 7 P.M. on the third day, a considerable gush of hæmorrhage came down as the os suddenly dilated; the vagina was plugged and pressure applied to the abdomen; the hæmorrhage was fully controlled; the dilatation of the os proceeded slowly; there seemed to be a want of contractile power in the uterus. With the concurrence of an experienced medical friend, ergot in infusion was given at intervals, which brought on pains, and the fœtus was expelled in three hours, still-born, and the placenta quickly following; no more hæmorrhage, and the patient expressed herself as comfortable; and there was no marked symptom that the circulation had suffered more than might be expected. My friend and I congratulated ourselves on the successful issue of the case; but thirty minutes afterwards my patient said: "I fear one of those fits is coming on." The pulse was weak, and she complained of cold and faintness. We ascertained that the uterus was firmly contracted, and that no hæmorrhage had taken place. Hot beef-tea with brandy was given at once in liberal doses, afterwards ammonia in ten-grain doses, with ether and other stimulants; but with all, the action of the heart became weaker and weaker still. Mustard poultices were applied hot over the cardiac region, electro-magnetism to the phrenics and through the diaphragm, and subsequently carbonate of ammonia in solution was injected hypodermically; but all was of no avail, and the patient died apparently of syncope three hours and three quarters after delivery.

The question which presents itself naturally is, what was the real cause of death? Was it due to constitutional weakness only? I am strongly impressed with the belief that it was due to the action of ergot on the maternal circulation. I presume the action was cumulative, and that it acted by producing forcible contraction of the muscular tissue of the heart and large arteries. No doubt exists that ergot acts on unstriped muscular tissue in the uterus—why should it not act on the same muscular fibres in the heart. There was no noted change in the circulation during the progress of the labour; and it may be presumed that when the necessity for the use of contractile power in the uterus ceased, that the action was transferred to the same unstriped muscular

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

tissue in the heart; and in this case there was no doubt irritability of the heart, and that it was liable to suffer from the action of ergot. In a similar case again occurring, I would combine some special stimulant with the ergot, in the hope of averting any similar evil consequences. Generally when ergot is given in repeated doses it causes sickness, and the stomach rejects a quantity of ergot which, if it be retained, might affect the maternal circulation. In this case no sickness took place, which may, perhaps, account for its effect on the system of the mother. The lesson to be taken is that, we should prescribe ergot with great care in cases where the circulation is weak or irritable.

A second case took place soon afterwards. A lady, mother of six children, summoned my assistance for uterine hæmorrhage. She was not aware she was pregnant, but circumstances pointed out that she might be so, and of six weeks' standing. Liquid extract of ergot was given, icebags applied, and cold water injections to rectum and vagina; the other usual injunctions were given, but little benefit resulted; considerable hæmorrhage took place still, and this began to tell on the patient; giddiness, palpitation, etc., appeared. I then gave ergot in infusion fresh made; this proved powerfully styptic for the hæmorrhage, but my patient suffered most violent palpitations, tightness in chest, and feeling of suffocation. When the palpitation ceased, the pulse-beat was 55 per minute, and the feet and hands were very cold, and the patient said there was considerable loss of power in the lower extremity. I am forced to think that the ergot acted on the maternal circulation, and so hampered its movements that the force of the circulation was much less than it should have been.

KOUMISS, BLANDA, SYRE, SIGRE, OR AIREN.

By JAMES T. GEORGE, M.R.C.S.E., Keith, Banffshire.

For upwards of twenty years I have used as a restorative medicine the vinous liquor procured by the fermentation of cow's milk, and although a liquor has been for some ages employed by several tribes of Tartars, as procured from the fermentation of mare's milk, it was with difficulty I could learn the particulars of the mode of preparing it. The books which I consulted, which were various, gave me little satisfaction concerning it. All writers say it is a vinous liquor obtained by the fermentation of milk, but none describe the mode of preparing it, or the purposes in medicine to which it is applicable. M. Paulus Venetus, in a work published in the thirteenth century, only mentions it to be a common beverage among the Tartars. Another writer on the Russian Empire gives a formula, which, if followed, could not be attended with success; for he mentions that the Kalmucks take off the thick substance, which, when sour, rises to the top of the milk, and employ this in food, and the remaining liquor is drank. But should any part of the milk be taken away no fermentation will or can take place; all the parts of the milk must be left in their natural proportion. The method which I have adopted in my own practice with success, and which was communicated to me by a Russian gentleman, is as follows.

Take of newly-drawn milk any quantity; add to it a little water, and pour the mixture into any vessel. Use as a ferment an eighth part of the sourest cow's milk that can be got—but at any future preparation a small portion of old koumiss will better answer the purpose. Cover the vessel with a thick cloth, and set it in a place of moderate warmth. Leave it at rest twenty-four hours, at the end of which time the milk will have become sour, and a thick substance will gather on the top; then with a stick, made at the lower end like a churn staff, beat it until the thick substance be thoroughly blended with the subjacent fluid. Leave it again at rest for some time; repeat the beating, after which pour it into a narrow vessel like a churn, agitate the liquor until it be perfectly homogeneous. In this state it is called *airen*.

Its taste, if properly prepared, ought to be a pleasant mixture of sweet and sour (agitation must be employed every time before use). When it is necessary to have it quickly made, heat the milk before applying the sour milk, and agitate every hour or half hour. By doing this it is obtained in twelve hours. If well secured in close vessels, and in a cool place, it can be kept a long time without injury to its qualities. There appear to be three things necessary to the vinous fermentation of milk; heat, souring, and agitation, the chief being agitation. In fermenting vegetable juices nature is sufficient to keep the parts of the fluid in mutual action, while milk is no sooner soured than a separation of its parts takes place; the cream rises to the top, while the cheese either falls to the bottom, or is suspended in the whey. When these parts are brought into close contact with one another by agitation, frequently repeated, a vinous liquor is produced, which, in my practice; I have found highly beneficial as a dietetic, and of considerable virtue as a medicine.

In cases of general debility I have given it largely, with essential service, as a nutritive. W. G., aged 26, was sent to this place from Edinburgh for change of air. He had been under a mercurial course for a venereal affection, which left him in a very weak state. He was much emaciated; his face of a leaden hue; his eyes sunken; he had slight cough, with expectoration of toughish phlegm; his appetite was impaired, and he was feverish toward night. On using the wine for about two months he got perfectly well and fat. He drank daily two quarts with a relish, and without any intoxicating effect. During the time he was under the medicine he required no purgative, and it seemed to act as a diuretic. I have found it of great use in typhoid fever, the patients using it for meat and drink. In a few cases no other remedy was used, young and old taking it. In nervous, dyspeptic, and hypochondriac subjects, its use for some time has a powerful restorative effect, giving flesh and strength. Invalids, not only without disgust, but with a sort of pleasure, drink it in large quantities, and, even when they do so, without headache or other unpleasant feelings, which the abuse of other fermented liquors produces. As stated, I have used it in various complaints with success, above my most sanguine expectations; and, in pulmonary consumption, when cod-liver oil cannot be taken, I have found it (but at the same time using whisked cream) equally, if not more efficacious, in relieving cough and giving plumpness to the body. From its mild acid, its vinous spirit, and its oily qualities, I consider it to be a cooling antiseptic, a mild stimulant and tonic, and a valuable nutrient. In acute diseases, with marks of weakness and putridity, in cases of excessive irritability, in dyspepsia, in phthisis, and in hectic, from ulceration or suppuration.

I again repeat, that all that is necessary for its preparation is, after it is sour, frequent agitation. No spirit can be produced from any one of the constituent parts of milk taken separately, nor any two of them unless mixed with the third. The closer it is kept the more spirit is obtained. If made in a glass vessel, that is to say if it undergo fermentation in it, it must not be more than two-thirds filled in case the bottles burst. When it is bottled for keeping any time, the bottles must not be full, and the corks must be fastened as in lemonade bottles.

ON UTERINE INFLAMMATION AND DEFECTIVE INVOLUTION OF THE SEXUAL ORGANS SUBSEQUENT TO THE CHANGE OF LIFE.*

By EDWARD JOHN TILT, M.D.

My having written a work on diseases of women at the change of life enables me to affirm that one kind of uterine inflammation is much more frequently met with after the menopause than medical men are aware of. It is our own fault if we have remained ignorant of this fact; insomuch as we have deprived ourselves of the opportunity of ascertaining it, by carefully dinning into our patients' ears that the change of life would bring with it a complete immunity from uterine disease which has been the torment of their lives, the result of this has been, that many women do not seek advice, when, after the menopause, a considerable amount of pelvic heat, pain, and muco-purulent vaginal discharge, denote inflammation of the vagina and cervical mucous membrane; and only consult us when these symptoms are very acute, and have thoroughly interfered with the duties of life.

In only two cases I have seen a severe attack of inflammation of the cervical mucous membrane to occur after the menopause in women who had *never* previously suffered from uterine inflammation. So I admit that, as a rule, we are fully justified in telling women who have never suffered before the menopause, that it will effectually bar the occurrence of congestion and inflammatory diseases of the womb, because, when healthy, the sexual organs then become subject to a process of physiological involution which gradually hardens the ovaries and the womb, diminishes their size, and contracts the vagina, unless matrimonial habits be kept up.

This process of physiological atrophy, which is the rule for healthy sexual organs, no longer holds good for the sexual organs that are still diseased at the menopause. If there be a small fibroid in the substance of the uterine walls, or a little polypus inside its cavity, or if what is much more frequently observed, the cervix be hypertrophied on the seat of fibroid degenerescence, the sexual organs may retain their acquired size for the next ten or fifteen years without making any attempt at physiological atrophy. So long as such is the case, women are liable to inflammation of the sexual mucous membranes, although

* Read before the Midwifery Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

to a less extent than when inflammation could be kept up by menstrual congestion. In fact, the recurrence of inflammation of the uterine mucous membrane after the menopause is to be explained by cessation of menstruation not having been followed by the involution of the sexual organs.

I have hitherto spoken of the involution of the sexual organs as an uniform process, but it may be only partially effected. Thus, if after the menopause there remains a remnant of internal metritis while the cervix is healthy, the latter may so shrink as to render the cervical canal impermeable to the fluids secreted by the diseased lining of the body of the womb, so as to cause a considerable amount of uterine tormina. This is the explanation of the cases long ago described by Dr. Mathews Duncan as "leucorrhœa of old women". I shall not consider these cases, because I have not met with more than five during the last twenty years; and I have never once had occasion to puncture the cervical canal to afford an exit to the pent-up fluid—an operation that has been not unfrequently resorted to by Dr. Mathews Duncan.

Having thus cleared the ground, I shall briefly draw your attention to the only uterine inflammatory disease that I have found to be of frequent occurrence after the menopause; that is, a more or less acute inflammation of the mucous membrane lining the cervix, and the vagina; for, although cervicitis and vaginitis may be separately met with, cervicitis generally brings on vaginitis—vaginitis being much more severe near the os uteri; and sometimes an ulcer surrounding the os uteri extends to the neighbouring folds of the vagina. This ulceration is not a very serious matter in itself, and may exist for years without coming to worse; but it gives important evidence of the cervical lining being in a similar morbid state, and shows the urgency of applying some kind of caustic to this diseased membrane.

When these affections occur after the menopause, they are less acute, but much more difficult to cure, than before the change. The same amount of cervical ulceration after the change does not wake up the distressing symptoms with which we often have to contend at a previous period of life. This may be partly due to the lowered tone of vital activity, partly to the fact that the submucous tissues of the cervix do not participate in the inflammation. Nevertheless, inflammation of the cervical and vaginal mucous membranes is often attended by a considerable amount of pelvic heat and pain, by back-pain and inability to walk, by a muco-purulent discharge, disturbance of the vesical functions, and an aggravation of any nervous phenomena to which the patient had been previously liable.

With regard to the rate of activity of vital phenomena after the menopause, it may be safely said that, while heteromorphous tissues often grow rapidly, inflammation is singularly chronic. The sluggishness of the tendency to repair on the part of the inflamed mucous membrane may be to a certain extent measured by the comparative length of time that an eschar will take to fall from the mucous membrane, according as the caustic is applied before or after the menopause. Thus when, after the change, the solid nitrate of silver is applied to the ulcerated os, the eschar may take nine or ten days to fall off; whereas it is known to fall off, from the fourth to the fifth day when the caustic is applied, under similar circumstances, to younger women. It is, therefore, obvious that a speedy cure should not be promised.

I have fully explained how defective involution of the sexual organs renders them liable to inflammation; and when, at the menopause, I find that a patient has a hard and an enlarged cervix, instead of encouraging her to believe that she is to suffer no more, I take care to tell her that she is likely to have occasional relapses for many years to come, if she be not careful. These relapses have been attributed to a chill, to overwalking, to too frequent coition (for in some women there seems to be no limit of age for the continuance of matrimonial habits). I have noticed these attacks to recur in spring and autumn in some patients.

Exceptional cases of inflammation of the sexual mucous membrane after the menopause can only be explained by a cachectic tendency to disease, on the part of all the mucous membranes. In these women, there is an habitually congested state of the vagina and of the cervical mucous membrane, with an atonic ulcer round the os uteri, which does not always admit of being permanently healed. In one case of this description, the prolonged application of a solution of nitrate of silver every fifth day did not cure the patient; and I only now have recourse to surgical treatment when the symptoms become worse and the discharge purulent.

The following case well exemplifies the difficulty of curing some of these patients. A lady had enjoyed good health, but had a severe attack of uterine inflammation, after being confined of her last child at thirty-five. She occasionally suffered from it, until menstruation ceased at forty-six; and, when forty-eight, she had a severe attack, from walking on wet grass. Several applications of nitrate of silver did no good; and, when she passed through town, I repeatedly ascertained that there was always an angry patch of ulceration, of about the size of a shilling, on the posterior lip of the os uteri. As this interfered very little with the patient's comfort, she did nothing until there came a very severe and almost constant pain in the back and right lumbar nerves. I then made two successive applications of the acid nitrate of mercury; but the ulcer was just the same when she came to me three months afterwards. I then applied the potassa fusa cum calce; but the patient started for Ben Rhydding before the ulcer was healed. There she underwent a long course of hot and cold water treatment, which had no effect on the spinal neuralgia; and when she passed through town to take the Bath waters, I still found the ulcer, though smaller and less angry.

This case gives an idea of the difficulties sometimes met with, although they were doubtless increased by the patient's objection to being controlled.

The practical hints to be derived from this paper are: 1. That the occasional recurrence after the menopause of inflammation of the sexual mucous membranes may be safely predicted to those who have long been martyrs to inflammation of the entire womb, when they presume too much on their partly recovered strength; for I have always found this to occur whenever I have had the opportunity of watching such patients for the ten years that followed cessation: 2. That we may safely predict inflammation of the sexual mucous membranes to those who overtax their strength after the menopause, whenever the uterine tissues are being constantly teased by a small interstitial fibroid or a polypus, when the cervix is hypertrophied or of a fibroid consistency, and also when women are cachectic and have always one or more of their mucous membranes in a diseased condition.

CASE OF JAUNDICE.

By WILLIAM DATE, Crewkerne.

J. C., aged 35, a stalwart, muscular, tolerably temperate agricultural labourer, has always enjoyed good health up to the present attack. In the evening of March 18th, 1872, he complained of headache. The following morning the headache was more severe: he said he could not see well, and remained in bed. Next day he felt better and got up, but did not go to his work. In the evening I saw him.

March 20th (Evening). He was throwing himself about the bed, moving incessantly, and talking wildly. When spoken to authoritatively, he became quiet for a minute and answered questions, but if left alone he speedily relapsed into delirium. He complained of intense pain in the head, horrible dreams, and dimness of sight. He said he could see objects, but they seemed wrapped in a cloud. He shrunk from a bright light. His pupils were contracted; the face pallid; lips leaden coloured, giving the countenance a cadaverous appearance. The tongue was thickly coated with white fur. Pulse 120; respirations 30; temperature 104.6 deg. Bowels freely moved in consequence of medicine previously administered. The urine could not be observed.

March 21st (Morning). The pain in the head was better, but not gone; he was very drowsy, but more rational. He had some restless unquiet sleep. Free purging continued; the motions were dark and offensive. The urine was copious and natural in colour. Pulse 102; respirations 28; temperature 103 deg.

March 22nd. He had had some quiet sleep. He said his head felt heavy and "queer"; the pain was quite gone. He could see well again; the pupils were more active. He had passed two motions—the last one very light in colour. Urine rather yellow; skin slightly tinged with yellow. There was no tenderness nor enlargement of the liver. He vomited once this morning for the first time. Pulse 100; respirations 24; temperature 102.6 deg.

March 25th. There was no return of headache. He complained of tenderness in the calves of his legs. The skin and urine were of a deeper yellow colour. Careful examination revealed nothing abnormal about the liver. The motions were costive and white; the tongue brown and dry. Pulse 110; respirations 28; temperature 102.7 deg.

March 28th. The skin had a deep yellow colour; the urine was very dark. There was no tenderness nor alteration in the size of the liver. The tongue was cleaner. Pulse 88; respirations 21; temperature 99.8 degrees.

It is useless to occupy space with further notes. From this time the case progressed as one of simple functional jaundice, and made an uninterrupted but rather protracted recovery. The interest centres entirely in the first three days of attendance. During that time there was not one single symptom indicative of jaundice or of disease of the liver. The intense pain in the head, delirium, disturbed vision, intolerance

of light, and high temperature, pointed rather to some meningeal inflammation. It was not until the third day of attendance that any sign of jaundice appeared; and *pari passu* with the development of jaundice the other symptoms became ameliorated. The man was moderately temperate; there was no history of any recent debauch, nor of a blow on the head, nor of any emotional excitement.

Now it is an interesting question to determine the mutual relation in this case of the head symptoms on the one hand, and the jaundice on the other. It is said that violent emotion will produce jaundice. If so, it must be possible that the brain affection may have been the primary cause, and the jaundice have resulted from an abnormal exercise of nerve-force, at present ill-understood. On the other hand, signs of cerebral disturbance are sometimes very prominent in cases of jaundice. But, then, how are we to account for the urgent head-symptoms and the high temperature appearing so long before any external evidence of jaundice? Altogether, the question of cause and effect is a puzzling one, which I leave to your readers to answer.

Note. Sept. 7th.—I have seen J. C. to-day. There is now no trace of jaundice; he has regained his lost flesh and strength, and feels quite well, except that if he work in the sun he becomes very giddy.

CLINICAL MEMORANDA.

TONGUE-SUCKING.

Dr. Morris's communication on Spontaneous Dislocation of the Jaw through Tongue-sucking is very interesting, and will become more so if Dr. Morris will kindly put upon record also what is the physical and mental condition of the young lady to whom the accident occurred.

I have taken some pains during the last twelve years to invite the attention of the profession to the blighting effects upon the infant of fruitless sucking, and to show that the retained habits of sucking—viz., tongue-sucking, thumb-sucking, etc.—and the deformities of the jaws resulting therefrom, are evidences of the individual having been exposed during infancy to this baneful error of management. I think it is likely that facts recorded by some other pen than my own may assist in directing attention to this important subject.

September 2nd, 1872. Thomas Ballard, M.D.

INGROWING NAIL.

I desire to add a mite to the evidence repeatedly given in the Journal that the removal of the nail (to my knowledge not always successful) is unnecessary.

About twenty years ago, I applied a bit of compressed sponge to afford temporary relief, and was delighted to find that it effected a radical cure. I make the sponge as solid as leather, by wetting and then winding string very tightly round it, and drying it thoroughly. Of this I cut a small pyramidal piece, less than a grain of rice. This I insert beneath the nail, and secure it by strips of adhesive plaster, applied longitudinally, to avoid compression. The sponge soon becomes moist and swollen, keeping the nail from the irritated flesh. Any granulations should previously be destroyed with strong nitric acid. I have adopted this plan upon many occasions, and have never found it to fail. Benjamin Blower.

Liverpool, September 4th, 1872.

OBSTETRIC MEMORANDA.

ERGOT IN ABORTION.

In a discussion at the late meeting of the British Medical Association, Dr. Evory Kennedy remarked that, "in abortion, ergot was generally inadvisable." As abortion about the tenth or twelfth week is frequently met with in general practice, it is, I think, important that the question of the utility or uselessness of ergot in cases of this kind should be freely ventilated. I have given the drug in above two hundred cases of profuse hæmorrhage with threatened abortion, and with the happiest result. Only yesterday, I attended a woman at the full time with a healthy boy. On February 10th, twenty-five weeks ago, she was taken with great flooding and alarming faintness. She was in the third month of pregnancy, having been "unwell" last in November. I plugged at once with a handkerchief, not being quite able to bring away the ovum, which was protruding to a great extent at the cervix. I then gave doses of the ammoniated tincture of ergot every hour. All bleeding ceased, and the patient went on perfectly well to her full time. I am engaged to attend a lady in October who had precisely the same symptoms in the spring. Indeed, I can call to mind several instances where, ergot being given to check uterine hæmorrhage, it has acted well by causing, not the expulsion of the ovum, but its gradual retrocession into the uterus. From what I have seen of the use of the remedy, I am prepared to maintain that it is a most valuable help; but that not unfrequently it does good, not by forcing the contracting uterus to expel its contenis, but often, contrary to our expectations, by helping the organ to retain its precious charge to its ultimate preservation. Ergot, in my opinion, is, in threatened abortion, only second to a plug in the vagina; and the best plug I find is a piece of sponge.

Stourbridge, August 26th, 1872. Alfred Freer, M.R.C.S.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

LONDON HOSPITAL.

Cases under the care of Mr. Hutchinson.

Buffer-crush: Rupture of Liver and Spleen: Extravasation of Blood into the Peritoneum: Almost entire Absence of Symptoms for several Hours after Accident: No alarming Symptoms for the first Forty-eight Hours: Death in about Seventy-six Hours.—James Wall, aged 19, was struck in the abdomen above the umbilicus by the buffers of a railway engine, in the afternoon of May 16th. He was not faint immediately after the accident, and was able to walk to a doctor's house without assistance. Two hours after the accident, he was somewhat worse. When admitted in the evening of the same day, he was cold and suffering somewhat from shock, but not to any degree that appeared serious. He shortly afterwards vomited, bringing up nothing except the proper contents of the stomach. The same evening he passed urine quite free from blood. Next day (17th), he vomited two or three times, but always expressed himself as "better"; there were no symptoms which appeared serious. On the 18th, he was still sick occasionally, but said that he felt better than the day before. He had, however, some pain in the abdomen, and considerable tympanitis. He was constipated, and had been so since admission, in spite of purgative medicine and an enema; perhaps this symptom was caused by the opium (twenty-five minims of tincture) which was administered on the evening of admission and on the following day. On the 19th, he was worse; the face dusky and anxious; the abdomen was more tympanitic and more tender on pressure; breathing entirely thoracic; vomiting continued. He sank gradually, and died at 10 P.M., about seventy-six hours after the accident.

At the *post mortem* examination, a rupture was found on the under surface of the right lobe of the liver. Much bile was extravasated on the surrounding parts of the surface of the liver. Its upper surface was much ecchymosed. There was also a laceration of the spleen, extending from its edge for an inch into its substance, and coagulated blood was attached somewhat firmly to this wound. The peritoneum contained a large quantity of blood, which was fluid. There was a little recent lymph on the surface of the liver, and slight congestion along the edges of the intestinal coils, but no other signs of peritonitis. All the other abdominal and thoracic organs were healthy.

Black Caries of Tibia, ultimately destruction of almost the entire thickness of the Bone: Fracture and imperfect Union: No Separation of Pieces of Bone: No Formation of New Bone: Repeated Operations: Prolonged Rest: Iodide of Potassium: Benefit, but no Cure: Amputation through Leg.—Charles R., aged 32, a gunsmith, was probably the subject of hereditary syphilis; his upper central incisors are screw-driver shaped, but not quite conclusive as to syphilitic taint. His skin is pale and earthy-looking. There is neither history nor evidence of acquired syphilis. His left tibia had been troubling him for about three years and a half, at which date the lower part of the leg inflamed, a swelling formed over the bone, and, after it had broken, numerous bits of bone (about, he says, as large as finger-nails), came away. He believed that this inflammation and disease of bone were caused by his having fallen and twisted the leg a year before; for ever after the fall his leg gave him some trouble, though not enough to prevent him from working. About a year after the formation of the abscess and escape of dead bone, he was under Mr. Curling's care, and had some dead bone removed. After this, the ulcer nearly healed, and he got on well for another twelve months. It then again began to trouble him, and another piece of bone (he said, as large as a finger) came away. The limb became more and more troublesome, till admission on April 18th,

1871. He then had an ulcer of moderate size over the inner and front part of the left tibia, extending down to, and deeply into, the substance of the bone. He remained in hospital seven weeks, during which Mr. Hutchinson removed a small piece of bone; he took iodide of potassium in two-grain doses thrice daily. On discharge, he was sent to the sea-side for three weeks. No very striking improvement resulted from this stay in the hospital, and he went away with the ulcer still partly unhealed and very deep; there seemed no attempt at the formation of new bone. At the end of September, he stumbled against the kerb-stone, and, a fortnight later, was readmitted, when it was found that he had broken the tibia at the carious part. The usual treatment was adopted, and he took larger doses of iodide of potassium. The patient wished very much to have the leg amputated—indeed, he came into hospital on purpose to have this done. Mr. Hutchinson discussed the question about three weeks after admission; but, finding that some union of the broken fragments had occurred, he deferred it. A large piece of black carious bone was removed on this occasion; it was not loose, and required some force. On January 1, 1872, the tibia was still quite movable; the wound, however, was filling with granulations, in which it was still possible that ossification might begin. More pieces of bone had come away. When he left the hospital, the ulcer had filled up and its surface diminished; it rapidly enlarged, however, as soon as he began to go about. He states that, if he ever brought much weight upon it, the "bone seemed to bend where it was broken"; he managed, however, to go about with a stick. At the beginning of July 1872, finding that it became worse and worse, he came in again for amputation, which was performed at the lower third of the leg, on the 15th of that month. Mr. Hutchinson made rectangular flaps, including in the anterior one a small part of scar-tissue belonging to the ulcer; this little piece of skin sloughed, but the rest of the wound healed well, and now (August 26th) there is no discharge from any part of the stump.

ST. THOMAS'S HOSPITAL.

LIGATURE OF THE COMMON CAROTID FOR HÆMORRHAGE CONSEQUENT ON THE REMOVAL OF A MAXILLARY TUMOUR.

(Under the care of Mr. LE GROS CLARK.)

IN a previous number, we noticed shortly that Mr. Wagstaffe had ligatured the common carotid, in a patient of Mr. Le Gros Clark, for hæmorrhage. We now give the details of the case, which are reported by Mr. H. F. Banham.

Henry Rivers, aged 57, gardener, was admitted on May 29th, 1872. The most noticeable symptoms in the history of the tumour were rapidity of growth and increase of pain. The pain, which was the first symptom, was not felt until three months before admission, and swelling of the hard palate and upper jaw were noticed a month afterwards. No other member of the family, so far as could be ascertained, had suffered from cancer.

On admission, the patient had a considerable tumour of the upper jaw, distorting the face and forcing its way into the mouth. The eye was partially closed, and there was a discharge from the left nostril, where a polypus was visible. The teeth had disappeared from the left superior maxilla, with the exception of the two incisors. No glandular enlargement of the neck was detected.

On introducing the finger into the mouth, the tumour was felt as a firm elastic mass, and scattered about it were some openings like pin-holes. The patient's symptoms were such as might be expected from the character and position of the growth: severe shooting pain in the left side of the head, difficulty of swallowing, much thickening of the voice, and impairment of vision from the upward pressure of the floor of the orbit, so that objects above a certain elevation appeared double. A small portion of the interior of the growth was obtained by harpooning from one of the openings before referred to in the hard palate, and was found to consist of a fibrous nucleated stroma with cells, chiefly of an epithelial character; there were occasional myeloid forms, but a large proportion were very erratic.

On June 12th, Mr. Le Gros Clark removed the left superior maxilla. The line of incision passed downward from the inner angle of the orbit by the side of the nose round the left ala nasi to the middle of the lip, and outward along the lower margin of the orbit to the middle of the zygoma. The soft growth which was found filling the bone extended so far back that it was impracticable entirely to remove it. Vessels in the tumour under the masseter bled freely, and were twisted. The actual cautery was applied to the exposed surface, and the superior maxillary nerve cut short. A sponge, covered with gutta-percha tissue, was introduced to fill out the cheek, and the edges of the wound were accurately adapted with wire sutures.

June 14th.—The sponge was easily removed. The wound was cleaned with Condy's fluid and replugged with oiled lint.

June 17th.—The wound was syringed with Condy's fluid. The incision had healed throughout almost the entire length. All sutures were removed. 7 P.M.—There was copious hæmorrhage—about twenty ounces. The bleeding was temporarily arrested by the application of ice and repeated pluggings of lint dipped in perchloride of iron. The condition of the patient, however, rendered it necessary that there should be some better security against hæmorrhage, and accordingly, at about half-past ten o'clock, Mr. Wagstaffe tied the common carotid artery. An incision, between two and three inches in length, was made over the edge of the sterno-mastoid muscle, the skin and fascia were divided, and the superficial veins twisted. The artery, which was large, emerged from under the sterno-mastoid at about a level with the upper border of the thyroid. A double catgut ligature was used and cut short. The wound was brought together with strips of plaster. The plugs were then removed from the mouth.

June 18th, 6 P.M.—The pulse was small, and the face much blanched. The patient's general condition was somewhat better than was expected. Since the operation the patient had slept a little, and had taken custard milk and iced brandy and water with some relish.

June 20th, 6 P.M.—He had been very restless, and had taken but little nourishment.

June 21st, Evening.—The patient remained in the same state until noon to-day, after which he sank rather rapidly and died at about half past five o'clock. There was no noticeable return of pulsation in the temporal artery. A *post mortem* examination was made by Dr. Payne about twenty-one hours after death. A mass of new growth or inflammatory material remained attached to the under surface of the floor of the orbit, and a small abscess was found under the zygomatic process. Beside this, there was no pus. The left side of the neck was also examined, and the vein and nerves (pneumogastric and descendens noni) were found uninjured. There was very little pus also in this wound. The upper lobes of both lungs were found studded with grouped patches of grey tubercle, and some masses of fibroid tissue, but no caseous matter. The lower lobes contained also scattered grey tubercle. The bronchi were inflamed, and the bronchial glands were large, hyperæmic, and succulent, but not caseous. The liver, spleen, and kidneys were healthy. The brain also was healthy. The arteries of the circle of Willis contained the ordinary *post mortem* clots, and a similar clot was found in the upper part of the internal carotid.

GUY'S HOSPITAL.

CASES OF SYPHILITIC DISEASE.

(Under the care of Mr. BRYANT.)

Syphilitic Cellular Membranes, Ulcer over the Right Trochanter, twelve years after a Chancre.—Abraham K., aged 30, a soldier, came under Mr. Bryant's care on March 13th, 1867, for a cellular membranous sore over his right trochanter, of six months' standing. It had followed the breaking down of a tumour which had existed for six years. The man had had a chancre twelve years previously, followed by skin-eruption. For this he had taken pills twice a day, and had been salivated. Quinine and the iodide of potassium were ordered, and a good recovery followed.

Syphilitic Disease of the Tongue, following a Chancre twenty years previously..—Robert D., aged 47, came under my care on April 17th, 1865, for well marked syphilitic disease of the mucous covering of the tongue. He had had it for two years. He had a chancre twenty years previously, and for about five years suffered from skin-eruptions, at intervals. For fifteen years previously he had been quite free from all signs of disease. Under five-grain doses of the iodide of potassium and the frequent application of nitrate of silver to the tongue, convalescence was established.

Cellular Membranous Ulcer on Arm, ten years after Chancre, etc.—James H., aged 29, came under care on July 24th, 1866, for syphilitic ulceration of the integument of the bend of the elbow, of some months' standing. He had had a chancre ten years previously, followed by skin-eruption, etc. Two years and a half ago, he was tracheotomised for disease of his larynx. He wore the tube for some months, after which he recovered. He had lost his nose for some years from ulceration. Under quinine and iodine, he rapidly recovered; a splint being applied to his arm, with water-dressing to the sore.

Syphilitic Disease of the Tongue of twenty years' standing, after Chancre, treated by Salivation.—Charles G., aged 43, came under care on February 22nd, 1866, with extensive disease of his tongue, of a syphilitic nature, which had existed for twenty years. At that time he had a

small chancre, followed by skin-eruption, for which he had been profusely salivated. His general health was very bad. He had taken an immense quantity of medicine. Mr. Bryant gave him quinine with the iodide of potassium in five-grain doses three times a day, and applied nitrate of silver to his tongue every other day; and in three months he made a good recovery. This case was the most rapid one of recovery after long continued disease that Mr. Bryant had ever seen.

KING'S COLLEGE HOSPITAL.

Operations, Saturday, September 7th, 1872.

Polypus of the Ear.—Mr. Henry Smith removed a large polypoid growth from the right ear of a boy in the ordinary way, and dwelt in his remarks upon the necessity of twisting the root well before any attempt is made to withdraw the growth. Such tumours are so extremely soft and friable that the least tug breaks them up, and after they are once broken, it is difficult to remove them piecemeal. The same manœuvre is necessary in growths of the polypus kind in any of the cavities of the body, and he is the most successful in their removal who disturbs them least until their neck is well fixed and twisted by the forceps.

Necrosis of Tibia.—Mr. Smith also removed some diseased bone from the tibia of a boy who had been operated upon before. He had come six months ago from Lewisham, with an extensively diseased tibia—altogether unlikely to receive any good, save from amputation. The boy's health was then in a most wretched state; but still Mr. Smith thought it best to make an attempt to save the limb, by scooping out almost the whole of the tibia. The irritation having subsided, new bone was rapidly thrown out; and the boy's health improved so fast that the same operation was performed on the tarsal bones, these being involved in the necrosis. A slight ankylosis has resulted from this last operation, but not enough to interfere with the use of the foot in walking or running. Mr. Smith now found another small piece of necrosed tibia, formed since the first operation, which he removed, together with some unhealthy-looking superficial tissue which seemed to retard granulation.

Saturday, September 14th, 1872.

Necrosis of Petrous Portion of Temporal Bone.—Mr. Henry Smith extracted some necrosed bone from the right ear of a boy, who had suffered from a discharge of blood and pus from the ear and from a sinus above it for a number of years. There was no connexion apparently between the meatus externus and the sinus, but they both led down to necrosed bone. There was apparently extensive necrosis of the bony tube. The portions of bone taken away by Mr. Smith required little more than mere lifting out, being entirely separated from the lining structure, but he feared that the operation would have to be repeated to cure the case entirely.

Eight Fistulæ in Ano, with Stricture four inches up Rectum.—This patient exhibited the most deplorable condition of the rectum, the buttocks being riddled with fistulæ, open and healed up. Five distinct fistulæ opened on the left buttock and three on the right, and a number had spontaneously healed up. They all opened into, or nearly into, the rectum at and above the stricture. The patient was a soldier, in excellent health otherwise, strong and robust, and he had been twice operated upon by qualified surgeons; but they and the physicians who had seen him had failed to detect the stricture. It was just beyond the reach of the finger, and was therefore overlooked. Mr. Smith demonstrated the stricture by introducing a No. 10 catheter, which could only pass up with difficulty: under chloroform it passed easily, but no more. When the stricture was freely divided, a No. 1 rectal bougie passed up readily six inches. Mr. Smith then freely divided the fistulæ also, although some of them opened fully two inches from the anus, making long cuts into the bowel and laying the anus quite open. The remains of former operations, in the shape of thickened skin about the anus, he then removed with scissors; and, after stuffing with sponges and padding, the man was removed. The operator remarked, that when stricture exists with fistulæ, it is quite impossible to cure the latter without dividing the former. So long as the stricture exists, so long will the fistulæ open on the buttock; and the stricture should in every case be looked upon as the primary disease. In some few cases a necrosed coccyx or sacrum is the cause of the fistulæ, and requires primary attention; but generally it is stricture. Mr. Smith also noticed the precise parallel between fistulous openings in the perinæum and stricture of the urethra, and such cases as he had just operated on.

Large Malignant Tumour growing from upper part of Tibia.—This girl had a large rapidly-growing tumour just under the knee, evidently sarcomatous. It has grown in five months, and is now about the size of a child's head. There is no breach of surface whatever, but the veins about it are varicose. Ten days ago, Mr. Smith had hopes of operating safely at the joint, but he now thought it wise to amputate at the middle of the thigh, which was accordingly done. On examining the tumour afterwards it was found to be medullary sarcoma. The fibula was pushed out of the way by the growth, which was only connected with the tibia. Mr. Worthington of Gloucester, who sent the case up to Mr. Smith, accurately detailed the whole history of the case, and strongly recommended immediate amputation.

STAMFORD AND RUTLAND INFIRMARY.

Two Cases of Dislocation of the Femur: Reduction by Manipulation.

By William Newman, M.D.Lond., F.R.C.S.Eng., Surgeon to the Infirmary.

Case I.—W. B., aged 20, Stretton, horsebreaker, was admitted into the Infirmary on July 20th, 1872. He stated that the same morning he was helping his father to break in a young horse. The horse was in a two-wheeled break, and the father was running on one side of the horse while he was on the other side. The horse broke into a gallop; the father left hold; and the shaft of the break struck the patient in the back, knocking him with his face into the hedge, while the wheel passed over his loins.

July 21st. Chloroform was administered to full anæsthesia. The dislocation was upwards and backwards on the dorsum ilii; the head of the bone could be felt in its new position. The limb was slightly shortened, and the foot markedly inverted. The pulleys were applied for ten minutes, but reduction was not effected. Reduction by manipulation was then put in practice. The knee was bent, and the thigh well flexed on the abdomen. The operator seized the knee and ankle firmly, bent the whole limb inwards, then bent or rolled it outwards, with a wide sweep of circumduction. The head of the femur slipped at once from the dorsum downwards into the ischiatic notch. This happened twice. It was readily replaced on the dorsum ilii (its original position) by a reversed movement. The same movement was again made, but the sweep round was not carried so far; and, while circumduction was being made, an assistant (standing on the right side of the bed, and leaning on the patient) lifted up the head of the femur with the fingers of each hand, so raising it on the posterior edge of the acetabulum. The head of the displaced bone went at once into its place with a distinct snap.

Recovery was perfect, without a bad symptom; indeed, five days after the reduction (needless to add, against orders), the man walked without pain or trouble ten yards or more to the closet from his ward.

Case II.—T. P., aged 23, of Ryhall, was admitted on August 9th, 1872. He had been severely injured by a corn-reaper. While he was doing something to the machine, the horses started off, and pulled him under the machine for some distance. He had extensive laceration of the structures on the inner side of the right upper arm. The biceps was torn through from below; and the brachial artery, the veins, and plexus of nerves, were all torn quite through. The integument was stripped from the side as far as the crista ilii; and on the whole of the back the integument and subcutaneous fat, crushed and cut by the knives, hung in a loose large flap. There was also a very evident dislocation of the left femur at the hip-joint. The head of the femur could not be felt; the trochanter was lying much lower and further back than its normal position; and the distance by measurement between the trochanter and the iliac spine was much increased. The knee was much flexed, and lay over on the opposite thigh; and the foot was considerably inverted. The limb was probably shortened nearly an inch; but this was difficult to measure, from the altered position. He could not bear to have the knee straightened, but wished to have the whole limb everted, saying that this relieved pain. He was much collapsed. No surgical interference was then possible.

August 10th, 10 A.M. He had had a fair night, after the subcutaneous injection of morphia, and was better in some points this morning. The collapse was less; the limbs were warm. He complained of pain in the leg, doubtless from stretching of the sciatic nerve. Chloroform was given to full anæsthesia. I reduced the dislocation of the hip by manipulation, flexing the thigh on the abdomen, and the knee on the thigh—seizing the knee and ankle, and then rolling the limb from

below outwards and upwards. Mr. Howard at the same moment raised the head of the femur with his fingers from behind. Almost at once the head slipped into the acetabulum. The injured right arm was removed by disarticulation at the shoulder-joint; a large outside flap being made, which included most part of the deltoid. Very little blood was lost from the incisions.

The man was fairly well after the operation; his pulse was not much affected. In about two hours, however, he slowly sank.

On August 11th, at 10 A.M., I made a careful examination of the injured hip-joint. There was no outside bruise on the buttock, and no wound leading down to the displaced bone. I reflected the integument, and then raised the gluteus maximus, exposing a large effusion of coagulated and fluid blood between this muscle and the external rotators. There was also infiltration of the coverings of the sciatic nerve, with recent blood. I dissected away the cellular tissue, and removed the blood-clot; and then examined the condition of the muscles beneath. The pyriformis, gemellus inferior, and obturator internus, were all uninjured. The gemellus inferior and quadratus femoris were completely torn across. A large clot was lying in the hollow behind these muscles, and close to the tuberosity of the ischium. Here, doubtless, the head of the bone had lain. The capsule of the hip-joint was extensively torn below and behind. The ligamentum teres was torn completely through. The head of the femur was in the acetabulum. By some forcible drawing of the limb over the right thigh, I was able to reproduce the dislocation in a measure, and to replace it also *in situ* by some manipulation.

This case seems to have been one of those comparatively rare instances of backward and far downward dislocations at the hip which are described at length in Holmes's *System of Surgery* (2nd ed., vol. ii, p. 906), where illustrative cases by M. Malgaigne and Mr. Adams are also referred to.

I have only to add, as the practical lesson from the above cases, that in each one the lifting up of the head of the femur by the fingers of an assistant, so as to raise it over the posterior edge of the acetabulum at the moment that the sweeping round of the limb was being managed, was of essential service in the speedy replacement of the displaced bone. I should urge its employment in any parallel case.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

THERAPEUTIC USES OF BROMINE.—In the *Wiener Medizin. Wochenschrift* (1871, Nos. 31, 32, 33), Dr. Schütz recommended the inhalation, in croup and diphtheria, of a solution of three *decigrammes* each of bromine and bromide of potassium in 150 *grammes* of distilled water. Dr. Gottwald, in the *Deutsche Klinik* (No. 18, 1872) states that he has tried this plan of treatment in eighteen cases of diphtheria and two of croup in the Charité Hospital in Berlin. In the cases of croup, the result was remarkably favourable. The cases of diphtheria were all attended with extensive ulceration; and all were either secondary or accompanied with high fever and much constitutional disturbance. Of the eighteen cases, four ended in death. In cases of angina and diphtheritic stomatitis, the solution was applied by a brush as well as inhaled. This plan, in small and weakly children, has the advantage of removing the masses of mucus and pus. Chloride of zinc was also applied as a caustic. The results of the treatment were very encouraging. The bromised solution of the bromide of potassium (1 part of each in 400) was also applied to sixty lying-in women who suffered from diphtheritic ulceration of the vagina and diphtheritic endometritis. The solution was thrown into the uterus three or four times daily by means of a Braun's syringe on a double-current catheter; and into the vagina by means of an ordinary syringe, generally every three hours. In cases of ulceration of the vaginal entrance, linen compresses wetted with the solution were applied, and frequently renewed. If pyæmia had not already set in, the results of this treatment were most favourable. Dr. Gottwald regards the bromised solution of bromide of potassium as a valuable antiseptic, not only in the cases above referred to, but in the dressing of diphtheric wounds and sores in surgery.

SUBCUTANEOUS INJECTIONS OF MERCURY IN SYPHILIS.—The injection of bichloride of mercury in the treatment of syphilis finds a warm advocate in Dr. Staub of Strasbourg (*Traitement de la Syphilis*), who specially recommends the albuminous solution of the sublimate. This is not acid, and does not produce coagulation in the tissues. His formula is the following: Bichloride of mercury, 1.25 *gramme;* chloride of ammonia, 1.25 *gramme;* chloride of sodium, 4.15 *grammes;* the white of one egg; distilled water, 250 *grammes.* One *centigramme* of this is injected daily by a subcutaneous syringe in two injections, one in the morning, the other in the evening. According to this somewhat enthusiastic author, bichloride so administered is an invaluable therapeutic agent, infallible in the treatment of secondary symptoms, prompt, complete, and devoid of inconvenience.

INJECTION OF AMMONIA IN OPIUM-POISONING.—In the *Glasgow Medical Journal* for August 1872, Dr. McEwen reports a case of opium-poisoning. Ammonia injected into the veins of the arm restored consciousness to an old man of sixty-nine, who was apparently moribund from a poisonous dose of opium (forty grains) eight hours previously. He was so far recovered as to be able to walk a quarter of a mile to the hospital. After admission there at 8 A.M., the ammonia injection was not repeated, but three doses of croton-oil were administered, and coffee. In the afternoon, he became somnolent, and sweated profusely. Belladonna was administered, and a further dose of croton-oil; and at 8.25 he died. The effect of the ammonia was so admirable, that it is to be desired that in any other case it should be repeated, as Dr. Halford recommends, to combat relapse.

CHROMIC ACID AS A LARYNGEAL CAUSTIC.—Dr. Isambert, of the Hôpital St. Antoine, has found chromic acid the most useful caustic, applied with the end of the laryngeal mirror, for the destruction of epithelial vegetations and warts of the larynx. He has used solutions as strong as one part in eight of water, and in rare cases one part in four, every eight days. A much weaker solution he finds to reduce the œdema of the glottis which sometimes accompanies the ulceration of laryngeal phthisis, and renders necessary a palliative tracheotomy.

MERCURY IN SYPHILIS.—The employment of mercury in syphilis has been again lately much discussed. We (*Gazette des Hôpitaux*) have witnessed the practice of both the supporters and its denouncers. To us, it is beyond doubt that mercurial preparations, properly administered, shorten the duration not only of the secondary accidents, but even of the tertiary, which have resisted iodide of potassium administered alone. As to the choice of the mode of application, Sédillot's pills have appeared to us as efficacious and more agreeable to take than bichloride or the hydrargyric iodides. We know that each of these pills contains double mercurial ointment, 10 *centigrammes;* medicinal soap, 10 *centigrammes;* marsh-mallow powder, 10 *centigrammes.* They are daily prescribed by M. Richet, M. Hardy, and others. By giving these concurrently with iodide of potassium, and disusing them from time to time, so that they can be alternated with a draught containing chlorate and nitrate of potash, they can be continued for months without producing either salivation or fatigue of the digestive canals. This is an excellent plan of treatment when one is anxious that certain accidents menacing existence, such as intracranial tumour, should rapidly disappear; but it must not be forgotten that, if these tumours manifest themselves by epileptiform attacks alternating with coma, returning at very short intervals, this specific treatment must not then be commenced. These symptoms must first be subdued by acting on the excitability of the brain. Tincture of amber in large doses, and bromide of potassium, of which the action is slower and more lasting, conduce to this result. Thus the system can for the time be reduced to calmness, although the tumour still exists. Things go on the same as before the first epileptiform attack. The morbid growth is still there; its pressure is always the same; but the brain is quiet. This truce must be taken advantage of, to at once administer the mercury and iodide. Expective treatment is not admissible in such a case.

APPLICATION OF ELECTRICITY.—An article of the *Wiener Med. Presse* quotes a communication made by Dr. Benedict to the Medical Society of Vienna on the application of electricity to medicine. He declares that great results can be obtained from Fromholt's zinc and lead pill. He himself constructed a pill of zinc and carbon, which could be put in action by a solution of one *gramme* of bichromate of potash in fifteen *grammes* of sulphuric acid. He has made use of electricity in tumours and inflammatory swellings of the joints, by applying the current, not to the tumour itself, but to the nerves which ramify in it, or to that part of the spinal cord from which the nerves emanate; also for tumours containing liquid, such as hydrocele; for aneurisms, by introducing needles communicating with the positive pole; for lymphatic tumours, by introducing needles connected with the negative pole, and taking care to conduct only a moderate current, so as to avoid suppurations and alterations; and also for indolent buboes, neoplasms, and cancers.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 21ST, 1872.

LIQUOR-LAWS.

AT a time when the success or failure of the recent Licensing Bill is being anxiously watched, it may be interesting and instructive to learn the experiences of legislative bodies of other countries, who, like us, deeply deplore the drunkenness flourishing in their midst, and aim at arresting or curing it. A paper in the *Boston Medical and Surgical Journal* by Dr. Henry Bowditch gives a careful and reliable account of the results achieved in New England by the working of the two opposite plans at present chiefly advocated—total prohibition of the sale of intoxicating liquors, or the unrestrained sale of liquors without a licence. It will be here well to quote his condensed and instructive table of statistics. It is as follows.

Total Number of Arrests for Drunkenness in Boston from June 1st to May 31st inclusive.

	Arrests.	Population.	Per cent.	Law in force.
1866-7	... 5,819	 194,422	..... 2.99	..... Prohibition
1867-8	... 6,085	 196,654	..... 3.09	..... Prohibition
1868-9	... 6,817	 230,988	..... 2.95	..... Licence
Last 6 months of 1869	... 4,889	 234,483	..... 4.17	..... Prohibition

It will be seen by this table that the arrests for drunkenness reached the highest percentage whilst the Maine Liquor Law was in force. In towns where the citizens had voted to sustain the prohibitory law in its entirety, intoxicating liquors could, nevertheless, be everywhere obtained; secret bars took the place of open ones; drug-stores the place of publicans and wine merchants; and drunkenness is declared never to have been so rife. The depressing moral effect on a people thus willing to hoodwink themselves was not the least evil effect of violent repressive measures. As Dr. Bowditch says, "such promulgation of law, and at the same time such utter and open and daily contempt for it, tend to lower the political morality of each citizen consenting thereto, to corrupt the whole community, and, in fact, to bring all law into less repute among the masses of the people." But, though increased drunkenness and a lower moral standard are the pernicious effects of the prohibitory law, the people of New England are adverse to granting a licence law, arguing that "the State has no right to license, for money, the perpetration of any vice." In some of the smaller towns, the prohibitory law has been observed to have a most happy result. In these, it has been found possible strictly to enforce it; and these towns have become "real asylums for the salvation of drunkards". In the large cities and busy centres, some redeeming plan remains to be devised. The Maine Liquor law has failed, and licensing laws are not approved. Dr. Bowditch proposes, as a preliminary necessity for any further legislation, "a profound study of the natural laws of the propagation of intoxication throughout the globe"; and gives the results of his own investigations on the subject. The use of stimulants he considers to be one of the strongest and most general of human instincts, and hence one which is not to be forcibly repressed. Intemperance he describes to be very rare between the isothermal lines of 77 deg. F. North, and south of the equatorial isothermal line of 82.4. It gradually increases on going northward (and southward, probably) between 77 N. and S. and 50 deg. isothermal lines, which is the area for the natural growth of the grape-vine. It becomes very rife above 50 deg.; and moreover it is of a coarser, more brutal character, than in either of the other two areas. It produces little or no crime at the equatorial area; rarely in the middle area; but it is the great provocative of crime above 50 F. In grape-growing countries, mild wines are freely used without producing a nation of drunkards; and the same may be said of lager beer. On the contrary, ardent spirits dwarf intellectually, morally, and physically, the nation that uses them to excess. Hence it is argued that the use of some liquors should be allowed, and others discouraged. He advises, therefore, that there should be a free trade in lager beer and "unfortified" light wines; and that the use of ardent spirits should be restrained by moral suasion, and, if need be, by stringent law; that grog-shops should be closed, and inebriate asylums established; that repeated drunkenness should be punished as a crime; that the seller of liquor to a known drunkard should be signally punished; that there should be a penalty for adulteration as a high crime against society; and, finally, that coffee-houses should be everywhere opened, where good coffee and tea could be obtained at low prices for the people.

PATENT MEDICINES.

IN a session which will count sanitary legislation among the chief elements of its business, we may perhaps hope for a reconsideration of that injurious relic of the war system of taxation, which encourages and protects the sale of nostrums and specifics of a secret and dangerous kind, by affixing to them a government stamp as the price of secrecy and the seal of approval of lucrative fraud.

The patent medicine stamp originated before the Apothecaries' Company had taken in hand the education of the general practitioners, or the Pharmaceutical Society had been even thought of, and when a belief in specifics was as common in the ranks of the profession as it is now out of it. It first appeared in the year 1804, in what is commonly called the Stamp Act, and was one of the many means devised by Parliament for raising "the supplies to defray the expenses of the just and necessary wars" in which His Most Gracious Majesty George III was then engaged. In those days the penalty for counterfeiting this or any other stamp was "death, without benefit of clergy".

The patent medicine stamp made its advent in strange company—with that on playing-cards; on dice; on "hats made of felt, wool, stuff, beaver, or leather, or any mixture of the same by whatsoever name such hat shall be called"; on newspapers, pamphlets, and advertisements; on gold and silver plate; and on carriages and horses; showing clearly that such medicines were deemed luxuries rather than necessaries of life at the time it was imposed. Many of these duties have either disappeared altogether, or been modified in conformity with our increased information, changed habits, and national prosperity; but the patent medicine duty remains unmodified in the slightest particular.

The Stamp Act also provides that a licence shall be taken out by the proprietors and by the vendors of patent medicines. Attached to the Act is a schedule of preparations, about five hundred in number, which are to bear the stamp. In 1812, an amended Act was passed, which is known as the Patent Medicine Act, and is in force at the present day. It gives a revised schedule of preparations somewhat longer than the previous one, and it imposes a penalty not exceeding ten pounds for selling any of them, or any other nostrums or specifics, without the government stamp; it further provides that victuallers, confectioners, and other shopkeepers, may sell medicated waters to be drunk in their houses without taking out a medicine vendor's licence.

Considering the great advances which have been made in medical and pharmaceutical knowledge, and the numerous evils which result from this tacit recognition of quackery by government, it is strange that the duty should have remained so long unrepealed or in any way modified. It is a very heavy tax on the slender resources of the sick poor, who are the chief purchasers and the greatest sufferers from patent medicines, and who labour under the unfortunate delusion that they are better than other medicines, because they bear the government stamp.

From a parliamentary return published in 1870, it appears that in the year 1859 a revenue of £44,000 was derived from the sale of about five and a half millions of stamps; and in 1869, £72,000 was derived from the sale of about nine and a half millions of stamps. Thus in ten years the receipts were nearly doubled—a fact of considerable interest to the social reformer as well as to the Chancellor of the Exchequer.

But these sums give no adequate idea of the gross amount of money actually expended in patent medicines, and the extent to which the public is robbed under government auspices. The preparations to which the nine and a half million stamps were attached would cost the public £680,000—a sum more than double the income of all the medical charities in London, and sufficient to support two hundred hospitals, with a hundred beds in each. We have been assured, moreover, by reliable pharmaceutists who are well acquainted with the popular quack preparations, that they are made of the commonest and cheapest drugs, and could be sold, without the stamps, for a few pence, and still return good profits, so that the greater portion of this sum finds its way into the pockets of the proprietors, and not into those of the vendors of patent medicines, or those concerned in the drug trade.

But there is another great evil resulting from the sale of patent medicines—namely, their unfitness for the state of health for which they are advertised and sold, and often their danger to life itself. There are no drugs in the Pharmacopœia which require more care in their administration than aloes and opium—the chief constituents of the two great classes of quack preparations—and the former is probably as much to blame for the great prevalence of hæmorrhoidal affections amongst the poorer classes, as the latter is for the death of numbers of their children. Under the protection of the government stamp any quantity of poison may be sold, and the recent Act to regulate the sale of poisons set at defiance. The stamp is, indeed, a delusion and a snare to the public, and a cloak and a shield to the knave and the quack, and should not be tolerated any longer. If the British Medical Association could bring to bear on the Chancellor of the Exchequer and on members of Parliament a full statement of the facts, backed by the influence of the enlightened public-spirited press, the stamp might be abolished and a great evil removed.

THE DIAGNOSIS OF SEX *IN UTERO*.

THE use of the stethoscope to determine pregnancy has been more or less diligently studied since first discovered by Mayor of Geneva in 1818, notwithstanding that the utility of obstetric auscultation has been warmly disputed by well known writers, including the late Dr. Adams of Aberdeenshire, Professor Hamilton, and Dr. Lyall. During the last ten years, the subject of differential diagnosis of the sex of the fœtus has attracted particular attention amongst continental physicians, since it was declared by Frankenhauser that the pulse-rate of the female fœtal heart was on average higher than that of the male, and hence, that the sex of the infant could be predicted *in utero*. The subject has since been investigated by Steinbach, Zepunder, Hennig, and Hüber, Dr. Tyler Smith, Dr. Lancia, and Dr. Munro in England, and Dr. Hutton in New York. But more facts and accurate tables of results are still needed to establish the truth of the discovery or to disprove its validity. An interesting summary of the historical progress of the research is furnished by Dr. Æneas Munro in a recent monograph (*Dissertation on the Use of the Stethoscope in Obstetrics*), in which he adds his own observations to the sum of our knowledge; and a further contribution is made by Dr. Hutton of Brooklyn, N.Y., in the *New York Medical Journal*, July 1872. The predictions of those physicians who have hitherto given the subject their careful attention appear to have been, on the whole, singularly correct. Of fifty-seven cases examined by Steinbach, he was wrong in ten, and unable to predict in two; but in the remaining forty-five cases he was correct. Of fifty cases examined by Frankenhauser, he was correct in determining the sex in every instance. In seven cases examined by Dr. Hutton, he predicted truly in each one. To arrive at any fixed average standard of the different pulsations of the male and female fœtal heart seems to be difficult, by reason of the irregularity of the pulsations of the fœtal heart; of the training and care necessary to obtain a correct observation by auscultation; and of the somewhat different figures given by different physicians. But they all agree that the pulsations of the female fœtal heart have a higher average than those of the males examined. Steinbach, who seems to have given to the subject the most careful investigation, fixes the average for females at 144 pulsations; for males at 131. The average pulsation of the male fœtal heart varies from 124 to 147 per minute; of the female, from 135 to 154. When the average pulsations are about 140 per minute, the diagnosis is held to be doubtful, according to the data. As a subject of mere curiosity, however interesting it would be to the mother to know beforehand the sex of her infant, and however much it would raise her doctor in her opinion, and strengthen her confidence to be able truly to predict, it would be unworthy the grave consideration and study of medical men were not some useful results to be obtained. The study of the sounds of the fœtal heart have already been found of use in determining the existence of pregnancy, in ascertaining the position and condition of the child, and in detecting the presence of twins; but, beyond this, if, by the aid of the stethoscope, the sex of the fœtus can be positively determined, the present high rate of mortality in childbirth might probably be diminished. It is computed that for 100 female, 160 male children die in parturition; and of the mothers who die under parturition, or from its immediate consequences, the far greater proportion are those who give birth to male children. By foreknowledge of the sex, we may hope, it is thought, to prevent, or at least prepare, for these minatory conditions of the puerperal state.

Speaking of the results to be hoped for, Dr. Munro says: "If we could save the larger proportion of male children, not to speak of lessening the general mortality at all, would the means not be of incalculable benefit? Of course, if the sex could be determined, it would only prove useful towards this end, provided we could discover some means to bring on labour sooner than the natural term with safety to the mother and child. All that can be done in the meantime is to investigate the matter, and collect facts relating to the subject." The facts at present within our reach are few and meagre, the tables insufficient, and often carelessly kept; and the prediction of sex is therefore, as yet, more a subject of speculation and curiosity than of accurate scientific research; but if the earnest attention of medical men were turned to it, it might prove of great use in lessening the dangers and sufferings of parturition.

THE ROYAL ORTHOPÆDIC HOSPITAL.

THE half-yearly meeting of the Royal Orthopædic Hospital will be held next Thursday. The lamentably zealous supporters of Mr. Brodhurst's promotion, for whose qualification *en masse* as new governors he presented a cheque shortly before the former meeting, but with whose extraordinary proceedings he "explicitly denies" complicity, have succeeded in reducing the hospital to a state of scientific weakness, maimed usefulness, and professional disrepute. The services of the two senior surgeons, who have chiefly made the hospital distinguished through a long series of years, have been lost, and their long career of brilliant and gratuitous exertions rewarded with insult and crowned with ingratitude. The resolution which was carried, declaring an increase of the staff necessary, was so worked as to effect a double decapitation of the staff, leaving but two officers—whose office must sit as uneasily as it does ungracefully upon them—where there were four, and should be six. No surgeon has been induced to come forward and discredit himself before the profession and the public by accepting office from hands stained with insult and ingratitude to eminent members of the profession, although much public and private solicitation has been employed; and we have heard of private offers having been made to "pay all the expenses of candidature", if a candidate could be secured. We may assume that

Mr. Brodhurst and Mr. Hill are only waiting for a fitting opportunity to tender their resignations or to secure adequate reparation to their insulted and injured colleagues. Mr. Brodhurst especially will, we imagine, feel that something more than an explicit denial of complicity with the acts of the improvised governors, whose cheque he tendered, is expected from him. There is a certain solidarity in professional rights and claims which cannot with moral impunity be disregarded; and even an explicit denial of direct responsibility will not, under the very peculiar circumstances of the case, be held to relieve him from an implied and indirect but very urgent responsibility, which imposes the duty of requiring a reparation for the injurious acts which he repudiates, and which are beyond justification.

It is altogether without precedent that vacancies at any important hospital should remain for so long a time contemptuously neglected and spurned as these have been, now for some months. No more emphatic condemnation could be imagined; nor can the governors fail to discern in it very clearly the pronounced decision of the whole profession, that it will not condone the unmerited and grievous insult offered to the two surgeons, until this has been effaced by a graceful and complete reparation; and that meanwhile no reputable professional man will come forward and place himself afresh under their control, or accept office in their institution. The oldest and most influential governors are anxious that full amends should be made. It is essential for the public usefulness of the hospital, for its restoration to professional standing, and for the healing of the deep wounds which recent proceedings have inflicted on the material and moral welfare of the charity.

THE American Medical Association have adopted a resolution that the members of the Association should discourage the use of alcoholic stimulants in their remedies. There was one "no," the enunciation of which caused considerable merriment.

WE direct especial attention to the able letters of our special correspondent with the Northern Army in the Autumn Manœuvres. The precise condition of our army medical arrangements, their degree of merit, and the necessity and character of required improvements, are in those letters indicated with excellent knowledge and precision.

A GOOD deal has been written about the union of morphia-injections with chloroform-inhalations to produce prolonged insensibility to pain after important surgical operations. M. Demarquay concludes, from a short series of experiments, that it is a method liable to especial dangers arising from lowering of the temperature.

THE AGASSIZ EXPEDITION.

LETTERS from Dr. Hill, dated Panama, June 26th, give the safe arrival of the Agassiz expedition in the steamer *Hasler*. The steamer proved defective in construction, and they lost over six weeks' time in repairs at various places, and so had time to make but very few deep sea soundings, and to carry out the chemical and physical experiments which they had planned. They, however, have obtained large numbers of specimens of plants and animals, and Professor Agassiz has already sent home 137 barrels, boxes and cases, filled with specimens.

INQUESTS IN THE DARK.

DR. LANKESTER held an inquest lately, at St. Mary's Hospital, on an aged domestic who had committed suicide by cutting her throat. A *post mortem* examination was made by Mr. Hickman, who stated that the brain was small and the membranes much thickened. Dr. Lankester, in recommending a verdict that the deceased committed the act whilst in an unsound state of mind, pointed out that the *post mortem* examination supported such a conclusion. He had not ordered this examination, but the hospital authorities had done it on their own responsibility. He had been accused by the magistrates of ordering such *post mortem* examinations improperly; but he would appeal to the jury as to whether, in the interests of truth and justice, such examinations ought not to be held. In condemning such examinations, the magistrates showed themselves greatly wanting in that kind of education which could enable them to judge of the necessity of such proceedings. The magistrates were not called upon to judge of the propriety of the proceedings in the coroner's court. They were merely the paymasters of the coroner; and a clerk of the Treasury had as much right to complain, when he paid a cabinet minister's salary, of his conduct in Parliament, as a magistrate to complain of the conduct of a coroner's court. If the magistrates really think that the expenses of coroners' courts are oppressive, it is quite competent for them to step out of the Sessions House on to the Green, and there to join the politicians in demanding a reduction of Her Majesty's expenses at Court, as well as that of the court of her representatives in the county.

SIX CHILDREN AT ONE BIRTH.

THE first authentic case we (*Nashville Journal*) have ever heard of was reported last April, at the annual meeting of the Georgia State Medical Association, if we except the one recorded in the "Remarkable Cases in Surgery," 1857; but they all died in the evening of the day of their birth. Dr. George N. Holmes reported that, twenty-eight years ago, in Kentucky, he delivered a poor white woman of six babes at one birth. The children were perfectly formed, and weighed each two and a half to three and a half pounds. The parents were originally from Maryland. They afterwards moved to Arkansas, and he had heard that two of the children had died.

AN OBJECT OF INTEREST.

AMONG the objects of interest shown at the late Annual Congress of the American Medical Association, was a "coloured man, thirty-six years old, who makes a living by exhibiting his ability to roll his abdomen with an undulatory motion, like a huge ball, around the umbilicus; and also to move his heart from side to side."

THE RESULTS OF REVACCINATION.

ACCORDING to a statement made at the Statistical Congress held this year in St. Petersburg, the total number of deaths from small-pox in the German army during the recent Franco-German war was 263. This small mortality is attributed to the system of compulsory revaccination, which every man who enters the army must undergo. On the other hand, in the French army, where revaccination is not compulsory, the number of deaths, as stated by a French authority, was 23,469. This terrible difference (says the *Wiener Medizin. Wochenschr.*) must puzzle the greatest opponents of vaccination.

THE CURE OF STAMMERING.

VARIOUS methods have been proposed at different times for the cure of stammering, and have been followed with more or less success. The mode of treatment followed by M. Chervin of Lyons has lately been the subject of investigation by a competent Commission appointed by the Departmental Council, whose report now lies before us. The three Commissioners (MM. Fonteret, Rassot, and Marduel) state that the system of M. Chervin is successful, rapid, and permanent in its effects; and this opinion is confirmed by numerous reports of earlier date on the same subject, by Commissions appointed in France, Belgium, Spain, etc. They support their opinion by the detailed description of the results achieved in the case of eight patients severely afflicted with bad forms of stuttering, who were submitted under their observation to the curative methods of M. Chervin. These patients, or pupils as the Commissioners call them, were of ages varying from ten to twenty-nine years. None of them could speak without stammering to an extent most distressing to themselves and to those that heard and saw them. In some cases, the act of speaking was accompanied with convulsive movements of the mouth and eyes, in others with spasmodic respiration. Some had stammered from their infancy; in others, the defect had been caused by a shock to the nervous system. On June 10th, these eight patients were placed under M. Chervin's treatment. On the 20th of June, they were seen by the Commissioners,

and each of them could then speak distinctly without stammering or hesitation; and, on the 28th, they were pronounced cured, speaking then with natural ease and rapidity. The system followed by M. Chervin is simple and rational. He discards all mechanical contrivances; but he teaches the patient, by means of a large number of exercises, gradually to pronounce with distinctness vowels, consonants, syllables, and sentences. He pays great attention to the act of respiration, which he seeks to regulate. He teaches his patient to take, at certain intervals, a slow but normal inspiration, which is succeeded by an even, continuous, and loud expiration, during which pronunciation is effected. The course of treatment takes twenty days. This time is divided into three periods. During the first, the patient is restricted to complete silence, so that the old habit may be broken; during the second period, the patient is taught to speak slowly and deliberately; and during the third period he acquires the practice of speaking fluently and without clipping the words. This method of treatment is stated to have succeeded in even the most difficult cases, and the good result attained is said to be permanent; but this greatly depends on the patient himself, who must occasionally make use of the means which were first used to cure him of stammering. The cases that are related are of a crucial character. The details of progress are described with care, and the success in every instance was remarkable and convincing; hence the Commissioners report in very decided terms in favour of M. Chervin's process, which they recommend for adoption.

PRESERVED MILK.

RETURNING to the subject of preserved milk (which we noticed last week), we now publish Mr. Wanklyn's recent analysis of a sample of the English Condensed Milk Company's manufacture. The contents of a tin yielded in percentage—

Water	20.5
Fat	10.4
Caseine	11.0
Ash	2.0
Cane and Milk Sugar	56.1
	100.0

In calculating the condensation, it must be remembered that condensed milk is of higher specific gravity than water or than milk. About 133 *grammes* of the condensed milk occupy 100 cubic *centimètres*. Calculating on this basis, it will be found that this sample is condensed four times; that is to say, that one volume of it contains the nutritive material of four volumes of fresh milk. In turning the condensed milk back into fresh milk, the rule is, therefore, to mix it with three times its volume of water. It is suggested, however, that, owing to the presence of the sugar employed for the preservation of the milk, there is an advantage in diluting rather further, and that four volumes of water, instead of three, is very well borne. In taking leave of the subject, we again call attention to the fact, which is very clearly established, that all three varieties of condensed milk—viz., Newnham's, the Anglo-Swiss, and that of the English Condensed Milk Company—are shown by analysis to be made of rich milk; and we cannot help expressing surprise at Dr. E. Smith's rash condemnation of condensed milk. There is not a more honest article in the market than condensed milk. In this respect it stands in marked contrast with the uncondensed milk of commerce, which hardly ever is that which it professes to be.

DUST RESPIRATORS IN FACTORIES.

MR. ROBERT BAKER, Government Factory Inspector, is, we learn, doing good service in pushing the introduction of respirators into dust-abounding factories. The great prevalence of lung diseases in cotton, file, china, clay, flax, and other factories, has long been pointed out, chiefly in this country by Dr. Greenhow; but the real extent of the evils dependent on manufactures such as we have named, is only now being thoroughly recognised. Public opinion and the operation of the factory-acts have already done much to diminish these evils by compelling the use of fans and other mechanical means, and of larger and better ventilated workshops; still, these practically are found to fulfil, to a limited extent only, the desired object of diminishing the risks of the workman. Mr. Baker, who brings the largest British experience to give weight to his recommendations, has recently urged in strong terms the introduction of a simple and effective respirator, made by Gratton and Co. of Dublin, consisting of a light flexible framework lined with cotton wool. It has been successfully tried in china scouring, hollow ware turning, and other factories, with gratifying results, and although the workers at first adopted only tardily the recommendations by Mr. Baker, they now begin to refuse to work without respirators. The protection afforded seems to be so effectual, and the means so simple and cheap, that there is every reason to believe that these respirators will shortly become general, and will be, as a matter of course, employed in all dust-abounding factories. Their influence on the health of the workers should make itself speedily evident.

A PATENT TAPEWORM-TRAP.

AN American contemporary, in an article on patent medicines, quotes the following description of a "trap for the tapeworm" for which a patent was granted in 1864 to Dr. Myers of Logansport, Indiana.

"Trap of gold, one inch long by a quarter of an inch in diameter; a hollow tube in three pieces, having holes and other contrivances. After the patient has fasted from two to six days, the trap baited for the worm is swallowed, the end of a cord attached being returned from the mouth. The worm, in reaching the bait through a hole, is to get his head caught by teeth, when trap and worm are withdrawn together. If the worm is not caught in twelve hours, the trap is brought up and baited anew."

CHINESE MEDICINES.

THE San Francisco *Bulletin* says: The ingredients of a witch's cauldron, as described by the poet, could not have been more repulsively disgusting than are the articles and compounds shipped to the Chinese physicians of this city from their native country, and used as medicines here. There seems to be just at the present time an extra demand for a venomous serpent closely resembling the rattlesnake, of which hundreds are received constantly. A custom-house official brought a specimen of these cheerful-looking creatures to this office yesterday: a coiled snake about four feet long, fanged, and with hideous head-scales like a crest. How these animals are taken by patients of Chinese doctors is not known. One would be a fair dose if disguised in a coating of sugar. They may be taken in sections three times a day, as they are desiccated, or they may be boiled down or pulverised, and taken in powders or rolled into pills. Lizards are in nearly as great demand as the snakes. These also are dried and sent over in packages, together with hundreds of other loathsome things, all of which are consigned to the Chinese physicians and used by them in their practice.

SAFETY FOR THE SANE.

A CORRESPONDENT, having the initial H., writes to the *Daily Telegraph*:—"By experience I am able to confirm the tenour of your recent leading article on the law of lunacy, and think, both in justice to the patients and their friends, that licensed houses ought to be accessible to all those who can show sufficient cause for seeing any particular inmate. Several years ago, I lodged some securities in the hands of a broker, in whom I believed confidence might be placed, and for some time the arrangement was satisfactory; but more recently, through some unexplained cause, his affairs got into confusion, the securities were in peril, and himself placed in a lunatic asylum. Wishing to ascertain where they were to be found, I managed once to gain access to him, and, on asking the porter who came into the room on some errand before the patient entered if he were violent, as in such case I should wish a third party to be present, he told me, to my great astonishment, 'Mr. —— is as sane as you are.' This cheered me; for, believing in my own sanity, I thought my troubles were at an end. When Mr. —— came into the room, and I had some conversation with him, I felt perfectly assured of his sanity and of his willingness to give every

assistance were he at liberty. This happened eighteen months ago. Last Easter, my mother—who is a widow—went to see him, but was denied access. As we cannot get redress from the parties managing for this patient, we feel anxious to know what point of law can touch the case, as we believe the trustees have some of the securities in possession. From a good income we are reduced to the necessity of getting a living by our own personal exertions. The patient would help us, but cannot; the trustees could, but will not." If H. will furnish us with the means of identifying the case to which he refers, we will undertake that it shall be investigated, and the result shall be published.

HÆMATOXYLIN AS A STAINING MATERIAL.

DR. ARNOLD writes to the *Philadelphia Medical Times* of July 1st, 1872, on hæmatoxylin as a staining material for animal tissues. Ordinary logwood extract is finely pulverised in a mortar and about three times its bulk of powdered alum is added. The two ingredients are rubbed well together for fifteen or twenty minutes, and mixed with a small quantity of distilled water. More water being added, the solution, after filtration, should present a clear, somewhat dark violet colour. Should it be a dirty red, more alum must be incorporated, and the mixture again filtered. By having an excess of both alum and hæmatoxylin in the mortar, a saturated solution can be obtained which, after filtration, may be combined with alcohol—one ounce of the logwood fluid with two drachms of seventy-five per cent. alcohol. A much better colour can be obtained by allowing the mixture, after thorough trituration, to stand for several days before filtering and adding the alcohol. If a scum form on the surface of the liquid after it has been some time made, a few drops of alcohol and careful filtering will remove it. The colouring with a strong solution, such as has been described, requires but a few minutes, but if a slower tinting be desired, the fluid may be diluted with a mixture of one part of alcohol and three of water. The tissue is coloured equally well, whether it has been previously hardened in alcohol or in any of the chrome compounds. The nucleus becomes of a brilliant purple, the cell-body of a distinct neutral tint. An over-staining causes a blackening of the nucleus, the protoplasm becoming purple. The following is the method of treating pathological new formations. The cut is placed for a time in the logwood fluid, and is then immersed in distilled water to remove the crystals of alum which might otherwise adhere to it. From water the tissue is transferred to seventy-five per cent. alcohol, when, after soaking for ten or fifteen minutes, it is clarified in oil of cloves—the light oil is the best—and may be either mounted immediately in balsam dissolved in chloroform or in damar varnish.

SUICIDES IN FRANCE AND ALGERIA IN 1870.

MANY prevalent errors concerning the proportion, distribution, causes and modes of suicide, may be dispelled by a short study of the report of the administration of criminal justice in France for the year 1870, recently published in the *Journal Officiel*. There have been brought to the knowledge of the Public Minister 4,157 suicides: 3,371 (81 per cent.) by men, and 786 (19 per cent.) by women. The age of 40 of the suicides remains unknown; 18 of them were not 16 years old; 130 were from 16 to 21; 1,067 from 21 to 40; 1,669 from 40 to 60; and 1,243 were at least sexagenarians. Amongst these suicides, 1,447 were unmarried; 1,380 were married, and had children; 599 married, without children; 464 widowed, with children; and 199 widowed, without children; the condition of the remaining 68 could not be ascertained. As regards their place of residence, it was found that 2,630 were the inhabitants of the country, and 1,461 of towns; 66 had no known home. As to employment, 948 were employed in agricultural labours, 933 belonged to various industrial occupations, 119 were merchants and tradesmen, and 395 were people without occupation. Of the suicides, 1,384 were committed in the spring, 1,129 in the summer, 668 in the autumn, and 976 in the winter. As, hitherto, the majority of these suicides attempt their deaths by hanging and drowning. The report divides the presumed motives for this crime into six great divisions: misery and reverse of fortune, 383; family troubles, 512; love, jealousy, debauchery, or misconduct, 701; various ills, 930, of which 515 were because of physical sufferings; cerebral diseases, 1,377; and 22 were the authors of capital crimes. For the remaining 232, the judicial inquiry was not able to assign probable causes.

NEW LUNATIC ASYLUM IN SOUTH YORKSHIRE.

AN immense building for the accommodation of lunatics in South Yorkshire has just arrived at completion, and has been formally opened. It is erected in what is known as Wadsley Park, three miles from Sheffield, and has cost about £120,000. It is capable of accommodating 750 patients. New wings are to be added, should such an enlargement be found necessary. The building is surrounded by about 136 acres of land, which will be devoted to farm and garden purposes.

PAYMENT FOR EXTRA SERVICES.

AT a late meeting of the Cambridge Board of Guardians, a report was brought forward of the Finance Committee, which had met for the purpose of taking into consideration what extra remuneration should be given to the medical officers and others for the extra labour and duties devolving upon them during the prevalence of small-pox. The Committee recommended that compensation should be awarded as follows:—Dr. Knowles, £8; Dr. Buckenham, £7 and £5 (for the House); Dr. Green, £5; Mr. Hosegood £8 and Mrs. Hosegood £5, making a total of £38. The Chairman, in moving that the report be adopted, said that at Norwich twenty guineas each had been awarded to the medical officers. At Cambridge, they proposed to give their officer two shillings per case, which he thought no guardian, however economical he might be, would object to. Mr. Alderman Death seconded the adoption of the report. Opposition, however, then arose from a medical source. Dr. Ransome asked if on any previous occasion the Board had done such a thing as that. If the medical officers were not sufficiently paid, let the Board increase their salaries and not give them these little rewards, which were a disgrace to the medical profession to accept. If the Board went on increasing the salaries of the medical officers in this way, presently there would be an application from the cook and others to be rewarded for extra labours. The Chairman was not aware that this had been done before, but let the present instance be a precedent. Mr. Crawley said all that he felt about it was, that Dr. Knowles was not sufficiently rewarded; £8 did not anything like pay him. The report was then adopted. We fail altogether to see the meaning or justice of Dr. Ransome's remarks. Extra exertions such as those called for in time of epidemic fairly earn an extra remuneration. If the sum proposed were too small, it would have been right that he should move to increase it—certainly not to cut it off altogether.

INDIAN MEDICAL SCHOOLS.

THE *Times* correspondent writes:—"A report on the medical schools of Bengal has just been issued, with a brief summary of their history. The crisis was some six-and-thirty or seven-and-thirty years ago, when Lord William Bentinck decided that the instruction was to be in the English tongue. A severe battle had been fought between the Orientalists, led by Dr. Lytler, Superintendent of the Native Medical Institution, and the Anglicists, led by Dr. Duff, the well-known Free Church Missionary. I was led by this report into some of the pamphlets on the subject, and was amazed at the clearness and tenacity with which that undaunted missionary held to his point. 'You will offend some of the best men in the country', his opponents said. 'We will lay the foundations of science', Dr. Duff replied; 'which we never shall lay till the myths and charms of Orientalism are cut away, and the knowledge of Europe opened up to India in the English tongue'. Never was scientific prophecy more literally verified. Medical science alone is effecting a revolution in India. Every day it is making fresh progress, fresh converts and disciples. There are no more cheering

reports than those of the medical colleges; and we may date it all to that victory won a generation ago under Lord William Bentinck. If medicine had been taught in the Oriental languages, it would to this day have been a mass of charms and jargon. Now it is a science, and some native practitioners are among the most eminent of its votaries."

IODIDE OF POTASSIUM.

THE price of iodine has increased, it appears, very greatly during the last four years; and we are threatened by the *Boston Journal of Chemistry* with a rise in price so exorbitant that iodide of potassium will be almost beyond the reach of physicians. We are, however, assured by a good authority that, although the price of iodine and iodide of potassium has increased between two and three hundred per cent., there has been no important variation during the last year. The advance of prices is believed to be mainly due to the operations of speculators, and is likely to be followed by a decline. At any rate, the interests of physicians and their patients are not likely to be compromised as threatened.

THROWING MEDICINE TO THE DOGS.

WE can very well afford to indulge in a hearty laugh at a harmless joke directed at ourselves, when it is as good as the following story, which is told by a correspondent of the *Times*.

"Many years ago, cholera was rife in Ireland, and it seemed to defy the skill of the faculty; so much so, that the panic-stricken people believed the doctors poisoned the patients, and in some instances threatened to pull down the hospitals. A medical friend of mine, who has long since gone to his eternal rest, was applied to very urgently to visit a cholera patient at the dead hour of night, and some distance from his residence. He could not attend, but he gave the brother of the patient the medicines recommended in such cases of emergency. A few days after, he saw the brother in the street, when the following conversation occurred. 'Well, John, how is Pat?' 'Long life to your Honour, he's finely!' 'I'm very glad to hear, it John; it's an ugly complaint. that cholera.' 'Throth and your honour, it is; and poor Pat had a hard time of it, but, praised be the Lord, he's well again; and, plase your honour, the dog's dead.' 'What dog?' 'Oh, your honour, it's for sartin the dog's dead.' 'What dog are you talking about, my good [illegible] 'Plase your honour, I gave the medicines to the dog, and he's dead; but Pat's finely, your honour.'"

ABORTIFACIENTS.

ACCORDING to the newspapers, a law has recently been passed by the Legislature of Illinois to prohibit the sale of "abortifacient drugs," except on the prescriptions of well-known practising physicians. Medicines intended for females, with the formulas, must be submitted under oath to five physicians of the county where it is proposed to sell such medicines; and these physicians must certify, under oath, that the said medicines are not "abortifacient," before sales can be made. The *Boston Medical Journal* observes that this is all very well; and will keep out of open market a number of dangerous articles and vile preparations now sold with "criminal intent." Curiosity, however, is excited to learn what drugs, or preparations, the "five doctors" will, under oath, declare unfit to be sold because they are "abortifacients."

MEDICINE AT THE INTERNATIONAL STATISTICAL CONGRESS.

AT the recent session of Congress at St. Petersburgh, the subjects of the Contagious Diseases Act and Cholera have been under discussion. With regard to upholding the former there seems to be unanimity of opinion; and it is interesting to know the actual text of the principal conclusion arrived at by a strictly scientific body, in which every civilised nationality is represented. It is as follows:—

"The Congress recognises the great importance of a serious study o prostitution, and insists upon the necessity of establishing in all large towns a sanitary control, which shall at the same time keep special registers concerning the persons addicted to prostitution."

The great and important question of Cholera, at this moment existing in Russia, has not been overlooked, and the *Times* correspondent states that, during two sittings at which he was present, he was much struck with the ability, minute and accurate knowledge, and freedom from foregone conclusions, shown by the Russian physicians who prepared the report and who took part in the discussion. To Russia the question is of pressing importance, as the gate through which the pestilence is believed to find its way to Europe, while it is, of course, a subject of constant anxiety to India, where the malady is known to originate. For this reason he thinks the authorities in India should at once make known to their great neighbour all that is done and is doing in Hindustan to investigate and arrest the pestilence at its source, to enable the latter to continue the inquiry in the new field and altered circumstances in which it becomes an immediate peril to the western world.

REV. JOHN WARD ON ATMOSPHERIC GERMS.

DR. C. M. INGLEBY writes to *Nature*: "This worthy was Vicar of Stratford-upon-Avon, from 1662 till his death in 1681. He was a man of general knowledge, and was specially skilled in the diseases of women and children. It is not known that he obtained the archiepiscopal licence to practise physic, but he certainly practised the healing art, and he records his intention 'to inquire whether a man may get of the archbishop a licence to practise *per totam Angliam*!' His diary, 1648-1679, is sensible and entertaining. It is chiefly known as containing a notice of Shakespeare, with the only extant account of the cause of his death, viz., 'a feavour' caused by a carouse with Drayton and Ben Jonson. The Diary is in the Library of the Medical Society of London. It was edited by Dr. Charles Severn, and published by Colburn, in 1839. The following extract is remarkable:—'Venenum pestilens est congeries minimarum animalcularum per aerem volitantium, quæ corpora humana per respirationem aut poros subeuntes, eorum partes corrodunt et corrumpunt, ex iisque ad alia corpora volitantes, seu ad alia quocunque modo delatæ, et quasi contagio propagatæ, etiam illa inficiunt, corrodunt, corrumpunt, sicut priora, e quibus evenerunt. . . . Supra fœnum cubare noxium multis fecit, non solum in peste, sed etiam in aliis morbis.' Of course *in peste* means 'in the case of the plague.'"

SCOTLAND.

THE NEW EDINBURGH INFIRMARY.

THE appearance presented by the site of the New Royal Infirmary, Edinburgh, is not encouraging. The foundations are only partially laid, and, to judge by the extent of the operations at present going on, there is little prospect of a new hospital for Edinburgh for several years. The estimated cost of the undertaking would appear to have been far short of the mark. Besides the want of sufficient funds, other difficulties have cropped up, but these do not sufficiently account for the present *laissez faire* spirit displayed in carrying out the undertaking.

CONVALESCENT HOSPITAL FOR ABERDEEN.

THE managers of the Aberdeen Royal Infirmary have in view the erection of a convalescent hospital in connection with that institution. The sum at present in the hands of the managers for the promotion of this desirable object is not large, but it is not too much to expect that this would be largely supplemented by a special appeal to the inhabitants of the town and neighbourhood. A scheme such as this is no longer an experiment; convalescent hospitals are the fashion of the moment, and from the gratifying success which has elsewhere attended them they give promise to form a most important permanent means for the treatment of disease, and the relief of the poor.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

AT the last meeting of this Society, the following gentlemen were elected office-bearers for the Session, 1872-3. *President*—Dr. R. S. Orr. *Vice-Presidents*—Dr. G. Buchanan, Dr. A. Fergus. *Council*—Dr. J. Gray, Mr. R. Grieve, Mr. J. Pollock (Mearns), Dr. R. Renfrew, Dr. G. Miller, Dr. T. D. Buchanan, Dr. R. Stewart (Coatbridge), Dr. James Scanlan. *Secretaries*—Dr. R. Perry, Dr. A. Robertson. *Treasurer*—Dr. H. R. Howatt.

THE VACANT CHAIR IN ANDERSON'S UNIVERSITY.

FOR the Chair of Medical Jurisprudence in Anderson's University, vacated by Dr. P. A. Simpson on his appointment to the same Chair in the University, there are, we understand, a considerable number of candidates. It is expected that the appointment will be made about the end of the current month.

THE APPOINTMENT OF A MEDICAL OFFICER OF HEALTH FOR GLASGOW.

UNDER the above heading one of the daily newspapers communicates the following.

It is stated that the advertisement for a medical officer of health for Glasgow has brought out no fewer than forty-five applicants, only two of whom, however, belong to Scotland. A leet of four likely candidates has been adopted by the Health Committee, and the appointment will probably be made at the next meeting of the Police Board. As the two Scotch candidates have already been in the service of the Police Board, it is but natural to expect them to be on the short leet. They are Dr. James B. Russell, medical superintendent of the Fever Hospital in Parliamentary Road for the last eight or nine years; and Dr. Thomas Johnson, who has been three or four years the police-surgeon and medical officer of health in the western or Anderston district. The two English candidates on the short leet are, it is understood, the medical officers of health for Carlisle and Salford; and a deputation of the Health Committee has been told off to visit those gentlemen and institute the necessary inquiries on the spot.

The candidature has naturally produced considerable interest in medical circles; and during the somewhat prolonged interval since the advertisement appeared, there has been time for abundance of speculation on the result. So far as we have been able to learn the opinions of the medical profession in the city, we can state with considerable confidence that their opinion is almost unanimous in favour of Dr. J. B. Russell. The ability which this gentleman has shown in organising and conducting the various fever and cholera hospitals in the city during a considerable period of years, has convinced every one that he is possessed of no mean administrative ability. At the same time his numerous contributions to medical literature show a shrewd practical insight which must be invaluable in such a position as that to which he aspires.

IRELAND.

DUBLIN CONVALESCENT HOME.

NOTWITHSTANDING that a clause was introduced into the Local Government Board (Ireland) Act empowering urban authorities to erect convalescent homes, the Public Health Committee of the Corporation of Dublin stops the way. At a late meeting of that Committee, a resolution was moved that the Council be recommended to proceed with the erection of a convalescent home, for which tenders had been received in last May. An amendment, however, was carried by a majority of eleven against four, to the effect that the object would be most effectually and desirably accomplished by contributing to each of the city hospitals affording accommodation such a sum, under the form of a capitation grant, as will provide for the care and maintenance of the convalescents. The experience of the past epidemic has proved this to be an utter failure. The hospitals were soon filled, and were obliged to dismiss patients not yet convalescent, to admit fresh cases. Besides, when an epidemic is present, it is too late to erect convalescent homes; and Dublin always requires such an institution for the 15,000 to 18,000 cases of fever that annually take place in that city.

SMALL-POX RELIEF FUND, DUBLIN.

THE labours of the Small-pox Relief Committee are now drawing to a close. The relief fund reached the sum of £3,719, of which nearly £3,000 was expended in the relief of the families of the sufferers from that disease. The Committee has pursued its charitable career, affording great satisfaction to all parties, over a period of nine months; and, at the last meeting, passed the following graceful resolution: "That the thanks of this Committee be presented to the medical officers of the Dublin Dispensary District for the zeal, activity, and attention with which they have rendered their services to the suffering poor during the late epidemic of small-pox; and that the Secretary of the Committee be directed to send a copy of this resolution to each of those officers." We understand that the Boards of Guardians of the two Dublin Unions purpose shewing their appreciation of the services of their medical officers in a substantial manner; and it is believed that such a mark of their approval of the manner in which these onerous and dangerous duties have been performed during the last eighteen months, will meet with the entire approval of the Poor-law Commissioners. We may add that the inauguration of the Small-pox Relief Fund, as also the Cholera Relief Fund on a former occasion, was due in great measure to the indefatigable exertions of Dr. Speedy of Dublin.

LABOURERS' DWELLINGS IN IRELAND.

THE Registrar-General's report of the agricultural statistics of Ireland, just issued, informs us that in 1861 the number of fourth-class houses in Ireland, each of which had but one room for the entire family of every age and sex (including, we presume, the pig), was 89,374; and in these were living close upon half a million of people, or nearly six persons in each house. The census returns for 1871 have not yet appeared; but we have no reason to believe that there has been much improvement in this state of affairs during the last ten years. The report urges the importance of improving the dwellings of the labouring classes, for which purpose the Legislature has enabled the Treasury to grant loans. This will furnish an opportunity for the display of the usefulness of the new Local Government Board.

AUTUMN MANŒUVRES.

[FROM OUR SPECIAL CORRESPONDENT.]

II.

THE MEDICAL ARRANGEMENTS OF THE NORTHERN ARMY CORPS.

IN continuation of my last, I shall say a few words more on some of the headings on which I have already touched. The base or ultimate hospital at Aldershot I stated was a kind of amalgamated regimental hospital. This is only a provisional arrangement. In actual warfare, the existing regimental hospitals, (more properly called battalion-hospitals) would be transformed into a general hospital; and consequently a new system, or at least a system which had not been practised in times of peace, would be introduced in all the bustle and confusion attending the breaking out of war. It is more than could be expected that the machinery of any system so established would work well and smoothly in time to bear the sudden strain thrown on it. I think it was Abraham Lincoln who recommended a friend not to "swop" his horse while crossing a stream. It would be well if this wholesome advice were followed in the present instance. In war the regimental system, all admit, is practically an impossibility in rear hospitals, and many say in primary hospitals; yet this is the system pursued in time of peace. "For", say its advocates, "in regimental hospitals the medical officers know their men; the sick have all the benefit of this knowledge, and are better and more tenderly cared for among their comrades". All this cannot be disputed; but they forget that in war it has none of these advantages, because it must of necessity be abandoned. What would be said if a rifle, in the use of which the troops have been carefully trained in time of peace, on the morning of battle were thrown aside as too complicated for the purposes of war, and another, and necessarily a weapon strange to them, were put into their hands? What is the object for which armies are maintained? Is it not for war? Then all training in time of peace should tend towards this one object. That system which it is intended to follow when war occurs should be the system practised and perfected in times of peace. Netley Hospital is on the general system, and it has been the base hospital for the Southern Army Corps; and with what result? that without any strain or confusion or change, it has been able to receive its complement of sick at a moment's notice. It has been laid down that accommodation be provided in the ultimate and intermediate hospitals for 10 per cent. of the operating force.

The field-hospitals I described as skeletons of what would be required in actual war. A committee has been appointed by the Secretary of

State to fix the establishment of a field-hospital. This committee has not yet presented its report. It has, however, been laid down that each field-hospital shall be divisible into two parts, and shall afford accommodation for two hundred patients, and that there shall be three such hospitals with each division of 10,000 men. Thus in the primary arrangements provision will be made for 6 per cent. As to the government of these hospitals, no definite plan seems yet decided on. In the skeleton hospitals of the manœuvres, the senior surgeon of each is supposed to be in charge; but he in reality has no military control over the different elements composing the staff of the hospital. The wardmasters and orderlies of the army hospital corps, the stewards and cooks of the control department, and the train drivers of the army service corps, all exist together as a kind of "happy family". No one party has any direct power over the other; each looks to a commanding officer outside the hospital; and when the "cat is away the mice can play". The plan of discipline which seems to be in contemplation is this: an officer of the army hospital corps, who is to be styled superintendent of orderlies, will be placed in each hospital at the disposal and subordinate to the senior surgeon. This superintendent will have the authority of an executive officer for the discipline of all the attendants connected with the hospital. In addition to this duty, he will have charge of all the stores as the quartermaster of a regiment, and will perform or superintend all non-professional duties. The offices which these hospitals have to fulfil are of a temporary nature: they receive the sick and wounded on the field in the first instance; but as soon as circumstances permit they are evacuated into the intermediate and ultimate hospitals, to again advance with the operating force. Where such evacuation cannot be effected, one wing of each can be detached to the front, leaving the other standing, or some entire hospitals which are empty can be advanced while the others are left standing, to come up when the sick can be disposed of.

The bearer detachment, of which I could not find any representative in the field, has a crude formation on paper. Sir Garnet Woolseley, in his *Soldier's Pocket-Book*, authoritatively gives the *personnel* at seven medical officers, nine non-commissioned officers, and one hundred and fifty men of the army hospital corps for each division of an army corps. This leaves much to be done in equipment, organisation, and discipline—a work which should not be left to the last hour. The experience gained by Prussia has shown that the number of bearers here given would often be insufficient, consequently auxiliary bearers have been trained in that country to meet such a contingency. These bearers have been drawn from the fighting ranks—two from each company; they are only employed in the removal of wounded from the battle-field, and, when the regular bearers are unequal to the task, returning to the fighting ranks when no longer required. No such provision, however, has been made in our service.

Let us see wherein does the system which I have endeavoured to describe differ from that which it has replaced. In the ultimate and intermediate hospitals matters remain much as they were; the changes have been in the primary arrangements. In the Medical Regulations of 1858, it is laid down that each battalion of 850 strong shall have accommodation for twenty sick, and authorising the principal medical officer to increase this, by brigade and divisional hospitals, to 5 per cent. of the operating force. Beyond this no arrangement is made for succouring or removing the wounded from the battle-field to the hospitals. There is a general belief that the bandsmen of regiments are detailed by regulation for the performance of this duty: such, however, is a mistake; no such order exists. For many reasons such a proceeding would be objectionable: first, the bandsmen are untrained, nor are they ever likely to be spared from their other duties to receive the necessary instruction; secondly, they are, as a class, selected for their musical qualities, physically unfit for such work; thirdly, the supply being limited, when those who take the field are expended, some other source of supply would have to be sought.

In conclusion, I think I may surmise that it will be apparent to the most casual reader that, though some advance has been made, yet much remains to be done to bring the medical arrangements of our army up to the standard of that country out of whose book every other branch of our service is taking so many lessons. Is the medical branch of the service less active than the others? Hear what one who has devoted much time to the study of the medical arrangements of our own and other armies has to say on the subject. "Great pains are bestowed in devising the best organisation for the fighting branches of the army, and great expense gone to in trying as far as practicable in time of peace how the organisation decided upon answers the purpose intended. The equipment of all the different arms of the service is closely scrutinised, and maintained in the most efficient state—ready, indeed, at any moment, to be applied to the purposes of actual warfare. Such supervision, such examination, such trial of the field medical arrangements, are not practised; yet in time of war a great deal will depend upon the field medical arrangements and equipment. When men are wounded and disabled by sickness in considerable numbers, the presence of a few old ambulance-wagons, and the removal of the small proportion of men who fall sick, or who have been unguardedly sent with ailments which prevent them doing their duties, to the regular fixed hospital established at Aldershot and Netley, will not suffice; yet this is all that has been done in the autumn manœuvres of this country, where real war and the arrangements for real war are supposed to be represented."

REPORT ON THE ACTION OF VARIOUS KINDS OF FILTERS ON DRINKING WATER.

Atkins's Moulded Carbon-Filter.

We have already shown that filtration through a silicated carbon-filter (so long as it is in good working order) is effective in cleansing drinking water from dissolved organic nitrogenous matters, which it breaks up much after the manner of alkaline permanganate. We do not by any means imagine that this property is confined to the silicated carbon-filter, and are gradually extending our experiments to other descriptions of filters. We now report on the performance of Atkins's Moulded Carbon-Filter.

The plan of our experiments is very simple. We first examine a sample of water by the ammonia-process, and then pass it through the filter, and examine the filtrate (*i. e.*, the water after its passage through the filter). The difference in composition between the two waters exhibits the effect of the filter. The investigation was carried out by Mr. Wanklyn.

Experiment I (July 24th, 1872).—A sample of water, yielding 0.04 parts of free ammonia per million, and 0.06 parts of albuminoid ammonia per million, was filtrated. After filtration, it gave 0.06 parts of free ammonia per million, and 0.02 parts of albuminoid ammonia per million.

Experiment II (August 1st, 1872).—Water yielding, before filtration, 0.02 free ammonia, 0.09 albuminoid ammonia, per million, gave, after filtration, 0.06 free ammonia, 0.04 albuminoid ammonia.

These experiments show much the same kind of action as takes place with the filters previously reported on. The organic nitrogenous matter is decomposed, and yields free ammonia as a product of its decomposition. We do not, however, think that the performance of the moulded carbon is so good as that of some of the other kinds of filters.

COLUMN FOR THE CURIOUS.

Buxton Waters.—In the Journal of August 31st, Mr. Casson has given an extract relating to the properties of the Buxton Waters. A century beyond his date, Buxton Well was famed for a power which seems, in these latter days, to be transferred to some of the continental resorts; and not unhappily I think. In Fuller's *Worthies* is the following extract, referring to the wonders of Derbyshire. "And *Buxton-Well*, dedicated to *St. Anne*, sending forth both *cold* and *warm* water, by which Queen *Mary*, Queen of *Scots*, received much refreshing, of which Mr. Hobbs—

> "Huc mater fieri cupiens accedit inanis,
> Plenaque discedit puto nec veniente Marito."
>
> "Where wives may breed, though desperately barren,
> *Sans* Husbands' help, as conies in a warren."

Amos Beardsley, Grange-over-Sands.

Action of Chloral.—In the *New York Medical Journal* for June 1872, Dr. Robert Amory, of Boston, concludes, from experiments which he has made on animals, that it is not possible to obtain decomposition of chloral into chloroform when the former is mixed with warm fresh blood, and that it is hardly probable that this decomposition occurs in the organism. The decomposition does not occur if the solution of chloral be separated from the blood by a membranous substance such as sheep's bladder. If, on the contrary, the blood be made strongly alkaline by the addition of caustic soda, the decomposition suggested by Liebreich, Richardson, and others, does take place. He thinks it hardly possible that a dose of chloral received into the stomach can pass through the tissues and be absorbed by the blood, any more readily than could have occurred in an experiment where a sheep's bladder only lay between the chloral solution and the liquid blood.

GUIDE TO HOSPITALS AND MEDICAL SCHOOLS IN THE PROVINCES: 1872-3.

For further particulars regarding each Hospital and Medical School, see pp. 309-11.

Lectures, etc.	Birmingham Queen's College.	Bristol Medical School.	Leeds School of Medicine.	Liverpool Royal Infirmary School of Medicine.	Manchester Royal School of Medicine.	Sheffield Medical School.	University of Durham College of Medicine, Newcastle.
WINTER SESSION.							
Anatomy and Physiology	Dr. Norris and Mr. T. H. Bartleet..M. Th., 4	Mr. Atchley and Mr. Spencer M. W. F. S., 9.15	Mr. Wright & Mr. Walker M. W. 10; Tu. F., 12	Dr. Caton....Tu. Th. S., 9.15	Mr. W. Smith..M. Tu. W. Th., 12	Mr. T. Leeds and Mr. S. Morton..M. W. F., 6	Dr. G. H. Hume..Three days weekly, 3 P.M.
Anatomy, Descriptive and Surgical	Mr. C. J. Bracey and Mr. Thomas..M. Tu. Th. F., 1	Mr. Board and Mr. Dobsou..M. W. F. S., 10.15	Mr. Seaton, Dr. R. T. Land, and Mr. J. A. Nunneley..Tu. Th. F. S., 10	Mr. W. M. Banks....M. W. Th. F. 3	Mr. Lund and Mr. Bradley..Tu. W. Th. F., 8.45 A.M.	Mr. Skinner and Mr. A. Jackson..Daily, 5	Dr. Nesham, Mr. L. Armstrong, and Mr. J. Russell..Four days weekly, 8.45 A.M.
Demonstrations and Dissections	Dr. Jolly and Mr. Edginton..daily	Mr. Chute, Mr. Norton, and Mr. Lawrence	Mr. Oglesby and Mr. Robinson..Daily	Mr. Coughtrey, M.B... Daily, 11 to 1, and 2 to 4	Mr. S. M. Bradley.... Daily	Mr. Clarke, Mr. Skinner, and Mr. T. H. Morton	Dr. Nesham and Mr. L. Armstrong .... Daily, from 10 to 4
Chemistry	Dr. Hill..Tu. Th. F., 12	Mr. Coomber..M. W. F., 8.15	Mr. J. C. Wilson....M. Tu. Th. F., 11	Dr. J. C. Brown....M. Tu. Th. F., 10.15	Mr. D. Stone....W. Th. F., 11	Mr. Allen..M. W. F., 11.30	Mr. Freire-Marreco.... Four days a week, 4
Medicine	Dr. Russell and Dr. Foster..Tu. W. F., 3	Dr. Martyn and Dr. E. L. Fox..M. W. F., 8.15	Dr. Heaton and Dr. Allbutt..M. Tu. W. Th., 5	Dr. Waters..M. W. F., 9.15; Tu. Th.,	Dr. Roberts and Dr. Morgan..M. Tu. W. Th., 1	Dr. Frank-Smith....Tu. Th. S., 6	Dr. Charlton and Dr. Philipson..Daily, 5
Surgery	Mr. Pemberton and Mr. F. Jordan....Tu. W. F., 4	Mr. Coe and Mr. Tibbitts ..Tu. Th. S., 8.15 A.M.	Mr. Wheelhouse, Mr. Teale, and Mr. Jessop ..M. W. S., 9	Mr. R. Harrison....M. W. F., 4	Mr. G. Southam....M. Tu. Th., 2	Mr. W. F. Favell and Mr. Parker....M. W. F., 8. P.M.	Dr. Heath, M. W. F., 6
Hospital Practice	General Hospital (*b*) Queen's Hospital (*c*) Daily, 9 to 12	Royal Infirmary (*e*) General Hospital (*f*) Daily, 1 to 3	Leeds General Infirmary (*h*)	Liverpool Royal Infirmary (*k*)	Manchester Royal Infirmary (*m*)..... Daily, 10 to 1	Sheffield General Infirmary (*o*)	Newcastle Infirmary (*q*)
Clinical Medicine	Physicians of Hospitals (*b, c*)	Royal Infirmary: Tu. S., 11.30 General Hospital: Three days weekly, 2.30	Physicians of Infirmary (*g*)....F., 5. Clinical Class: Dr. Allbutt.. Tu. S., 11.30 to 1	Physicians Royal Infirmary (*k*)..Weekly	Physicians Royal Infirmary (*m*)	Physicians of Infirmary (*o*)..Tu., 8 P.M.	Physicians of Infirmary (*q*)
Clinical Surgery	Surgeons of Hospitals (*b, c*)	Royal Infirmary: F., 12 General Hospital: W., 3	Surgeons of Infirmary (*g*)..Tu., 6	Surgeons Royal Infirmary (*k*)..Weekly	Surgeons Royal Infirmary (*m*)	Surgeons of Infirmary (*o*)..Th., 8 P.M.	Surgeons of Infirmary (*q*)
SUMMER SESSION.							
Materia Medica	Mr. Wilders and Dr. Mackey..M. W. F., 4	Dr. Burder..M. Tu. Th. F., 9	Dr. Eddison..M. W. Th. F..11	Dr. J. B. Nevins..Tu. Th. S., 8.30 A.M.	Mr. Somers..Tu. W., 12; F., 12.30	Dr. Young..M. W. F., 8 A.M.	Dr. Humble and Dr. Arnison..Daily, 4.45
Midwifery, etc.	Mr. Clay and Mr. Bassett..M. Tu. Th. F., 1	Dr. Swayne..Daily, exc. S., 8 A.M.	Mr. W. Hall..M. Tu. Th. F., 4	Dr. Steele....M. W. F., 8.30 A.M.	Dr. Thorburn..Tu. W. Th. F., 9	Dr. Keeling and Dr. Hime..M. W. F., 8 P.M.	Dr. Gibson..Daily, 8.30 A.M.
Botany	Dr. W. Hinds..M. W. F., 3	Mr. Leipner..Daily, exc. S., 7 A.M.	Mr. E. Atkinson....Tu. F., 12; Th., 10	Mr. W. Carter..Tu. Th. S., 9.30	Mr. Grindon....Tu. W. Th., 10	Mr. Birks..Tu. Th., 8 A.M.	Mr. Thornhill and Mr. H. E. Armstrong..M. W. Th. F., 3.45 ..M. Tu. Th. F., 11
Forensic Medicine	Mr. Swain and Dr. Hill ..Tu. Th. F., 12	Mr. Keall....M. W. Th., 9 A.M.	Mr. Scattergood....M. Tu. W. Th., 5	Dr. E. Whittle & Dr. J. C. Brown..M. W. F., 3	Mr. G. M. Harrison.. M. W., 1; F., 1.30	Mr. Baker and Mr. Harrison..Tu. Th., 4	Mr. Freire-Marreco.... Daily, 10 to 5
Practical Chemistry	Mr. Anderson..Th., 1; F., 2	Mr. Coomber .... Daily, exc. S., 8 A.M.	Mr. J. C. Wilson....M. Tu., 9.30	Dr. J. C. Brown..Tu. W. Th., 10.30	Mr. D. Stone..Tu. Th., 11	Mr. Allen	..
Comparative Anatomy	Dr. Savage..Th., 3	Mr. Atchley..W. Th. S., 10	Mr. Wheelhouse and Dr. Allbutt..M. W., 12	Dr. Caton (twice weekly)	Mr. Bradley	Mr. W. Jacksou..F., 5	..
Pathology	Mr. Rickards (at Gen. Hospital)	Dr. Martyn and Dr. E. L. Fox (Sum.) W. F., 7	Dr. Eddison	Dr. Davidson (Win.)	Dr. Simpson (Win.)..F., 12; (Sum.)..M. Th., 12	Mr. Hallam..(Sum.)	Dr. Gibb....W., 6.45 (Sum.)
Operative Surgery	..	Mr. Coe and Mr. Tibbits (see above)	Mr. Wheelhouse, Mr. Teale, and Mr. Jessop	Mr. Harrison (see above)	..	Mr. W. F. Favell & Mr. Parker..Tu. Th., 11	Dr. Heath (Sum.
Ophthalmic Surgery and the Ophthalmoscope	Mr. Solomon (Sum.).... Tu., 4	..	Mr. Nunneley, Mr. Seaton, and Dr. Land	Mr. T. S. Walker..Tu. F., 2	Mr. Hunt (Win.)..M., 10 A.M.	..	..
Vaccination	..	..	Mr. Holmes	Dr. Steele	..	..	Dr. Gilchrist
Miscellaneous	*Diseases of Women, etc.:* Mr. Berry and Dr. R. C. Jordan (Sum.).. M., 12; Tu., 3 *Dental Surgery:* (Sum.) ..Mr. Howkins		*Skin Diseases:* Dr. Allbutt..Th., 11.30 *Aural Diseases:* Mr. Nunneley..F., 12 *Mental Diseases:* Dr. J. C. Browne.... (Sum.) F., 3; S. 4	*Diseases of Children:* Dr. Gee..M. F., 10 *Dental Surgery:* Mr. Snape (Sum.)..Tu., 9 *Dental Mechanics:* Mr. Stewart (Sum.) F., 9		*Practical Physiology:* Dr. Thomas..Tu. Th. S., 4 *Dental Mechanics:* Mr. G. Mosely..S., 1 *Dental Surgery:* Mr. Merryweather (Sum.) ..Th., 4	*Psychological Medicine:* Mr. T. O. Wood *Practical Physiology:* Mr. J. Reoch

(*b*) *Physicians*, Dr. Bell Fletcher, Dr. Russell, Dr. Wade, Dr. Foster. *Surgeons*, Mr. A. Baker, Mr. O. Pemberton, Mr. T. H. Bartleet, Mr. Goodall, Mr. R. Jolly. *Operations*, W., 12.

(*c*) *Physicians*, Dr. Fleming, Dr. Johnston, Dr. Heslop, Dr. Sawyer. *Surgeons*, Mr. West, Mr. Gamgee, Mr. F. Jordan, Mr. J. St. S. Wilders. *Obstetric Surgeon*, Mr. J. Clay. *Dental Surgeon*, Mr. S. A. Parker. *Operations*, S., 11.

(*e*) *Physicians*, Dr. Brittan, Dr. Fairbrother, Dr. E. L. Fox, Dr. Beddoe. *Surgeons*, Mr. C. Leonard, Mr. T. E. Clark, Mr. Tibbits, Mr. Steele, Mr. Board. *Assistant-Physician*, Dr. W. H. Spencer. *Assistant-Surgeon*, Mr. C. H. Dowson. *Operations*, Tu. F., 1.30.

(*f*) *Physicians*, Dr. Martyn, Dr. Burder, Dr. Fripp. *Surgeons*, Mr. Coe, Mr. F. P. Lansdown, Mr. Atchley, Mr. Dobson. *Physician-Accoucheur*, Dr. Swayne. *Operations*, Th., 1.30. *Dental Surgeon*, Mr. Parson.

(*h*) *Physicians*, Dr. Heaton, Dr. Clifford Allbutt, Dr. Eddison. *Surgeons*, Mr. Wheelhouse, Mr. T. P. Teale, Mr. T. R. Jessop, Mr. J. Seaton. *Surgeons to the Eye and Ear Department*, Mr. J. A. Nunneley, Dr. R. T. Land.

(*k*) *Physicians*, Dr. Turnbull, M. Th., 12.15; Dr. Waters, W. S., 12.15; Dr. Glynn, Tu. F., 12. *Surgeons*, Mr. Stubbs, Tu., 12.30, F., 1; Mr. Bickersteth, M. Tu. Th., 1; Mr. Hakes, Tu. W. S., 1. *Assistant-Surgeon*, Mr. R. Harrison. *Dental Surgeon*, Mr. Snape. *Pathologist*, Mr. Banks. *Operations*, Tu., 1.

(*m*) *Physicians*, Dr. Eason Wilkinson, Dr. Watts, Dr. Browne, Dr. W. Roberts, Dr. H. Simpson, Dr. J. E. Morgan. *Surgeons*, Mr. W. Smith, Mr. Southam, Mr. F. A. Heath, Mr. Lund, Mr. Bowring.

(*o*) *Physicians*, Dr. de Bartolomé, Dr. Law, Dr. Frank-Smith. *Surgeons*, Mr. Barber, Mr. W. F. Favell, Mr. Parker.

(*q*) *Physicians*, Dr. Charlton, Dr. Embleton, Dr. Philipson. *Surgeons*, Dr. Heath, Mr. Russell, Dr. Arnison, Mr. L. Armstrong. *Assistant-Surgeons*, Mr. A. Bell, Dr. Hume, Mr. J. Hawthorn, Mr. C. Jeaffreson.

TABLE OF THE MEDICAL OFFICERS, PROFESSORS, AND LECTURERS IN MEDICAL SCHOOLS OF SCOTLAND.

For further particulars regarding each Hospital and Medical School, see pp. 311-12. *The letters* (*W.*) *and* (*S.*) *in this Table denote respectively Winter and Summer Courses.*

Lectures, etc.	Aberdeen University.	Edinburgh University. (*d.*)	School of Medicine, Edinburgh. (*g.*)	Glasgow University. (*l.*)	Glasgow, Anderson's University. (*q.*)
Anatomy	Dr. Struthers, 11 (W.)	Mr. Turner, 1 (W.)	Dr. Handyside, 1 (W.)	Dr. Allen Thomson and Demonstrator, jun. 11; sen. 2; (W.); 11 (S.)	Dr. G. Buchanan, 5 (W.)
Anatomical Demonstrations...	Dr. Struthers, and Demonstrator, 9 (W.); 2 (S.)	Mr. Turner, 4	Dr. Handyside, 4 (W.)		Dr. G. Buchanan, 1 (W.) *r*
Dissections	9 to 4 (W. and S.)	Daily (W. and S.)	9 to 4 (W. and S.)	9 to 4 (W.); 7 to 2 (S.)	Daily (W. and S.)
Physiology or Institutes of Medicine	Dr. Ogilvie, 4 (W.)	Dr. Bennett, 11 (W.)	Dr. A. Gamgee, 11 (W.)	Dr. Buchanan, 4 (W.)	Dr. E. Watson, 12 (W.)
Chemistry	Mr. Brazier, 3 (W.)	Dr. Crum Brown, 10 (W.)	Dr. S. Macadam, 10 (W.)	Dr. Anderson, 10 (W.)	Dr. Thorpe, 10 (W.)
Practical Chemistry	Mr. Brazier, 10 A.M. (S.)	Dr. Crum Brown (W. and S.)	Dr. Macadam, 9 to 5 (W. and S.)	Dr. Anderson, 12 (W.); 10 (S.) *m*	Dr. Thorpe, 10 to 4 (S.)
Materia Medica	Dr. Harvey, 3 and 4 (S.)	Sir R. Christison, 9 (W.) *e*	Dr. T. R. Fraser, 9 (S.)	Dr. Cowan, 11 (W.)	Dr. Morton, 3 (W.)
Botany	Dr. Dickie, 9 (S.)	Dr. Balfour (S.)		Dr. Dickson, 12 (S.) *n*	Mr. Hennedy, 10 (S.)
Natural History	Mr. Nicol, 2 (W.); 11 (S.) *a*	Dr. W. Thomson (S.)	...	Dr. Young, *Zoology*, 2 (S.)	
Medicine	Dr. Macrobin, 3 (W.)	Dr. Laycock, 3 (W.)	Dr. R. Haldane and Dr. C. Muirhead, 3 (W.)	Dr. Gairdner, 12 (W.) *o*	Dr. McCall Anderson, 5 (W.)
Surgery	Dr. Pirrie, 10 (W.)	Mr. Spence, 10 (W.) Operative in Summer	Dr. P. H. Watson, Dr. J. Bell, Dr. Chiene, and Dr. John Duncan, 10 (W.) *h*	Dr. G. H. B. Macleod, 1 (W.)	Dr. Dunlop, 11 (W.)
Midwifery.....	Dr. Inglis, 2 (W.)	Dr. A. Simpson, 11 (W.)	Dr. Keiller, 10 (S.); Dr. M. Duncan, 11 (W.); Dr. A. Macdonald, 10 (S.)	Dr. Leishman, 3 (W.)	Dr. J. G. Wilson (S.)
Forensic Medicine	Dr. Ogston, 9 (W.) *b*	Dr. D. Maclagan (S.)	Dr. Littlejohn, 2 (W.); 11 (S.)	Dr. P. A. Simpson, 4 (W.)	Vacant.
Practical Physiology & Histology.....	...	Dr. Bennett (W. and S.)	Dr. A. Gamgee (S.)	Dr. J. Coats, 3 to 5 (S.)	...
Pathology.....	Dr. Rodger	Dr. Sanders, 2 (W.); and in Summer	Dr. John Wyllie, 4 (W.); 9 (S.)	Dr. J. Coats, 2 (W.)	...
Hospital Practice	Royal Infirmary, *c.* Daily, 12	Royal Infirmary, *i*	Royal Infirmary, *i*	Royal Infirmary, *r* 9 A.M.	Royal Infirmary, 9 A.M.
Clinical Medicine	Dr. Smith, Dr. Beveridge, and Dr. A. Fraser	Drs. Bennett, Laycock, Maclagan, & Sanders, M., Tu., Th., F., 12 to 2	Drs. R. Haldane, G. W. Balfour, and Grainger Stewart, 12 (W.); Tu. F., 12 (S.) *k*	Physicians of Royal Infirmary, M. Th.	Physicians of Royal Infirmary, twice weekly, 9 (W. and S.)
Clinical Surgery	Dr. Pirrie, Dr. Kerr, and Dr. Fiddes	Mr. Lister, M. Th., 12 (W.); also in Sum.	Dr. P. H. Watson and Mr. Annandale, 12 (W.); M. Th., 12 (S.)	Surgeons of Infirmary, Tu. F.	Surgeons of Infirmary, twice weekly, 9 (W. and S.)

a. Zoology with Comparative Anatomy.

b. With Medical Logic.

c. Aberdeen Royal Infirmary: *Physicians*—Dr. J. W. F. Smith, Dr. Beveridge, Dr. A. Fraser; *Surgeons*—Dr. Pirrie, Dr. D. Kerr, Dr. Fiddes; *Junior Surgeon*—Dr. A. Ogston; *Ophthalmic Surgeon*—Dr. Davidson; *Dental Surgeon*—Mr. Williamson.

d. Medical Psychology and Mental Diseases, with Practical Instruction at an Asylum, Dr. Laycock (S.)

e. With Dietetics.

g. Vaccination, six weeks' courses in Winter and Summer, Dr. Husband. Diseases of Children, Dr. Stephenson (S.) Diseases of the Eye, Dr. A. Robertson (S.)

h. Operative Surgery and Surgical Appliances, Dr. J. Bell (S.): Operative Surgery and Surgical Anatomy, Dr. Chiene (S.): Practical Surgery, Dr. J. Duncan (S.)

i. Edinburgh Royal Infirmary: *Physicians*—Dr. Bennett, Dr. Laycock, Dr. Maclagan, Dr. J. M. Duncan, Dr. Sanders, Dr. R. Haldane, Dr. G. W. Balfour, and Dr. T. Grainger Stewart; *Assistant-Physicians*—Dr. C. Muirhead and Dr. T. R. Fraser; *Consulting Surgeon*—Dr. J. Dunsmure; *Surgeons*—Mr. J. Spence Dr. J. D. Gillespie, Dr. P. H. Watson, and Mr. Annandale; *Ophthalmic Surgeons*—Mr. Walker and Dr. D. A. Robertson; *Assistant-Surgeons*—Dr. J. Bell and Dr. John Duncan; *Dental Surgeon*—Dr. J. Smith; *Pathologist*—Dr. J. B. Pettigrew.

k. Dr. M. Duncan gives Clinical Lectures on Diseases of Women.

l. Operative Surgery, Dr. Macleod, 1 (S.); Lectures on Eye, Dr. T. Reid, Tu., Th., 1 (S.)

m. Chemical Laboratory from 10 A.M. to 4 P.M. (W. and S.)

n Demonstrations in the Botanical Garden, 6.30 P.M.

o. Dr. Gairdner lectures in the Summer at 12 noon on Tuesdays, on the Causes and Prevention of Diseases; and on Fridays on Urinary Diseases.

p. Glasgow Royal Infirmary: *Physicians*—Dr. Gairdner, Dr. Steven, Dr. Perry, Dr. McCall Anderson, and Dr. Scott Orr; *Surgeons*—Dr. Macleod, Dr. G. Buchanan, Dr. Morton, Dr. E. Watson, and Dr. Dewar.

q. Ophthalmic Medicine and Surgery, Dr. J. R. Wolfe.

r. Surgical Anatomy, Dr. Buchanan, 12 (S.) Osteology for Beginners, Dr. Buchanan (S.)

ASSOCIATION INTELLIGENCE.

NORTHERN BRANCH.

THE autumn meeting of the above Branch will be held at Durham, on Thursday, September 26th, at 3 P.M.; CHARLES TROTTER, Esq., F.R.C.S., President, in the Chair.

Members who are desirous of reading papers, are requested to communicate their intention to the Secretary, without delay.

G. H. PHILIPSON, M.D., *Honorary Secretary.*

Newcastle-uponTyne, August 23rd, 1872.

SHROPSHIRE ETHICAL BRANCH.

THE annual general meeting of the above Branch will be held at the Lion Hotel, Shrewsbury, on Monday, October 7th, at 1 P.M.; J. W. PROCTER, Esq., in the Chair.

Dinner will be served punctually at 3.30 P.M., for the convenience of the country members.

Members have the privilege of introducing friends, on transmitting their names to the President.

Chamber concert music by a select band of musicians, under the leadership of Mr. T. Hulley, will be provided as usual.

Papers have been promised by the President, J. R. Humphreys, Esq., A. Mathias, Esq., Dr. Styrap, and R. Wilding, Esq.

Gentlemen intending to read cases, etc., or to be present at the dinner, will oblige by notifying their intention, at their earliest convenience, to JUKES STYRAP, *Honorary Secretary.*

Shrewsbury, September 16th, 1872.

SOUTH MIDLAND BRANCH.

THE sixteenth autumnal meeting of this Branch will be held at the Cottage Hospital, Stony Stratford, Bucks, at 2.30 P.M., on Tuesday, October 15th. Luncheon at 1 P.M. previously, kindly provided by Dr. Mackay at his house. A. D. Mackay, M.B., President.

Gentlemen who intend to read papers are requested to forward their titles forthwith to Dr. Bryan, Northampton.

J. M. BRYAN, M.D.
WM. MOXON. } *Honorary Secretaries.*

Northampton, September 11th, 1872.

CORRESPONDENCE.

PROFESSOR HUMPHRY'S LECTURES ON HUMAN MYOLOGY.

SIR,—At the time I wrote my letter, 29th July, I had not by me, a copy of the "Proceedings of the Royal Society," and writing from memory, I made a misstatement in my first criticism on Professor Humphry's lecture. I find that I *did* make observations on the flexor tendons of the foot of *Man*, although I made none on the flexor tendons of the hand of Man. I subjoin a summary of my measurements. For the foot I obtained the following results.

TABLE I.—*Friction of Long Flexor Tendons of Toes.* (Cross section of toe tendons greater than cross section of muscle tendons.)

	Amount of friction. per cent.		Amount of friction. per cent.
1. Pyrenean Mastiff	65.4	17. Australian Dingo	33.8
2. African Lion	59.0	18. Japanese Bear	31.7
3. Common Fox	57.6	19. Virginian Bear	25.9
4. African Jabiru	56.8	20. Common Llama	25.9
5. American Rhea	52.4	21. Hedgehog	25.0
6. Indian Jackall	49.2	22. African Ostrich	24.6
7. American Jaguar	49.2	23. Common Otter	19.8
8. New Zealand Weka Rail	47.5	24. Man (mean of 5)	16.2
9. Silver Pheasant	47.4	25. Spider-Monkey	12.3
10. Bengal Tiger	46.0	26. Goat	9.5
11. Indian Leopard	45.5	27. One-horned Rhinoceros	9.0
12. Six-banded Armadillo	44.4	28. Negro-Monkey	8.0
13. Three-toed Sloth	42.5	29. Brahmin Cow	6.8
14. Black Swan	36.0	30. Nemestrine Macaque	2.0
15. Common Hare	36.0	31. Boomer Kangaroo	0.0
16. European Wolf	34.0		

From this it appears that the cross section of the flexor tendons in the toes of the mean of five human subjects is 16.2 per cent. greater than the cross sections of the flexor tendons above the heel. The following animals were exceptions, having the cross section of the tendons above the ankle, greater than the cross section of the tendons in the toes.

	per cent.
1. Alligator	11.5
2. Common Porcupine	20.0
3. Phalanger	29.2

For the *hand*, I found the following results:

TABLE II. *Friction of Deep Flexor Tendons of Hand.* (Cross section of muscle tendons greater than cross section of finger tendons.)

	Amount of friction. per cent.		Amount of friction. per cent.
1. Common Porcupine	71.0	8. Negro-Monkey	27.4
2. Sooty Mangaby	49.2	9. Spider-Monkey	26.5
3. Nemestrine Macaque	40.7	10. Bengal Tiger	22.7
4. Capuchin Monkey	35.3	11. Common Fox	20.7
5. Virginian Bear	35.0	12. Pyrenean Mastiff	7.0
6. European Wolf	31.4	13. Goat	0.0
7. Japanese Bear	30.6		

I do not think it necessary to add that my observations were "very carefully" made, but I can assure Professor Humphry that they were made with every precaution against error which a well-appointed laboratory could furnish me with; and that all the dissections and weighings were made with my own hands.

Professor Humphry did not measure the cross sections of the flexor tendons in the toes, in his single observation, and, until he does so, is not entitled to call in question the accuracy of my observations.

Until the foregoing observations are confronted and refuted by corresponding observations, I am entitled to assert that,

1. *In the foot of a large number (probably a majority) of animals the cross section of the flexor tendons above the ankle is less than the cross section of the same tendons in the toes.*

2. *In the hand of a large number of animals the cross section of the flexor tendons above the wrist is greater than the cross section of the same tendons in the fingers.*

The facts above stated are quite independent of the theory by which I have explained them, depending on the action of friction, and it would be a waste of time to discuss the theory if there be any doubt as to the facts.

My observations on the comparative anatomy of the flexor tendons of the hand and foot will shortly appear in full, in a work on Animal Mechanics, which is in the press. In it, also, I have given a proof of the theory by means of which I explain the facts.—I am, etc.,

SAMUEL HAUGHTON.

Trinity College, Dublin, September 2nd, 1872.

P.S.—I have forwarded to Professor Humphry the proof sheets of my book referring to the flexor tendons.

INTRAOCULAR MYOTOMY IN MYOPIA.

SIR,—Will you oblige me by inserting in the JOURNAL that, although Dr. Donders "was not satisfied that my cases proved the refraction to have been altered," he also remarked that the operation in some way "improved the vision of myopic eyes." He did not dispute my facts, but the *explanation* which I gave of the results attained.—I am, etc.,

J. VOSE SOLOMON.

Birmingham, September 2nd, 1872.

A CHARITABLE PROPOSAL.

SIR,—Allow me space in your JOURNAL to enlist the serious attention of the members of the medical profession to the fact that we have no benevolent establishment for the education of the orphan daughters of duly qualified medical men. Being now on a visit to this charming and healthy town, I find that in addition to its thriving and magnificent colleges for both sexes, and its numerous other schools, a new building is being erected for the reception of the pupils and staff of Cheltenham Ladies' College; and that the present College known as Cambray House is now for sale; also that magnificent structure, with its extensive and handsome dome and capacious apartments known as the Montpellier Spa, is to be purchased for a very moderate sum of money. In the hope that this may meet the eye and touch the heart of some noble philanthropist, and that he or she may be induced to follow the example of the late excellent founder of the Royal Medical Benevolent College for the sons of medical men, I write this appeal. I had also hoped that a monument for such a purpose would have been erected to commemorate the recovery to health and usefulness of His Royal High-

ness the noble Prince of Wales; and in compliment to the medical profession who, under Providence, recovered the stranded ship—the Prince of Wales. The Montpellier Spa would form an elegant and commodious national monument, worthy of the name of the Princess of Wales College, for the bereaved and the needy daughters of professional men generally, including those of the army and navy. The orphans of the medical profession to be supported exclusively by this charity to the number of fifty; and about 150 or 200 others could be received at a moderate cost, as in that now thriving College for the sons of our profession at Epsom. The pupils of the proposed college would have to be boarded at houses provided for that purpose; many such are obtainable here in every direction, and at very low rents. If such a college could be conducted on the same principles as that for the daughters of clergymen, or that on Epsom Downs for our sons, it would do honour to our profession by educating our daughters, and giving them the same chances in the battle of life as their more fortunate brothers.

There is also another plan of accomplishing the education of the orphan daughters of medical men, by collecting a fund, which may be designated the Royal Medical Benevolent Fund (in connection with the existing fund of the British Medical Association?), for the education of the orphan daughters of medical men, or the daughters of those incapacitated from age or infirmity. With such a fund we could scatter our daughters amongst the well established schools throughout this country, such as those excellent establishments known as the Queen's College in Harley Street, London, the Cheltenham Ladies' College, and other similar schools.

Either of the above systems would, in my opinion, and in the opinion of others, be better than congregating boys or girls together, being the offspring of one profession only. I have herein suggested two plans for a very much required charity, for the consideration of the members of our noble profession, and for the support of a loyal and generous public, largely indebted to our profession for their gratuitous services at home and abroad, at our hospitals, infirmaries, and dispensaries, etc. May a grateful country respond liberally to this appeal, is the urgent prayer, Mr. Editor, of yours, etc.,

WM. DALTON, M.R.C.P. & F.R.C.S.Eng.

Cheltenham, September 14th, 1872.

THE GEOGRAPHY OF PULMONARY CONSUMPTION.

SIR,—After reading your review of Dr. Charlton's interesting paper on the above subject last year, I remarked, in a note to the BRITISH MEDICAL JOURNAL, that although physicians could not send all their patients who showed a tendency to consumption to the Steppes of Russia or the high altitudes where consumption is unknown, they might still be inclined to give a trial to those districts in our own isles where it was shown this dreaded disease was least frequent. Looking round for authorities on this point, I found the published conclusions of Dr. E. Crisp and Mr. Haviland, who have given us much information on on this subject, did not exactly correspond. Dr. Crisp, in a paper published in the *Transactions* of St. Andrew's Graduates' Association, 1868, makes an analysis of the Registrar-General's reports for the ten years 1851 to 1861. By dividing the amount of population by the number of deaths from consumption in that period, he gets results of much interest. The highest numbers, of course, indicate the localities most exempt from the disease, and the lowest where it is most prevalent. Curiously enough, Great Ouseburn (88) and Keighley (25), both in the West Riding of York, come out as examples of places where phthisis is least and most frequent. Circumstances having led me to reside for some weeks in the Great Ouseburn district this year, I determined to prosecute the investigation for the next decade—1861 to 1871—so far as relates to that union. Through the kindness of the Registrar, I was allowed to extract the number of deaths from consumption happening in the district during that period. I found that the total number for the last ten years was 251; and, taking the mean of the census in 1861 and 1871, the average population 11,904. Adopting Dr. Crisp's plan, we get 43 as the proportional exemption from consumption in that period, in place of 88 as in the preceding decade. This shows that in the union of Great Ouseburn at present, consumption is of average frequency. According to the Registrar-General's reports, deaths from phthisis in England and Wales average about 1 in 8 of the total number of deaths from all causes. It is instructive to note the variations that have occurred in the contiguous sub-districts of Boroughbridge, Whixley, and Poppleton, of which the union of Great Ouseburn is composed. Boroughbridge, at the northern extremity, gives the deaths from consumption as 1 in 9.5, Whixley 1 in 7.2, and Poppleton, on the southern boundary, 1 in 9.2, as the average of deaths from consumption during the last ten years. These figures show that in coming t conclusions as to the relative mortality from this disease, in country districts at least, we ought not to base our calculations on a period of ten years only, for the results of the next ten may completely upset our deductions and expectations. Whether more recent figures and further consideration will, in equal degree, modify Dr. Buchanan's conclusions as to the diminution of phthisis by improved drainage, remains to be seen. Maps of the distribution of disease, however, can be of little permanent value if founded on data so inconstant as these averages of phthisis prove to be.—I am, etc.,

LEONARD ARMSTRONG.

Harrogate, September 14th, 1872.

FOREIGN DEGREES IN THE "MEDICAL DIRECTORY".

SIR,—In the autumn of last year, the traffic in foreign degrees had attained proportions which demanded from us a prompt effort for its discouragement. It was obviously our duty not to admit into the *Directory* degrees procured solely by purchase; and we had to discover what means we possessed of distinguishing degrees of that character from those obtained after due examination. Our resources in this respect were found to be inadequate, and we were compelled to have recourse to the regulation adopted by the Medical Council. This regulation falls harshly on those whose foreign degrees have been honourably gained, and, with a view to its modification, we have this year communicated with several foreign Universities; but as we have received responses from a few only, our power of detecting the "bogus" degree still remains imperfect. We are, however, desirous of giving insertion to foreign degrees in medicine and surgery fairly obtained, and they will in future be inserted in the *Directory* under *any one* of the three following conditions.

1. That the degree *is registered* under the Medical Act; or
2. That the possessor has qualified in Great Britain or Ireland, and *is practising abroad;* or
3. That the holder of the degree has also a British qualification, and that *his possession of the foreign diploma and its attainment by examination have been certified* to the editors of the *Medical Directory* by two registered practitioners not themselves possessing foreign degrees.

Forms of certificate for Condition 3 will be supplied on application.

FORM OF CERTIFICATE.

To the Editors of the "Medical Directory".

Gentlemen,—We hereby certify that we have seen the diploma of , obtained by of , at the University of , in the year , and that our knowledge of Dr. induces us to give full credence to his statement that he obtained the diploma after presenting himself at the above-named University, and there passing an examination as stringent as that of British licensing bodies

Signed { Name .....
Address .....
Registered qualifications* .....
.....
Name .....
Address .....
Registered qualifications* .....

Dated the day of , 18 .

We are, etc.,

THE EDITORS OF THE "MEDICAL DIRECTORY".

THE POOR-LAW MEDICAL SERVICE OF GREAT BRITAIN.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A GENERAL meeting of this Association will be held at the Medical Club, 9, Spring Gardens, on Tuesday, October 1st, at half-past seven precisely, for the purpose of considering what will be the best plan to secure, in the next session of Parliament, legislative sanction to those clauses of the Public Health Bill, and notably those relating to the extension of the dispensary system to the rural districts, which, having originally formed a distinctive feature of the Bill, were subsequently abandoned by the Government. The bearing of the Public Health Act on the Poor-law service, and the recent appointment of lay or legal inspectors only to carry out its provisions, will be also dealt with. As

* The qualifications of the signataries, as they appear on the *Medical Register*, must be stated, for the purpose of identification.

many Poor-law medical officers will be attracted to the metropolis by the opening of the winter session, it is to be hoped that they will find time to attend a meeting where so many matters materially affecting their interests will come up for discussion.

OBITUARY.

CHARLES HINGSTON, PLYMOUTH.

CHARLES HINGSTON, M.D., the son of a Plymouth banker, was born in that town in 1805. At seventeen years of age he became a pupil at Guy's and St. Thomas's, from which, at the expiration of twelve months, he removed to Edinburgh. He studied there under Dr. Alison, and completed his medical education by taking his degree in 1827. Soon afterwards, he commenced practice in his native town, and in 1831 was appointed Physician to the Dispensary, at that time the sole medical charity in the town. This appointment he retained for ten years. In 1840, the South Devon and East Cornwall Hospital was built and established, and he, together with the late Dr. Yonge, were elected the first physicians to the institution. On resigning that position in 1866, he was appointed Consulting Physician. In 1865, when his son commenced to practise, he partially retired, entirely withdrawing from his profession in 1868. From that time he became a confirmed invalid, and though his gradually increasing weakness rendered it impossible for him latterly to take much exercise or enjoy the society of his friends, he retained his intellectual faculties and his interest in all matters relating to his profession up to the last. He died on September 5th. He was married twice: first, to the daughter of George Braithwaite, Esq., at Kendal, who died three years after her marriage; and secondly, to the daughter of Sir William Parker, Bart., by whom he had two sons and five daughters, five of whom survive him.

MEDICAL NEWS.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALVERSTOKE UNION—Medical Officer for the Town District: £90 per annum, and extra fees.—Country District and Workhouse: £140 per annum, and extra fees.

BETHLEM HOSPITAL—Two Resident Medical Students.

BOYLE UNION, co. Roscommon—Apothecary to the Workhouse: £40 per ann.

BRENTFORD UNION, Middlesex—Medical Officer for the Twickenham or No. 9 District: £80 per annum, and extra fees.

CARLISLE DISPENSARY—House-Surgeon: £80 per annum, residence, coal, gas, and attendance.

CREDITON UNION, Devon—Medical Officer for the Coleridge District.

CRICK, Northamptonshire—Certifying Factory Surgeon.

DOWNPATRICK UNION, co. Down—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Strangford Dispensary District: £80 per annum, and fees.

EVESHAM UNION, Worcestershire—Medical Officer for the Workhouse: £30 per annum, and midwifery fees.—Medical Officer and Public Vaccinator for District No. 1: £52 per annum, and extra fees.—Medical Officer and Public Vaccinator for District No. 2: £50 per annum, and extra fees.

GLASGOW ROYAL INFIRMARY—Extra Physician to the Dispensary.

GLENTIES UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Dungloe Dispensary District: £100 per annum, and fees.

GREAT NORTHERN HOSPITAL—Junior Resident Medical Officer.

HENLEY UNION—Medical Officer and Public Vaccinator for the Nettlebed District: £80 per annum, and extra fees.

HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square—Consulting-Physician.

LIVERPOOL DISPENSARIES—Assistant Resident House-Surgeon for the East Dispensary: £108 per annum, furnished apartments, coal, gas, and attendance.—Honorary Medical Officer to the North Dispensary.

MIDDLESEX HOSPITAL MEDICAL COLLEGE—Two Entrance Scholarships: £25 and £20 per annum, for two years.

PENZANCE UNION, Cornwall—Medical Officer for District No. 3: £26 per ann.

RUGBY UNION, Warwickshire—Medical Officer and Public Vaccinator for the Crick District: £15 per annum, and extra fees.—Medical Officer and Public Vaccinator for the Kilsby District: £25 per annum, and extra fees.

ST. GEORGE, Hanover Square—Medical Officer of Health: £350 per annum.

SEAMEN'S HOSPITAL (late *Dreadnought*), Greenwich—House-Physician.

SUNDERLAND INFIRMARY—Dispenser.

TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser: £80 per annum, and residence.

TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.

WESTMINSTER HOSPITAL—House-Physician.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

WOODCOCK.—On September 16th, at 414, Stretford Road, Manchester, the wife of Dr. Woodcock of a daughter.

DEATHS.

*ATKIN, William, L.K.Q.C.P.I., at Virginia, co. Cavan, aged 57, on Sept. 5th.

*EVERS, Charles, M.D., late of Grassendale, near Liverpool, at Scarborough, on September 15th.

*TESSIER, Wm. Henry Cecil, M.D., at Biddenden, Kent, aged 38, on Sept. 13th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY.—Quekett Microscopical Club (University College, Gower Street), 8 P.M. Mr. D. E. Goddard, "On Comparative Study"; Mr. John E. Ingpen, F.R.M.S., "Remarks on a Standard Dynamometer for ascertaining the power of Microscopic Objectives."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MIDWIFERY ENGAGEMENTS.

SIR,—In reply to the queries of B. B. B., in the JOURNAL of September 7th, I write to inform you that about a year ago, having been similarly treated by a patient, I sued in the Mayor's Court, Guildhall, and recovered. B. B. B. must not sue, as he contemplates, for advice which has not been given, but for *damages* sustained through *breach of contract*; the damages being the pecuniary loss suffered —*i. e.*, the amount of the fee. Dr. Lavies had two successful cases some years ago. B. B. B. will find Letts's *Medical Diary* useful in his case; there being on page 11 a paragraph relating to midwifery contracts, which probably would be accepted by the judge as evidence of custom, if not of law. I hope your correspondent will be successful, and that he will send you a report of the proceedings.

London, September 9th, 1872. I am, etc. A. KISCH.

A CORRESPONDENT, B. B. B., may be informed, in answer to his queries, that a case was tried in the County Court in this town some years ago which covers two of the questions asked. The facts in that case were not precisely like those stated by B. B. B., but were as follows. A medical man was sent for to attend a first confinement, for which he had been previously engaged. Being of an irritable temper, and finding he was not likely to be wanted for some hours, he scolded the people for sending for him so soon, and returned home, desiring them to send for him when they required his services. Hearing nothing of the case for three or four days, he called, and found that his patient had been confined on the evening of the day he had visited her. Feeling aggrieved, he made a charge in the County Court for his fee. The judge ruled that the charge was for *work* which had not been *performed*; that the *fee* was not recoverable; and that the patient was not obliged to send for a medical man, although he had been previously engaged to attend when wanted. With reference to the third question, the *custom* of the profession would not support a charge for *advice* under such circumstances. Of course, it is very much to be regretted that patients do not act honourably in these matters. I fear, however, that your correspondent's only consolation is, that he must pocket the affront instead of the fee. He may at the same time hold the mirror up to Nature, and see if there is anything in him less attractive than in his neighbours. I am, etc., JOHN BASSETT.

Birmingham, September 9th, 1872.

USE OF ALCOHOL.

SIR,—I have read with much interest Dr. Eastwood's paper on the Use of Alcohol in Health and in Disease, and I entirely agree with him in thinking it very desirable that a Committee of Members of the Association and others be formed, as soon as possible, to examine and report upon this most important question.

Sept. 7th, 1872. I am, etc., THOMAS LANGSTON.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

MR. BURNS GIBSON will find probably all the information he requires concerning Cottage Hospitals in the *Handy Book of Cottage Hospitals*, published by Churchill and Co.

COMMUNICATION OF DIARRHŒA THROUGH MILK.

MR. J. P. BILLING writes:—I had an infant taken very ill four weeks ago with diarrhœa. The stools were normal in colour, and I was unable to account for it; and though it was treated with care, and had the usual remedies administered, it gradually sank ten days after the onset of the attack. Its elder brother, two years old, was now taken ill in the same way, and was gradually sinking, when I applied at the farm where the milk for these children was procured, and found that all the family were suffering from diarrhœa. I stopped the use of the milk: they became better directly, and my little patient is now quite well. The cause of the diarrhœa was that the milk was taken from cows that had all had "foot-and-mouth disease", and had been treated in the usual way with aperients—sulphate of magnesia, etc.

A CURIOUS PRESCRIPTION.

SIR,—The following curious prescription may interest some of your readers. A parish patient, suffering from a scrofulous irritable ulcer of the leg, called on me the other day, and requested me to examine her leg. She stated that she did not want anything to put on it, as what she used seemed to do it more good than anything else she had ever tried. Her valuable preparation consisted of urine, two pints (she sometimes used the urine from several chambers; but, when there was sufficient of her own, she preferred to use only it—she was quite sure hers was better than any other person's); horses' hoofs, two handfuls (obtained from shoeing forge). Boil for three hours; then strain; and, as soon as cold, put the preparation into a large pan with half a pound of brown soap, two large cotton candles (middle eights), and boil until a pipe-bowl (ordinary churchwarden deprived of its stem) will just float. Then, when cool, tie down in jars, and keep in a cool place.

She stated that the preparation made the leg smart a little when first applied; and, although I could see that it was only making an irritable ulcer worse, she would on no account try any other remedy.

I am, etc., CHARLES D. HILL DRURY, M.D.

Pulham St. Mary. Harleston, August 27th, 1872.

THE CONTAGIOUS DISEASES ACTS.

SIR,—It has been so much the practice of the opponents of sanitary legislation for the mitigation of the evils resulting from syphilis, to rely, for the furtherance of their views, on bold assertion unsupported by facts, that the strong language of Mr. Worth's letter, which appeared in the columns of the JOURNAL for August 24th, will cause but little surprise.

If, however, as that gentleman contends, in direct opposition to the evidence taken by the Royal Commission, the Contagious Diseases' Acts "are altogether unnecessary and uncalled for," and "so far from mitigating they aggravate every evil, both physical and moral," we are fairly entitled to ask Mr. Worth to what system he refers when he states that "there are measures entirely unobjectionable and in full accordance with the free spirit of all English institutions," etc., which ought to be adopted in lieu of them? Are they equally efficacious?

September 6th, 1872 I am, etc., HENRY HUGH CHAPMAN, L.R.C.P.

SIR,—In reply to the letter of Mr. Worth, I would observe that the serious charges of Mr. Holland against the opponents of the Contagious Diseases Acts, are only too well founded, and that all who have impartially witnessed the working of the Acts must agree with Mr. Holland's remarks. (BRITISH MEDICAL JOURNAL, July 13th, 1872, page 57.)

The advocates of the Acts do not wish to "experiment on the body politic, and violate the constitution": they desire to extend the proved facts, that removal of causes diminishes disease, and to protect the human constitution. It may here be noticed that a few physiologists perform careful investigations on animals in the direct furtherance of knowledge, by means of which practitioners are enabled to prevent or mitigate suffering.

To examine any public woman against her will with the speculum, is, in my opinion, the absolute duty of the State, for the prevention and cure of enthetic diseases. I would remind Mr. Worth that prostitution is a legal offence, and that the Acts recognise, of sad necessity, the dreadful calling, but certainly do not license it. Mr. Worth says: "Of 100,000 women examined, 86,000 are reported as free from disease." This is another way of admitting that of 100,000 women examined, 14,000 (*i.e.*, 14 per cent.) were diseased, and therefore proper objects for detention and treatment.

Mr. Worth writes: "I and other scientific gentlemen protest against these measures." The opponents of the Acts protest, of course; so do criminals when the police interfere with their crimes in the interests of public safety. One of the "guaranteed rights of British subjects" is, that the State should prevent disease, as far as possible. Is it a fundamental law of this country that diseased persons should be encouraged to act as foci? That the Acts are necessary and called for, is abundantly proved on all sides but the bigoted. Your notice (at page 222) of the Army Medical Report is alone a sufficient proof of this. So far from aggravating, the Acts mitigate many evils, both physical and moral. The value of Mr. Worth's letter would have been more apparent if he had mentioned the "other measures entirely unobjectionable and in full accord with the free spirit of all English institutions", which "would not only suffice but accomplish infinitely more good" than successful and mitigating endeavours at police control.

September 1872. I am, etc,. PROPHYLAXIS.

BRITISH ARMY MEDICAL EXAMINATIONS.—A correspondent gives the following as to the reasons for the delay in forwarding examinations for appointments in the British Medical Service and in the Control Department. It has been decided to make a great change in all army examinations at once, and the steps necessary to bring this about are now being taken. The chief revolution will be, that examinations for the Artillery and the Engineers, as well as for the Control, will henceforth all be conducted at once, and hence a large saving of money and time will take place. Several of the papers handed to the candidates will be the same, and the examinees will have to write at the top of their papers the words "Artillery", "Engineer", or "Control", according to the respective branches in which they wish to serve. The examinations for the British and Indian Medical Services are also to be amalgamated.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

MR. J. HUGHES.—A medical man is bound to supply, gratuitously, information to the Registrar concerning the death of a person whom he may have attended, if applied to within eight days. The use of the form supplied by the Registrar-General is, we believe, not absolutely necessary. The present system of death registration has been repeatedly shown to be a very inadequate means of obtaining a registration of disease. We are not aware that an annotated edition of the Public Health Act has yet been published.

MEDICAL ETIQUETTE IN THE COUNTY OF DURHAM.

SIR,—An accident lately occurred in the practice of my principal, Mr. Broadbent, of South Hetton, in which a person sustained extensive lacerated wounds of the face, with comminution of the nasal bones, fracture of the superior maxilla, and comminuted fracture of the right humerus. Having been sent for, I arrived at the house immediately, and found the man attended by the assistant at South Hetton; and while we attended to the most urgent demands of the case, Mr. Fothergill, of Haswell, who was acting for Mr. Broadbent, then absent from home, arrived, and, immediately after him, an individual who seemed most anxious as to the condition of the patient, as shown by his pushing himself forward to the bedside, and exhibiting such a degree of officiousness as induced Mr. Fothergill to inquire who he was. He explained his anxiety by stating that he was the "family doctor", and was then introduced as "Dr." Parker (of Easington Lane). After a short time, Mr. Fothergill proposed a consultation, and accordingly we withdrew and considered the case, and, in fact, our further mode of procedure. Mr. Fothergill proceeded to put up the fractured humerus with junk splints, which were then the most ready at hand, the arm having been bandaged from the extremity. While he was adjusting the splints, "Dr." Parker insisted that the bandage should be continued beneath them. Mr. Fothergill objected to this, stating, at the same time, that the fracture was being secured only temporarily. Whereupon "Dr." Parker remarked, rather spitefully (for his tone could not possibly be construed otherwise), that Mr. Fothergill "put up his fracture like a bone-setter"; and otherwise expressed himself in a manner calculated to depreciate us all, but especially Mr. Fothergill, in the eyes of a roomful of the patient's friends. I should consider myself far short of my duty did I not publish such conduct, which too truly verified the adage that "doctors differ"; and which plainly showed that "Dr." Parker never learned, or at least has forgotten, that they can differ in a gentlemanly manner. I am, etc., EDWARD E. CAMPBELL, M.B., C.M.

Murton Colliery, Co. Durham, September 5th, 1872.

DEATH-CERTIFICATES: THE CASE OF MR. CROFT.

SIR,—A short notice appears in your JOURNAL of the 17th August, of the committal for trial of a gentleman named Croft, who has practised at Snitterfield (Warwickshire) for twenty years, on a charge of giving a false certificate of death.

The facts of the case, as related in the JOURNAL, appear to me to render the committal so preposterous and absurd, and to point out so strongly the danger of medical men filling up the certificates provided by the Registrar-General, that, for one, I shall certainly decline in future to use them until some satisfactory arrangement is made or explanation given. For a man of twenty years' standing in our profession to be dragged before a bench of magistrates, and sent for trial on such a trumpery charge, ought to open the eyes of the profession to the dangers in which they are environed by the Registration Act. I think the best way would be for all of us to ignore altogether the Registrar's forms, and simply write, on a plain sheet of paper, the name, age, apparent cause of death, and other necessary information; signing this, and addressing it to no one in particular. This, I am advised, would not render the signer liable to any proceedings.

I am, etc., GEO. B. MEAD, M.D., L.R.C.P.Lond.

Mentmore House, Newmarket, August 1872.

*** From the particulars which have transpired, it seems clear that, although Mr. Croft was not free from indiscretion in the matter, he was entirely free from any other than the purest intentions. The prosecution is one of the most vindictive and unjustifiable proceedings ever brought under our notice; and Mr. Croft is entitled to the warmest sympathy. We learn with pleasure that this is already manifested by the profession and public in his neighbourhood. The grand jury will probably ignore the bill against him; and Mr. Croft must not think too much of what is a technical rather than a real trouble.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Sept. 14th; The Manchester Guardian, Sept. 18th; The Tewkesbury Record, Sept. 14th; The Aberdeen Daily Free Press, Sept. 13th; The Cambridge Express, Sept. 14th; The Homeward Mail, Sept. 11th; The Jersey Express, Sept. 12th: The North British Advertiser, Sept. 14th; Saunders's News-Letter and Daily Advertiser, Sept. 17th; The Bath Express, Sept. 14th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Morell Mackenzie, London; Dr. Tilt, London; Dr, W. W. Dunkley, Stoke-on-Trent; Dr. C. Handfield Jones, London; Dr. H. Simpson, Manchester; Our Glasgow Correspondent; Dr. H. Bennet, London; Mr. W. Draper, York; Dr. D. Page, Kirkby Lonsdale; Dr. James Thompson, Leamington; Mr. Wanklyn, London; Dr. Dalton, Cheltenham; Dr. Styrap, Shrewsbury; Dr. Rogers, London; Mr. T. C. White, London; M.D.Edin.; Dr. C. Bell Taylor, Nottingham; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. E. Robinson, Leeds; B. B. B.; Mr. Lawson Tait, Birmingham; Mr. Soutter, London; Dr. S. Woodcock, Manchester; The Editors of the "Medical Directory"; Dr. Bryan, Northampton; etc.

BOOKS, ETC., RECEIVED.

System of Surgery: Pathological, Diagnostic, Therapeutic, and Operative. By Samuel D. Gross, M.D., LL.D., D.C.L. Illustrated by upwards of Fourteen Hundred Engravings. Fifth Edition. In Two Volumes. Philadelphia: 1872.

Aid to the Diagnosis of Diseases of the Kidney. By W. R. Basham, M.D. London: 1872.

AN ADDRESS
ON
PUBLIC HEALTH.

DELIVERED AT

The Annual Meeting of the Social Science Association, in Plymouth, September 1872.

By H. W. ACLAND, M.D., F.R.S.,
President of the Health Department.

AFTER some introductory remarks, the President said: The two Public Health Acts of the last two sessions appear to have wrought a very remarkable change in the social condition of this country, and I think that this strong expression concerning them may be shortly stated. For the first time in the history of our country a first-class central office has been formed for at once the regulation and amendment of our greatly increasing population; and in the last session another step was taken—that of committing to the people themselves the charge of their own health, for so I interpret the wise, or unwise, Act of last session. I have heard in my Section that we must seek the repeal of these laws. My object this morning is to endeavour to give you a brief and rapid sketch of what is fundamentally comprised in the idea of health, as entertained by those who have done their best to entertain and master the idea, and then to consider what are the circumstances of this country in respect of that conception. You will well understand that it is just as impossible to do this completely as to make a complete picture in the course of an afternoon, but still I will give you a sketch.

Health.—First of all, health itself has to be considered in its fundamental conception. That is a simple matter enough. A living being is a particle of matter, composed of but few ingredients out of those which compose our planet, arranged in a certain order, and performing certain functions ill and well; if ill, then in ill-health; if well, then healthy. The public health does not consist, so to say, in the health of the individuals, but in all those circumstances which affect the body politic. I will take some remote instances. A question as to whether a man had been poisoned or not would be a question of public health, though affecting, no doubt, the health of particular individuals, and not the health of the country. The term national health includes a further idea. It includes the idea of all circumstances—not only those that affect a nation as a whole, but the whole of the individuals which compose it. Then we have a comparative national health, that health which affects and is affected by the circumstances of the whole world; the nations comparing among themselves the reasons why one nation is more healthy and one less healthy than another, and presenting to the mind the conception of the fluctuations and circumstances of the whole human race. Now, the object of sanitary legislation in any civilised country is a great idea—an idea which many persons will suppose cannot be wisely handed over to the tender mercies of common councils or guardians. Whether this is generally the case or not I shall show presently. The great circumstances which affect these several ideas are very simple. While we in civilised countries cannot do without clothing, fire, and habitation, the happy savage (and it may be my misfortune to believe there are such beings) requires only air, water, and food. Still less such things as are also required in civilised countries—highways, cleansing, and police. The fundamental ideas of health, of public health, of national health, of comparative national health—these ideas are different. I take the fundamental basis of national health to be a wise education.

Hospitals.—For the next subject I have to deal with I will take only three illustrations, carefully selected I admit. When an expert in sanitary matters mentions the word hospital, there immediately arises in his mind a conception of what is called a hospital unit. This hospital unit, technically called "ward", is that place in which patients live; and, if they have no convalescent home, they live there always: therefore it has to be made as perfect as possible for the purposes of health, because modern physicians and surgeons do not believe they are treating their patients properly, unless when they are ill they put them in as healthy circumstances as they would wish to be in themselves when they are well. The fundamental notion is, that hospitals should be in the most healthy possible place for a healthy man to live in, because if a man be sick, of course he requires all those external circumstances more than he would if he were well. Then the units may be arranged in a great variety of ways. They may be placed side by side at a certain distance parallel to each other; they may be placed in *echelon* according to the views of the constructor; they may be placed parallel around a quadrangle, having connection with the end of their units by means of a corridor; and may have the administrative portion at the north or south, as the case may be. In fact, the skilful architect may be able to lay out the building in the most desirable way as soon as he sees the ground on which he is to build. I have brought with me, in order to explain this subject satisfactorily, a collection of diagrams, to show, not theories, but the arrangement of various hospitals. Having a sick man, the first thing I have to do is, not to treat him for his sickness, but to place him in the circumstances of health. If I have a sick village, a sick town, a sick navy, or a sick army, I do the same. The same fundamental principles have to be applied somehow or the other to each individual of the whole. Therefore, I say, a truce to dogmatic statements when I hear that we are not to have large nor small hospitals. We are to have both large and small hospitals; we are to have hospitals of every kind, because I maintain that by that method, and that method alone, aided by experience, judgment, and skill, you may produce the best possible sanitary conditions for the sick.

Sickness: Leprosy and Cholera.—I wish now to present in a similarly rude and hasty way the fundamental conception of sickness, because as the object of the health department of this Association is to handle disease, and so to promote health, we cannot help remembering that disease is a necessity as our world is constituted, and that we have to provide means for the treatment of disease, as well as for the preservation of health. What is disease, and how is it to be studied? There is a disease called leprosy, which, happily, we do not know in our country; or, if so, very rarely. I have not yet had an opportunity of ascertaining whether a case of supposed leprosy in Plymouth is what it is supposed to be or not. Leprosy is a dreadful infliction that infested the human race three thousand years ago, and has persisted in maintaining its footing from that time until now. It called for the most stringent sanitary regulations in the time of Moses. It is a disease not uniformly fatal, but so constantly fatal as to be one of the gravest that can affect man, destroying him piecemeal, diffusing destruction wherever it visits, enduring several thousand years, capable of going here and there, living in one race, but not necessarily visiting all races. Through the kindness of two eminent men, it was my good fortune to utilise a portion of my brief holiday in examining for the first time this disease in Norway. What does a paternal Government do for the health of the country? It procures the most able men to investigate disease, and to obtain every information which the skill of the nineteenth century enables them to get, with the view of discovering what is the reason of the disease, and how we can stop it. If a poor country like Norway can do this, what are the more wealthy nations of the world doing that they do not follow the example? We have now photographs of the disease as it appears in various parts of the world, which we can compare. Our own country has not been idle in this matter. Some years ago Governor Walker wrote to the Duke of Newcastle, informing him that leprosy was on the increase in the West Indian islands. That wise minister sent to the College of Physicians, which obtained a report from two hundred and fifty different persons of eminence, and placed it in the hands of the minister, who was enabled to act with propriety in the emergency. It is such monuments of sagacity, of knowledge on all points, as was exhibited in that one instance—such united means of research and inquiry—that are necessary in order to ascertain what can be done for the human race. The next subject to which I will refer is that of cholera. I will take my text from a letter which appeared in the *Times* a few days ago. We learnt by that letter that there had been an outbreak of cholera at Mean-Meer; and see what a lesson we can draw from it. In the year 1856 there was an outbreak of cholera at the same place, and at the time the ratio of deaths per 10,000 of strength was not less than 1,664 of our troops, that being a military station. In 1861 there was a second outbreak, and then the ratio of deaths per 10,000 of strength was 2,456. Leprosy does not move. Cholera is a disease which has the remarkable quality of moving, and therefore when it appears in one place it may appear in another. Cholera, therefore, excites attention. Persons who were familiar with this tremendous subject, this terrible subject, in the case in question, inquired into the circumstances which attended the visitation, and, finding its history, ascertained the curious circumstance that whereas Mean-Meer—as was the case in the great majority of nuisances in India—was formerly the abode of filth, after the invasion of cholera the sanitary conditions were so thoroughly attended to that the air and soil of the place must be acquitted of al

share in the production of disease. They would further find that Dr. Derenzy, the able commissioner who wrote on the subject at the time, said there were abundant facilities at Mean-Meer for the propagation of cholera through the drinking water. There were still grave defects in the water-supply, he added, but he hoped they would be shortly removed; and, even as matters now stood, a repetition of the terrible epidemics of past days was impossible. We may have sanitary regulations, but incomplete; or, if complete, they may not be carried out. In dealing with national health, we require not only the highest skill to track out causes, but an universal machinery, which is to be constantly seeing that these wise regulations are attended to. Mr. Clarke, in a letter to the *Times*, written two or three days after the article I refer to, pointed out that the reason why cholera had reappeared at Mean-Meer was, that the water-supply had been allowed to become impure again; and then he made the suggestion—simple in itself, but profound in its application if applied—that there ought to be a provision in India for having rain-water tanks constructed above ground, so that the upper surfaces of these tanks, or wells, should not be used as sitting places by the natives, and as receptacles for all kinds of filth. The reason I selected this example is that the same thing applies to our own country. I know places in England where, notwithstanding the fulminations of some of our sanitary friends, it is impossible to have a regular water-supply and a system of pipes. But they can store rain-water, and arrangements could be made in the smallest villages for a constant supply of it, applicable to the wants of even small detached cottages in the most remote rural districts. This is an instance of how, by watching the nature and progress of remote difficulties, we may get very often the solution of difficulties which press in an unexpected and altogether different manner at home. To complete this picture of the labours of our own country on this matter, I have presumed, in the presence of an eminent reformer—a governor of one of the Indian presidencies—to lay on the table several reports showing the admirable manner in which the subject has been studied under the wise administration of India. Quite lately, too, a curious document has been prepared by Mr. Symons, of the Privy Council, in which he raises the important question whether cholera would come along the new lines of communication, which are being opened up between India and Europe. A man who believed cholera always travelled along the lines of human intercourse would *à priori* say that it would. I am not capable of passing judgment upon this question, but it is at all events a very proper and philosophic question to ask, and one which requires investigation. Dr. Cunningham (whose gigantic labours give his conclusions much weight) is of opinion that, with the present imperfect data, it is premature to decide in favour of any one theory regarding the localisation of cholera; that the several existing theories might really involve partial truths, and that they only become incompatible with one another when insisted on as absolute and entire explanations. That is the language of a truly philosophic writer, who declines to dogmatise until he has mastered the whole subject. Dr. Cunningham also showed that it is necessary for a sanitary commissioner to keep his mind perfectly unbiassed by all theories—his aim being to collect facts and draw conclusions from them only by a process of strictly logical deduction. India, he added, presented a field for the study of cholera and other diseases such as could be found nowhere else, and the evidence available year by year, if carefully collected, would be of immense value. Here is the other quality of the scientific man—hopefulness, a readiness to pursue a work to the end of his life, and to train pupils to succeed him in collecting facts and drawing conclusions, though he himself will never live to see them. This, then, is my third illustration of the idea comprised in the words, "Study of comparative national health." It first of all asks what is health; then, generally, how it is to be maintained—in the individual, in the nation, and the world; then we have to ask whether we really understand the most simple fundamental propositions concerning air, water, and food—whether we are not in danger of thinking some things healthy which are unhealthy; whether we are not trifling sometimes when we declare things to be unhealthy when common experience had shown the contrary; whether we are not in danger, even in our sanitary inquiries, of endeavouring to impose universal laws of living and maintaining health, when we know perfectly well that climate, inheritance, and a multitude of other circumstances make men vary in their bodies as much as they do in their minds, and that there is no one type into which we can all be forced, either by education or by sanitation.

The Proper Objects of Legislation.—I say these illustrations are such as it will be well for all to ponder who undertake either to legislate or to administer the laws which the legislature makes for us. Before I entirely quit this department of my subject and proceed to the practical application only, I must show you a diagram which is taken from Johnson's Physical Atlas. I am anxious before entering on that portion of the subject to recall again to your minds the extraordinary value of this kind of table. It is twenty years old, and was prepared by Dr. Starr, and has the peculiar merit of being able to show the rate of mortality of a single land, and of all countries of the world; if only we can get the information, and it is correct. The mortality is said in New Zealand to be at the small rate of 100 to 10,000 *per annum;* in Norway, 20 per 1,000; Prussia something under 30, and so on; but, on reaching the warmer climates, the mortality is greater, that at the river Ganges being 700 per 10,000. I am not going to vouch for these figures, because they are only approximate; but that is the way with all these questions. We must endeavour to find out the way of getting at the precise data of mortality, the rate of life in all civilised portions of the world, and then see how briefly they might be expressed; and if I, a poor provincial physician, might presume to ask a favour of the great leading journal (the *Times*), I would ask that, instead of putting these figures, as it now does, in a paragraph, they might be put in the form of a diagram. Such is the astonishing success of the inquiries made, that the Registrar-General is actually able to tell me at breakfast once a week how the people are getting on, not only in Oxford, London, Manchester, and so forth, but he tells me of New York, of Vienna, of Turin, of St. Petersburg, of Bombay, and of Bengal. Now, I have endeavoured to lay these three bricks, this foundation for my last conception. We have this health, this public health, this national health; this amazing rising science of comparative national health, so roughly sketched; and now the question is—What are poor mortals to do? So far as England is concerned, Mr. Gladstone has said: "Oh, well, hand it over to the guardians." And I will say that I think Mr. Gladstone quite right. I say so because I believe that the conception rests upon the fundamental conception of the nature of modern civilisation, and all the possible future of this nation; and I presume that that conception is based upon this—Who are going to manage this country in future, the people or despots? Are you going to make the people take care of themselves, or are you going to treat them like children, and in the type of the worst feudal times? Still, I am a believer in feudal times and paternal government. And what is the principle of paternal legislation? The principle is to do for the people what they cannot do for themselves. You have to ascertain what the people cannot do; you are not to try to pry into their cottages. If they like to live in dirty cottages, I say let them; but you are not to make it impossible for them to have clean ones. The fundamental laws should secure to a man pure air and water, and unadulterated food. What the poor working man cannot do for himself, the Government is bound to do for him. These are the proper objects of legislation. Nothing is too minute for the attention of the legislator; but it must be based upon this principle. When Mr. Goschen, in the course of the last year or two, introduced a sanitary measure, the measure came in contact with the enormous question of local taxation, and the consequence was that this Bill had to be withdrawn. Mr. Stansfeld, in the Act of 1867, with a rare combination of sagacity and impetuosity, introduced a Bill contained on three sides of a sheet of foolscap; and in that Act placed this principle before the legislature—that the care of the public health should be in the hands of a first-class cabinet minister, containing within his office all the elements requisite for supervising the whole health of the nation. He was stigmatised and taunted with taking a narrow view of the question; and when the Bill was read a third time and passed in the House of Lords, some of the newspapers actually did not notice it. I have here set down the chief subjects which are comprised in the great fundamental ideas of health. I have got twenty-nine of them, and there is not one that could be properly taken out of this conception of legislation concerning national health.

Reorganisation of Charities.—I am not going into all these questions; but I will first point out that there are many questions we may ask with regard to hospitals. Is it possible to build a bad hospital now? Should a county hospital, because it is supported by voluntary contributions, be exempted from inspection? On the list, I have put down one matter which may not at first seem to have much connection with public health and local government. I allude to the reorganisation of charities. It seems to me impossible that we should go on for another quarter or half a century without dealing with this subject; without seeing that there is no waste of the energies and powers, either of governments or individuals, in caring for those who need care. Instead of committees squabbling, as they do in various towns, as to who is and who is not eligible for aid, and matters of that sort, I hold that there must be a combination of the powers of the State, and of those of individuals upon the subject; and, in point of fact, unless there is, they will come to a dead lock. That is my answer to the sharp criticism that we sometimes hear as to the impropriety of collecting in one central

office what is called the care of destitution and the care of health. I say that the two subjects are inseparable; and that in the present state of civilisation it is necessary that, in some form or other, these two great departments of State should be united.

Sanitary Self-government Essential.—I think that the Act of 1872, which placed the administration of these matters in the hands of guardians and town councils, and divided the county into rural and urban districts, was framed with great judgment. In adopting that plan it appears to me that the Government of Mr. Gladstone proceed upon the wise principle, that instead of waiting until they could construct a perfect theoretical system they should avail themselves of the existing institutions and habits of the country. In resting upon the local self-government of the country for the administration of this vast subject, Mr. Gladstone followed the principle that has made England what it is, with all her faults, as unquestionably they exist, and with all her virtues which, unquestionably, are great. He relied upon the principle that has made her people self-reliant, and therefore capable. He recollected that he was dealing with a practical people, whose forefathers, sailing from this port, laid the foundation of the American republic, gaining for their country new worlds and new reputations. And this practical people I have yet to learn, when they have new duties assigned to them, and they are told calmly and kindly how they are to discharge them, will refuse to act up to their character as Englishmen. There is one thing, however, in the Act which I for one should wish to see repealed. It is absolutely necessary that there should be attached to the office what are called scientific experts. A scientific expert is not necessarily a man who has not succeeded in his profession, and wishes to be delivered from the troubles of private practice in order to devote himself to the care of a Government salary. What is necessary is, that whoever our scientific experts may be their decisions should be able to command respect, and stand such a test as the opposition in a court of law of my friend Sir John Coleridge, and the evidence of such men as Letheby, Frankland, and Liebig. It is not enough to send down experts in the profession to lay down the law before the guardians; they have got to remember that the English people would resist a doubtful opinion on appeal. The point is very easily met. What is wanted is not that the Local Government office should pay experts large salaries, but that the services of the most eminent scientific men should be retained, and that they should be paid fees for their opinions. In this way you would be able to get the best opinions which the world can produce, and avoid any subsequent contest in a court of law. It is my belief that the Public Health Bill—and I have carefully abstained from having any communication with members of the Government upon the point—so that I can speak my own opinions—has conferred upon the great central authority, and upon the very competent person who holds the chief position in it, powers to divide the country into such areas as in the several localities may be desirable; and to obtain the assistance of any number of experts to aid him and the local authorities in their honest and upright endeavours for the promotion of the national health.

Further Legislation.—With regard to the legislation of the next session, Dr. Acland said he would not take the responsibility of urging the Government to take up further action next year.—I earnestly desire there may be no Public Health Bill in the next session, and that the powers of the Government shall be given to the question of local taxation. My reason is perfectly plain. You cannot expect to treat this public health question with finality. I do not think we are in a position in which any legislation on this question can be final; and I hold that local taxation must be settled before you can even complete your arrangements for the payment of your new sanitary officers and even for assigning to them their proper duties. Another reason why I am anxious that no bill should be brought in next year—always remembering that our present position with regard to the question is tentative—is that we must not overwork our public men, and that we should give them our support while they patiently meditate those vast problems which we have committed to them to solve. I would implore the Association to support the Government, until they see what are the effects of the existing laws, and until the local authorities throughout the country have had time to mature their plans. It is only waiting for a few months, when, I hope, both parties in the House of Commons will combine together to propose a permanent sanitary code, and not a mere consolidation. I appeal to any person whether it is possible to complete a work of that kind under pressure, or in the presence of a feeling of want of confidence. If you wait for completeness you will simply put off from year to year doing that which can be done. Depend upon it in all respects this country is in a progressive state; that unquestionably the fundamental questions which lie at the root of our institutions are not only now being criticised and being discussed, but will have to be very considerably modified, if not in our own time, still in that of our children; and we may congratulate ourselves upon the admirable foresight of Mr. Hastings which has provided in this Association a means of preparing for that work. There is a class of persons who seem to me to be of opinion that we who are engaged in sanitary work are somewhat fanatical, and occupied in altogether a second-rate employment. Bred a physiologist and a physician, I am not in the least afraid of being called a materialist. I believe that by our birth, by our inheritance, by our climate, by our lives, we are what we are; that the great qualities of a people, unless in rare and exceptional instances, depend upon the physique of a nation. Some of the highest of man's qualities have been shown in an eminent degree in days when there was no writing nor any systematic education. We still see that great moral qualities in men are connected, with here and there an exception, with a certain kind of physique. I have known eminent men who might have rendered far more service to the world than they did, die simply because they were overweighted with work; and I say that there is no possibility of over-rating the importance to the world and to our country of fostering and caring for the body of man. It is not only a casket which contains the soul. It is more than that. It is a casket which under certain conditions moulds it and modifies it. That casket may be injured by vice; or parents may transmit disease to their children. You may ruin a nation by letting it rush into commercial speculation; you may also ruin it by neglecting the health of its people. As one who has now passed middle life, doing his poor endeavours to promote the health of those with whom he was brought in contact, I urge upon all not unawares to destroy that most precious gift of God—that health which enables our minds to do good and great work, our duty to our fellow-creatures, our duty to ourselves, and to God.

WOUND OF ABDOMEN, WITH INJURY OF INTESTINE: RECOVERY.*

By HENRY HORTON, M.R.C.S., Eardisley.

On August 9th, 1865, late at night, I was called to see F. M., a woodcutter, who, as the messenger most truly described the case, had walked into the town with his intestines in his hand. He had brought wood into the town, and was returning, as was his custom, with a bottle of rum inside his guernsey. When about a mile or so on the way home, the night being very dark, he drove his cart into a pit. He was thrown off and the bottle was broken into several pieces. A portion, in shape like a huge lancet, penetrated the abdomen to the left, and about two inches below the umbilicus, making an irregular-shaped wound externally, cutting through the large omentum, and dividing the peritoneal coat of the jejunum. Protrusion occurred on his rising, and increased at every step until he reached the town; so, that when I saw him there were from ten to twelve inches of intestine, and a rather large piece of omentum to be dealt with. There had not been much bleeding, but the omentum was darker than natural, and, as also the protruded bowel, quite cold. As there was not much prostration, and the patient was otherwise in good health, we (another practitioner had been sent for and arrived about the same time) thought it the best course to return all *en masse*. This was done, and five silver wire sutures were applied. Full doses of opium with a little calomel were given every two hours. Next day, August 10th, I saw him twice, as there was a good deal of tenderness and threatened peritonitis; but, on the whole, he had passed a tolerable night. He was ordered to continue the powders. On August 11th, 12th, and 13th, he was seen once daily, and nothing special had then occurred. On the 14th, there was very great distension of the abdomen from fluid, so that I had to loosen the lowest suture; when, after turning the patient as much as possible into the prone position, a great quantity of bloody, grumous-looking contents escaped, to the great relief of my patient, and I must say to my own personal alarm. On the 15th, the condition was even more alarming; and, as he complained of very great thirst, I gave him an anodyne mixture with mineral acid. This state of things continued for the next three days, and each morning a further quantity of fluid was evacuated from the abdominal cavity. On the 19th, a gradual improvement set in, which continued without any drawback until August 30th, on which date I took leave of my patient, who, in a few days afterwards, resumed his ordinary employment.

I saw him several times during the next three or four years, and the only complaint was that he sometimes felt a little "pinching" just at the part injured, and which, I suppose, was the result of the omentum becoming adherent to the abdominal wall at that spot. In every other respect he declared that he was as well as he ever had been.

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

ON THE TREATMENT OF RHEUMATIC GOUT BY THE AID OF THE CONSTANT GALVANIC CURRENT.*

By JULIUS ALTHAUS, M.D., M.R.C.P.Lond.,
Physician to the Infirmary for Epilepsy and Paralysis.

I DO not intend on the present occasion to bring forward a systematic essay on the pathology of rheumatic gout, or to add one more to the many speculations which have from time to time been proposed concerning the nature of this distressing and painful malady. The symptoms of the complaint have been so well described by different authors, amongst whom I will only mention Adams, Todd, and Fuller, that little, if anything, new could be added to their observations: indeed, these symptoms are so patent to the eye, that rheumatic gout may be pronounced one of the few diseases which you can diagnose by merely looking at the patient, without asking him a single question, or entering into any minute physical examination. For, although difficulties in the diagnosis may arise in a few cases, where the larger joints, such as the hip and the knee, or the sterno-clavicular articulation, are affected to the exclusion of the smaller ones, yet the common form of the distemper in which chiefly the interphalangeal joints of the hands and feet are deformed, is so peculiar and characteristic that the nature of the disease may be recognised at a glance.

I will not here discuss the question whether rheumatic gout owes its origin to a special poison which is generated in the system. No proofs have been brought forward for the assertion that it is so, which has perhaps been somewhat too rashly and confidently made; pathologists relying for this view more upon the analogy of the disorder, with gout on the one, and rheumatism on the other, hand, than upon any very precise data at their disposal with regard to rheumatic gout itself. Taking all the special features of this distemper into consideration, it seems to me more rational to look upon it as a nutritive disturbance of the joints peculiar to old age, or premature old age. By far the largest number of cases of this disease are observed after the age of 45; and although instances do occur in which rheumatic gout occurs in much younger persons, yet we invariably find, when such is the case, that emotions, anxiety, privations, voluntary or involuntary offences against the laws of hygiene, and other debilitating influences, have produced a sort of premature *senile decay* in the persons thus affected. The morbid process which under these circumstances takes place in the joints, is indeed very analogous to the atheromatous process which occurs in the internal tunic of the arteries at the same period of life, and which nobody thinks of putting down to a special poison generated in the system. It constitutes one of those highly *insidious and chronic inflammatory conditions which are characteristic of the period of involution and senile decay.*

This peculiar kind of inflammation, which, if it occur in the synovial membrane and the articular cartilages, we call rheumatic gout, or rheumatoid arthritis, or arthritis deformans, and which, if observed in the intima tunic of the arteries, we call endo-arteritis deformans, or the atheromatous process, never seems to lead to suppuration, as it is not intense enough for that. The first thing that occurs in the joints is hyperplastic proliferation of all the parts involving the same. The synovial membrane throws out, partly, somewhat large pediculated polypi, consisting of fat and connective tissue, and partly a finer kind of tufts and fringes, causing a peculiar roughness of the surface, which Volckmann has appropriately likened to a sheep's-skin. The cartilages likewise become proliferated, at first in their superficial and external layers, and subsequently in their deeper parts. In the healthy cartilage, *pairs of cells*, which look like the two halves of a ball cut through in its middle, are seen to be regularly imbedded in the hyaline basement substance; and the proliferation of these cells occurs in strict proportion to a simultaneous growth of that basement substance, so that always a proper distance is kept between the several cells. Now, recent microscopical researches have shown that in rheumatic gout, on the contrary, *groups of from ten to twenty large cartilaginous cells* are formed, which are lying close to one another, to the detriment of the basement substance, which becomes more fluid, absorbed, and finally altogether wasted. The natural consequence of this tissue-change is, that the joints are no longer able to stand the wear and tear, either of motion or of pressure, which is put upon them. The structure, therefore, gradually perishes, and proliferation continues only at the edges of the articular cartilages. There is, however, no uniform swelling there, but numberless small nodes are formed, which are as many ecchondroses, and which gradually coalesce to form a sort of wreath round the joint. The surface of the bone thus becomes gradually denuded. This, however, does not cause caries, but ostitis, terminating in sclerosis; and the bone becomes covered with a smooth, shining, white, and firm osseous plate, on which traces of the mechanical injuries to which it has been exposed during life may often be discovered. This brittle osseous tissue cannot, in the nature of things, resist in the long run the constant friction and grinding to which it is exposed, however quiet the patients may keep, in order to avoid the pain which is caused by every motion. If two pieces of pumice-stone were constantly rubbed against one another, only little would be left after a time; and in a similar manner the surface of the bone gradually wastes away. Whole epiphyses may thus perish; the neck of the femur will disappear; and the affected joints will altogether be so deformed that only little, if anything, is left of the original structure.

Looking, then, upon rheumatic gout as a disease of malnutrition peculiar to the period of involution and senile decay, we must not be led away by the term "inflammation" into antophlogistic measures, which only make matters worse; but the great aim of our treatment should be to support and stimulate the failing powers. The remedies upon which chief reliance is placed by the best observers are, therefore, bark, mineral acids, strychnia, iron, cod-liver oil, and arsenic. There can be no doubt, from the positive statements of reliable practitioners, that in a considerable proportion of cases these remedies do a great deal of good: yet how frequently do we see patients who have for months and years been under the care of the most eminent physicians, familiar with all the ordinary resources of the art; who have had everything done for them which money can procure; who have not only taken gallons of physic, but paid one visit after another to Buxton, Bath, Wiesbaden, and Wildbad, and who yet find the distressing symptoms of their complaint gradually becoming intensified, the pain more severe, the deformity greater, the helplessness more embarrassing. Surely under such circumstances we cannot look with any degree of satisfaction upon our present treatment of rheumatic gout; and any means which promises, from general considerations, to be really effective in such cases, should have a fair trial given to it.

Holding these views, I have for the last six years sought and found many opportunities to use in this distressing distemper that most active stimulant of nutrition the continuous galvanic current; and, although I am far from considering it a specific or a panacea for all cases of rheumatic gout, yet I have seen enough of its effects to convince me that in cases where the most approved lines of medicinal and hydrotherapeutic treatment, intelligently and perseveringly followed, have, after months and years of trial, left the patient no better but rather worse than before, the constant current, judiciously administered, may do great good in a variety of ways. I do not mean to say that we can by its aid really cure rheumatic gout. The current cannot reproduce wasted cartilages, nor restore its normal structure to a sclerosed bone; it cannot prevent the patients from advancing in age, nor arrest altogether the process of involution and senile decay to which the system must in the end succumb; yet it can do much good. Instead of relating cases which might prove monotonous, I will shortly summarise the results of my experience about the therapeutical capabilities of the current in the disease now under consideration.

1. It acts as a general tonic to the system, and more especially to the nervous system. Although in some cases of rheumatic gout the appetite is tolerably good, the food taken is pretty well digested, and the action of the liver, the alvine evacuations, and the urinary secretions, are not very materially interfered with; yet we find that the large majority of patients suffer from some form of dyspepsia, and impaired action of the liver, bowels, and kidneys. In the cases to which I now allude, there is no actual disease of these organs, which sometimes becomes developed towards the end; but there is functional debility, owing to an insufficient supply of nervous force to the parts mentioned. Thus an insufficient quantity of food is taken; that which is taken is imperfectly digested; the elimination of effete matters from the system is slackened; and the consequence of all this is a degree of debility which is more alarming to the experienced observer than the discomfort and pain attending the local manifestations of the disease in the joints. Patients of this class have often considerable difficulty in taking medicinal tonics, which are apt to heat the system, while alteratives often lower it still more. Under such circumstances the constant current is often remarkably effective in rousing nervous energy and improving all the most important functions of the body. The best mode of application for this purpose is to direct the positive pole, armed with a conductor of large surface, to the cervical spine, while the negative pole, similarly armed, is placed on the pit of the stomach. A gentle current, which even patients of exquisite sensibility can well bear, is thus allowed to flow for from three to five

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

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minutes in the direction just described. By this application, the base of the brain, the spinal cord, and the cœliac plexus of nerves, are simultaneously brought under the influence of the current.

2. *Want of sleep* is one of the chief complaints of patients suffering from rheumatic gout. This arises partly from want of exercise in the open air, and partly from the circumstance that the pain is apt to get worse at night. The patient keeps tossing about in bed from being unable to find a really comfortable position. "Nature's sweet restorer" thus flees the pillow of the sufferer, who generally dreads the night as his worst time. Opium and morphia are rarely applicable in these cases, as they generally excite rather than soothe, and impair the action of the stomach and the liver still more. Hydrate of chloral often steps in as the right thing in the right place; but I believe you will agree with me when I say that the more ample our experience of that remedy becomes, the more frequently do we find cases in which the system does not tolerate it, either in small or large doses. Where morphia and chloral fail to procure sleep, few other drugs will succeed in doing so; and it must, therefore, be looked upon as a considerable advantage connected with the use of the constant current, that under its influence sleep soon becomes prolonged and refreshing. No special application is necessary for attaining this end, the one I have just mentioned being quite sufficient.

3. *Pain* is another invariable symptom of rheumatic gout, and one which frequently resists the administration of sedatives and counter-irritants. Even subcutaneous injections of morphia and atropia have only a temporary effect, which rarely extends beyond twelve or twenty-four hours. The pain is generally most severe in the deformed joints, but is likewise felt in many other parts of the body. For the alleviation of the pain, the constant current is the most useful remedy with which I am acquainted. It must in this instance be applied to the suffering parts, so that the positive pole, armed with a small electrode, is made to touch the sore points; while the negative, connected with a large electrode, is placed in the neighbourhood. The current used may in this instance be somewhat more powerful than where it is employed for general tonic effects; and if a short application, say of one or two minutes, be not successful, this may be extended to four or five minutes. The effect is, in many instances, almost magical, inasmuch as pain, which has been fixed in some particular spot for months and years, is, as it were, charmed away by one or two applications.

4. The *deformities* which rheumatic gout produces, more especially in the interphalangeal joints of the hands and feet, resist the use of the current more obstinately than the other symptoms which have been mentioned; and it requires much patience and perseverance on the part of the practitioner and the patient to reduce them to any extent. Provided, however, that the galvanic treatment is followed up for a sufficient length of time, even extensive deformities may be improved, which is a matter of considerable importance, as most patients belong to the female sex. No one who has not seen it can have any idea of the beneficial effects which the current will produce in the long run on these deformities, even where they are extensive, and where the patients are not very old. It seems as if the action of the vasomotor nerves were gradually directed back into its proper channel. Unfortunately, many patients want to be cured in a week of a disease which is essentially chronic in its progress; and some practitioners are inclined to discontinue a special treatment too soon, unless immediate effects are produced by it. In this as in many other complaints the ultimate success of a particular plan of therapeutics depends not alone on the remedies which are used, but also very materially upon the more or less systematic use made by the practitioner of his remedies; and last, not least, upon the intelligent co-operation of the patient. In order to reduce deformities, galvanisation of the cervical sympathetic nerve must be had recourse to.

By what I have said I do not by any means wish to imply that the use of internal remedies should be altogether eschewed in the treatment of rheumatic gout. If we were, for some reason or another, to abstain completely from their use, we should only deprive ourselves of many chances to do good to our patients. Although in the system of therapeutics which I have pursued for rheumatic gout, I have given the first place to the constant current, I have frequently prescribed medicines which I thought would prove beneficial for removing certain complications which were present. Thus where there was an excess of acidity in the system, as evidenced by a highly acid condition of the mucous membrane of the tongue, the perspiration, and the urine, I have given alkalies or bismuth; for constipation, I have ordered Marienbad or Frederickshall mineral water; where the blood appeared to be very much impoverished, the ferrum redactum of the Pharmacopœia, or Spa water, was prescribed. All these and some other remedies I have used were, however, only auxiliaries of the galvanic treatment, and could not of themselves have exerted any decided influence upon the progress of the disease.

In conclusion, let me impress upon you once more the necessity of persevering with the use of the galvanic current, if it is to be used at all. The circumstance that most of our patients will be above 45, and not a few above 60 years of age, in connection with the obstinate character of the malady itself, must prepare us for slow results, more especially as far as the improvement of the deformities is concerned. Pain, indeed, is often relieved at once, but it is very apt to return: the patient often becomes rapidly stronger, but at times the old debility will again be felt, more especially if he undertake to do more, either in business or pleasure, than he is able to do; and a sleepless night may again occur after many good nights in succession. It is therefore necessary to tell the patient at once that a rapid cure is quite out of the question. The current should be used, either daily or three or four times a week, for at least a month or six weeks; and if the patient continue to improve, we may go on with it much longer than that. If, however, after that time he does not seem to make any further decided progress, it is better to discontinue the treatment for a month or longer, and then to recommence it. Those who will not shirk the sometimes rather tedious labour involved in carrying out such a treatment perseveringly, will ultimately be amply rewarded for their trouble by an amount of success which, in some forms of the disease, could not have been obtained by any other line of treatment.

ON THE INFLUENCE OF LIME AND MAGNESIA IN DRINKING-WATER IN THE PRODUCTION OF DISEASE.*

By JOHN C. MURRAY, M.D., Newcastle-upon-Tyne.

THE subject of my paper is of great importance to every one who, like ourselves, resides in a magnesian limestone district. It therefore well deserves to occupy a portion of our time, especially in this progressive age, when preventative medicine is engrossing so much attention. What I am about to advance is founded upon a few cases only; not, however, in consequence of a paucity of such cases, but rather the difficulty of fully testing the indicated plan of treatment, from inability hitherto of obtaining soft water in a town and region where every sample of drinking-water is saturated with lime and magnesia.

Last March, I read, in *The Urine and its Derangements*, by Dr. George Harley, that "oxalate of lime and phosphatic calculi are the two most common forms of stone met with in districts where the water is impregnated with large quantities of lime;" and that "the lime must be got rid of from the drinking-water; for, should it by any chance contain an excess of lime, its habitual employment will completely frustrate our best efforts at treatment." On perusing this, a previously dim and uncertain light became to me fixed and clear; not as yet, however, to attain the brilliancy of the lime or magnesian light, but perhaps sufficient by which to indicate other cases in which soft water, or water freed from lime and magnesia, would be of service in the prevention or cure of disease.

On referring to older works on urinary pathology, I find that in 1844 Dr. Golding Bird was the first to bring under notice the frequent presence of oxalate of lime in the urine of inhabitants of towns. In 1849, Dr. James Begbie pointed out the connection between oxaluria and imperfect digestion with sequent mental despondency. In 1850, Dr. Bence Jones said distilled water instead of spring water will lessen the quantity of lime passing through the body, and hence oxalate of lime in the urine. He also states that lime-water will cause phosphatic deposit. Sir Thomas Watson points out the risk from drinking water containing lime in oxaluria; and Dr. Atkin recommends, when oxalates appear in the urine, to avoid water containing lime. Dr. Harley, in the second volume of the *Medical Times and Gazette* for 1864, is, I believe, the first to show the imminent danger of lime in drinking-water in what was wont to be termed the phosphatic diathesis. My experience in the action of solvent remedies in gravel and calculi has not been so satisfactory as I could have wished; but, following the light shed by Dr. Harley, and acting by it whenever practicable, I am enabled to support the doctor's statements.

One patient, *e.g.*, with ammoniaco-magnesian phosphate and carbonate of lime sediment in his urine, has since been relieved by mineral acids and the use of soft water from Hamburgh, he fortunately being a sailor. Two others, by the same treatment and distilled water, are now passing acid urine, the physical signs of renal calculi are less urgent,

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* Read before the Northern Branch.

and they are already happily free from deposits. A fourth has been relieved by acids and rain-water brought from the country. Two cases of oxaluria have been relieved : one by going for a short time to Glasgow and drinking copiously of Loch Katrine water, which only contains one grain of lime per gallon ; the other by taking a holiday westward, where the water is soft. Two more cases have altogether recovered from their previously painful, depressed, and almost hopeless condition—one by removing to the south ; the other, after going by my advice, to Cumberland. I have seen this gentleman there since, and he said that his well-water was so soft as to feel oily, and that it suited both his cuticle and mucous membrane.

Some cases are still under treatment, of which I may mention one from Leith, who came to Newcastle only last November, and applied to me in May for white gravel. Under mineral acids and soft water brought from Leith, improvement has commenced. A case from Denmark is one of peculiar interest. While in Vienna, phosphatic deposits first appeared ; on happening to remove to a soft water country they ceased. Since then, the patient has remarked that health and comfort varied according as the water proved to be hard or soft. In Newcastle the party is such a sufferer that another removal will be essential, unless soft water can conveniently be obtained. I might multiply cases, but will only add that of a traveller from Liverpool, where the water-supply indicates only three degrees of hardness. When on his eastern journey, he begins in the north of Yorkshire, where the water is very hard ; as he travels northward, coming by Sunderland and Shields to Newcastle, he seems to surcharge his blood with urate of soda ; for, while writing this article, I am attending him for the sixth time with rheumatic gout. When he reaches home, he feels as if it required some time to wash his system clear, for he does not at once recover his usual health and elasticity of body.

When phosphatic gravel is persistent, and there is no history of disease or injury to brain or spine, to paralysis, or disease of the urinary organs, I think it may justly be set down to a superalkaline state of the blood, which condition water holding in solution large quantities of lime and magnesia will undoubtedly tend to induce ; these bases neutralising a portion of the acid of the gastric-juice, besides which they will interfere with the action of the mucus and albumen of that secretion, and thus exert a notable influence in bringing on indigestion, hence the local value of pepsin as a remedy in dyspepsia. A sufficient reason for the difficulty we find in relieving these troublesome cases is thus afforded ; for I think it will accord with the experience of all of you that a patient rarely, if ever, continues remedies sufficiently long to be cured of phosphatic sediments. The fact is, he daily requires fully a drachm of dilute mineral acid merely to neutralise the lime and magnesia which he takes in his twenty-four hours' consumption of our hard water. Hence, in this district a patient may continue to take acids until his teeth are gone without being relieved of the so-called phosphatic diathesis. On the other hand, if he contract with his chemist for distilled water and continue the acid treatment for a short time, a change will soon become apparent. The patient has less frequent calls to urinate, can sleep longer at night, go again to church, feels more buoyant, suffers less or no pain, his urine becomes acid and remains so. All that is required, then, is to make distilled water palatable, so that it may be drunk freely as one would a mineral water, and thus, according to Drs. Prout, Beale, and Harley, wash the system well out, thereby freeing it of every kind of urinary or blood-deposit. Urate of ammonia, and even the urate of soda of gout and rheumatism by this means may be dissolved and removed from the body. Large draughts of pure water increase the elimination of effete material especially of phosphates ; hence after a time the administration of acids may be discontinued, and, according to my experience in this mode of treatment, the cure will be complete.

Cases of oxaluria have likewise been unsatisfactory, inasmuch as oxalic acid is a constant ingredient in both the blood and urine. Acid fruits and rhubarb contain oxalic acid ; and if there be indigestion from the worry of business, or, as I have ventured to advance, from the lime and magnesia of hard water, neutralising pepsin and mucus in the stomach ; or, again, if the action of the lungs be impeded from disease or impure air,—then sparkling wine, beer, effervescing drinks, carbonated alkalies, carrots, cauliflower, asparagus, preserves, sugar, starch, and even the retrograde metamorphosis of the albuminoid and fatty tissues of the body may stop short at $C^2 O^3$ instead of $C O^2$. We all know that oxalic acid in an appreciable quantity is dangerous to the organism, but even in such minute proportions as would be incapable of producing melancholia, it may nevertheless in the presence of lime, form the nucleus of a calculus ; hence a dyspeptic patient in a hard water district runs a daily risk of suffering—to use Sir Thomas Watson's words—"the pain and exceeding peril of a renal calculus."

The oxalic acid diathesis, when not confirmed, is more easy of cure than the phosphatic. Air, exercise, ease of mind, mineral acids, and tonics, together with water free from lime, if no calculus have already formed, will soon remedy the state of system ; but if there be one or more calculi, they are less easy of solution than the phosphatic. When one of these melancholy cases of hypochondriasis occurs in your practice, I would recommend aërated distilled water in addition to your other treatment.

If mankind, like insects, reptiles, and birds, could pass solid urine ; if Northumberland and Durham were less populous, and like the aborigines we could be sufficiently supplied with surface-water pure, or if an unimpaired digestion and chemistry enabled us to keep the salts in the urine always in solution, we would not need to fear the effects of earthy salts ; but when, as I have found by examination, the usual daily consumption of water contains twelve or thirteen grains of salts of lime and carbonate of magnesia, and we see that this quantity is a frequent cause of disease, I hope to be pardoned for specially drawing your attention to this subject. Young persons enjoying country air and a powerful digestion, may long resist the effects of the earthy carbonates ; but to the crowded denizens of a town, anxiously struggling for position; or, it may be, for existence, whose nervous system must ever be generating excess of phosphoric acid, or whose pneumogastric nerves, like tired sentinels, unguardedly permit the formation of oxalic acid, much lime and magnesia must be a continual source of danger, and none the less so because unsuspected. The proverb where ignorance is bliss, etc., is, as I take it, somewhat at fault here.

If time permitted, I would endeavour to prove that, in every kind of calculus, water holding much lime in solution is attended with danger, that rare form the xanthic only excepted. For not only may lime be mixed with or coat other nuclei, but even in uric acid deposits, which have been thought to be benefited by lime in water, the lime, by uniting with the free hydrochloric acid in the stomach, will leave soda at liberty to unite with uric acid, causing rheumatic gout, and also the chalk-stones which we so frequently see. When property is at risk, man is often shrewder and more anxious about it than even about his own personal health. Surely human life and comfort are of more moment than the beauty and usefulness of cattle ; yet we find that owners have been observant of, and learned from the instinct of horses, which they try to supply with soft water in order to prevent them having a "staring coat," or suffering from stone, chalk-stones, and gripes. If man does not experience the effects of hard water so much as horses in consequence of eating animal, as well as vegetable food, he nevertheless frequently shows the evils of excess of lime and magnesia by early baldness, boils, carbuncles, scurvy, purpura, erythema, urticaria, herpes, bullæ, impetigo, acne, lichen, psoriasis, eczema, a dry unpleasant state of cuticle or dandriff, by cretification of arteries and valves of the heart, a frequent cause of apoplexy, paralysis, aneurism, phlebolite of veins, exostosis, rheumatic arthritis, calcareous deposit upon, and cretification in, various organs, and, as life advances, ossification of cartilages of ribs, joints, larynx, and petrifactions in pulmonary and even muscular tissue. Some of this formidable list, viz., the skin-diseases, are enumerated from my having observed them to improve under the use of soft water.

I will only further take up your time with goïtre and cretinism—diseases which are seen only in limestone and magnesian limestone quarters. In Northumberland and Durham we have many cases of goïtre, and a few of cretinism and semi-cretinism. It is fortunate that goïtre is difficult of cure, for so long as the patient continues to live on a calcareous soil, to cure the goïtre would be apt to bring on a worse disease ; we should rather let the gland go on to the secretion of lime salts to save more vital organs, or, better still, give dilute mineral acids. I am glad to see that in the JOURNAL for June 15th, Dr. Spender recommends tincture of the perchloride of iron in conjunction with tincture of iodine for Derbyshire neck when the patient can neither procure soft water nor migrate to it. This rational treatment will serve to neutralise and remove the lime salts which are undoubtedly the cause of bronchocele. The disease will be apt to return, however, on discontinuing the treatment. Cretinism, according to Kölliker, Virchow, and Aitken, is attributable to excess of lime in water, causing ossification and diminished diameter of the foramina at the base of the cranium ; hence strangulation of vessels and nerves, and arrest of cerebral development.

I see in the *Lancet*, and in the *Food, Water, and Air Journal*, that the contamination of drinking-water with unoxidised animal excreta is being ventilated. The question is a most vital one ; its importance has, however, been longer recognised, and it has also been more carefully studied, than the one which I have the honour of laying before you.

CYANOSIS WITH DEFICIENCY OF THE INTER-VENTRICULAR SEPTUM.*

By JAMES JOHNSTON, M.B.,
Physician to the Queen's and Children's Hospitals, Birmingham.

THE subject of the present remarks, J. Thompson, aged 9, the son of healthy parents, was apparently in perfect health until seven years old. He had never suffered from rheumatism in any form, nor was there any history of shock or violent exertion. About two years since, he complained, for the first time, of dyspnœa, pain across the chest, and dizziness. He then had the first of a series of epileptic fits, and from that time gradually became cyanotic.

When admitted into the Children's Hospital, on February 6, 1872, his face and extremities were very blue; the lips deep purple. The conjunctival membrane was congested. On examining his chest, the apex-beat was found in its normal position, with a heaving rather than accentuated impulse. There was a loud systolic murmur, harsh and rough in character, most distinct at the midsternum opposite the cartilage of the fourth rib, barely audible at the ensiform cartilage, and not running up the sternum; not heard over the aortic valves in the second right intercostal space, only as a soft murmur over the pulmonary valves in the second left intercostal space. Posteriorly it was heard slightly opposite the upper angle of the scapula, but not at the lower angle, *i.e.*, the mitral district. This *bruit* was barely perceptible at the apex of the heart, but was limited to a space on the sternum opposite the fourth left rib cartilage. There was no regurgitation into the veins. The *bruit* was most distinct in the horizontal position, and frequently disappeared when he was raised upright; and when this occurred the boy complained of faintness and intense præcordial pain, and then was convulsed. The lungs were well and fully distended. There was no increase in the number of the respiratory movements, no cough or expectoration, and he never spat blood. The liver was not enlarged. The kidneys acted well; no albumen was detected in the urine. The first fit that was noticed in the hospital was on February 24, about eighteen days after admission, and they recurred at uncertain intervals until a week before his death; during the last week, they were much more frequent, with painful intermissions and deep cyanosis. About ten days before death, symptoms of pulmonary congestion came on with cough and frothy expectoration, but no blood. He died on June 10th, after a series of fits, in the intervals of which his mind was clear, but with pain and faintness. In forming my diagnosis, the intense venous congestion and blueness of skin clearly showed that, from some cause, the blood was not being fully oxygenised. The quiet respiration, the freedom of the lung from all symptoms of congestion, at a time when the whole system was gorged with venous blood, indicated, quite independently of the site and character of the *bruit*, that the mischief was not caused by any imperfection in the mitral or aortic valves. On the other hand, this state of the lungs might co-exist with partial plugging of the pulmonary artery; a solution which was rendered highly probable by the history of the case, a certain definite time having been noted at which the cyanosis and other symptoms came on. Yet this view was rendered improbable by the absence of any signs of dilatation of the right auricle or regurgitation into the jugular veins. I could only account satisfactorily for all the symptoms by a reopening of the foramen ovale; but in that case I should have expected more hypertrophy of the left ventricle, with a more distinct apex beat than was found in the case. On *post mortem* examination, June 17, every organ was found deeply congested with dark fluid blood. In the right auricle the inferior and superior cavæ were normal in size and position. The foramen ovale was closed. The tricuspid orifice was perfect, and the valves healthy. In the right ventricle the pulmonary arterial orifice was so small that it hardly admitted an ordinary probe. Immediately above, and to the right side of this orifice, the aorta could be felt open to the ventricle. The septum ventriculorum being deficient at the upper part for about half an inch, the finger could be pushed with ease into the aorta, from either the right or the left ventricle. The aorta seemed to be placed over both ventricles, so as to receive the blood from both as from a common cavity. The ductus arteriosus was patent, in its normal position, and of the diameter of an ordinary goosequill; in length about one-eighth of an inch.

There can be no doubt that this state of the heart was congenital. Numerous cases are on record in which the heart, in its development, has not kept pace with the rest of the body, so that in a full-grown child the heart of a fœtus in the fifth or eighth week of existence is found; corresponding to the lower type of heart found in the Saurian reptiles, in all of which, except the American alligator, the normal heart consists of two auricles, and one ventricle partially divided by a septum, which separates the aorta from the pulmonary. This form of septum has been met with in many cases of congenital malformation, but in this one we find the septum deficient in the upper portion. Attention was first drawn to this class of cases by Sandifort, about the middle of last century; since that time Tiedemann, Quain, Farr, and others have contributed largely to the pathology of these cases. I shall not, however, detain you now with quotations from these authors, but simply draw your attention to a few points of interest in this case. 1. Life was prolonged until the ninth year; most of the cases of this form of cardiac mischief survive but a few days or months at most. 2. Cyanosis did not come on until early in the seventh year. Graily Hewitt records the case of a child which lived to the fifth month, and in which the skin was of normal whiteness unless moved or excited, when it became cyanotic immediately. In his case the pulmonary was obliterated and the septum deficient. 3. The small orifice of the pulmonary and the full size of the ductus arteriosus give support to the view proposed by Farr, that, in these cases, the lungs receive their blood from the aorta through the ductus, thus reversing the ordinary course; and here we should note that—4. Dr. Peacock gives the case of a child twelve months old, in which there was a deficient septum and aorta common to both ventricles, but *no* ductus arteriosus or pulmonary artery, the lungs receiving their blood from the aorta by vessels corresponding to the branchial vessels of early fœtal life. 5. One peculiarity in this case of Dr. Peacock's leads to the fifth point of interest; viz., at times, in the upright portion, the *bruit* (which was a loud systolic one like that in the present case) entirely disappeared, although loud and harsh when the boy was lying down, just as it did in the present instance. 6. In all or most of the cases the lungs were not fully distended, in fact atelectasis prevailed. In the case now before you the lungs were fully and well dilated; resonant on percussion, and the respiratory murmurs were perfectly normal until the last ten days of life; and this fact, so manifest at the same time that there was an absence of all symptoms of a dilated auricle or overloaded right side of the heart, caused me to diagnose the probability of reopening of the foramen ovale. I cannot close the paper without drawing attention to the clearness of the mental powers at a time when he was subject to epileptic fits on alteration of position. The retained carbonic acid cannot be fairly considered as the factor causing the fits.

* Read before the Medical Section at the Annu Meeting of the British Medical Association in Birmingham, August 1872.

RETROFLEXION OF THE IRIS.*

By A. SAMELSON, M.D., Manchester.

JOHN COATES, of Todmorden, aged 30, a "twister and drawer" in a cotton-mill, was admitted a patient at the Manchester Royal Eye Hospital on the 2nd of August.

[Having never known his parents, he was brought up in the workhouse, and seems to have lost the sight of his left eye in infancy, as he never recollects seeing with it. This eye, at present, has no perception of light, and appears singularly flattened on both sides, at the distance of a few lines from the corneal margin; there is ciliary staphyloma, particularly developed above the limbus corneæ, tremulous iris, and a totally adherent narrow pupil, occupied by a siliquose cataract. Having been hurt by the wheel of a cart which he was driving, he has had his right leg amputated a number of years ago, and is wearing a wooden leg.]

On the 24th of July last, he met with an accident to his *right* eye in the following way. He had been seated on the floor, to have his dinner, in the mill where he was working, when, in getting up, he slipped and fell with his head against a piece of iron which projected from the wall at the height of about two feet from the floor. The eye, after the accident had just occurred, is said to have been painful and bloodshot, but there was no bleeding. For two nights he could not sleep from pain, and could not keep his eyes open for two days; he cannot now "stand the sun" as well as he could before the accident. The eye was bathed with camomile tea, and a camomile-poultice was kept applied to it for the first two nights.

Status præsens.—The iris appears as a narrow seam only at its attached border, widest (about 1½ lines) at the outer and lower periphery, narrowest at the top and inwards, in which latter situation it presents traces of a solution of continuity; two minute roundish knobs are seen to project, respectively upwards and outwards, from what

* Read in the Surgical Section at the Annual Meeting of the British Medical Association at Birmingham, August 1872.

represents the pupillary margin; this margin, from the varying width of the remaining seam of iris, is not regularly circular. There is a small patch of greyish-white opacity upwards and outwards, and a similar dot inwards and downwards, upon the capsule of the lens. Otherwise the latter is perfectly transparent, and its margin can be distinctly traced with the ophthalmoscope throughout the entire circumference. With the movements of the eye the lens as well as the visible remnant of iris is sometimes seen to shake a little. The anterior capsule further presents the following phenomenon, in reflected as well as in refracted light. About the centre of the pupil, three plait-like figures are seen, nearly vertical, resembling elongated cells; in focal light they can only be distinguished when the eye is directed inwards; they noways interfere with the transparency of the crystalline body. The whole contour of the lens, as dividing the latter from the surrounding hyaloid membrane, being so distinctly traceable, we naturally look for the ciliary processes. But nothing can be made out at all resembling these. When the eye is turned either extremely inwards or outwards, a dark figure is, indeed, observed beyond the outline of the lenticular margin, but that figure, far from presenting anything like the beautiful and regular design of the ciliary processes, appears rather like a uniform and slightly tremulous mass, somewhat shaggy in its outline. The vitreous body presents extensive floating opacities when seen with the ophthalmoscope. The optic papilla and the retina are in no wise abnormal in their appearance. The tension of the eye is somewhat increased.

The patient reads No. 4 of Jaeger's types from four to nine inches. His acuity of vision is about one-thirteenth, with — 16 it is one-fifth. Through a stenopaeic aperture he reads, with some difficulty, No. 1 Jaeger, and the acuity of vision, with — 16, is nearly two-sevenths. He states that he never could see well at a distance, but he never tried the effect of glasses, and that he could read the newspaper at a greater distance from his eye than at present. Neither atropine nor Calabar are found, in an appreciable way, to affect the results as stated. After the instillation of atropia, however, the seam of iris appears to become somewhat narrower still. (The patient states that he sees black specks floating before his eye, even more when the latter is closed, and that he finds his sight somewhat improved since his admission.)

As the investing membranes of the eyeball were evidently not injured in the accident, the question naturally presents itself, as to what has become of the bulk of the iris. From the appearances described, the necessary inference seems to me to be that, in the concussion caused by the accident, a displacement of the vitreous body must have occurred, sufficient to allow the iris to become folded back upon itself. Apart from the support lent to this view by most of the phenomena described, I have only further to state that the inner free edge of the iris-seam, when examined in focal light with the aid of a magnifying lens, far from appearing sharp or torn, rather gives the decided impression of such an increase of thickness as must necessariiy arise from a doubling of the membrane. The black figure, which I have described as seen beyond the equator of the lens, I hold to be the image of the backfold of the iris reflected from the hyaloid membrane. If my interpretation of the phenomena be correct, the case is one of those to which Von Ammon has directed attention in his elaborate article in the first volume of the *Archiv für Ophthalmologie*. Instances of traumatic retrusion of mere segments of iris I have seen ere this, and presented at the Manchester Medical Society.

TRAINING FOR THE TRIPOS.

By J. M. WINN, M.D.,
Senior-Physician to the St. George's and St. James's Dispensary, etc.

The vast importance of rigid attention to the bodily health, whilst preparing for an examination, was forcibly brought to my mind by a recent occurrence at the College of one of our Universities. A young friend of mine, of great mathematical talent and unwearied industry, lost the first place at his college examination, simply from the effects of indigestion caused by his having incautiously eaten some articles of food at lunch, just before he went in for his examination, which disagreed with his stomach. On the first day, he was so confused from the malassimilation of the food, that it was with great difficulty he got through his work; on the second day, he rallied, and ultimately came out second, losing the first place by only one mark. Who can doubt that, but for the unfortunate lunch, he would have come out first?

Whilst so much has been written on the subject of training for bodily contests, how little has comparatively been done towards furnishing anything like a systematic guide as to the best rules to be followed in order to maintain the brain and nervous system in their highest state of integrity, at a time when both are strained to the utmost, not only by the efforts of the will and intellect, but also by the hopes and fears which are excited by a trying ordeal. The question whether our Universities have raised the standard of their requirements too high, and induced an amount of study under which the health of those who are determined to distinguish themselves often fails, is one that I will not enter upon now. My present object is to offer a few medical suggestions, which may possibly lead to an improved system of hygiene, for those who are training for academic honours.

If we keep in view the difference between the structure of the nervous and muscular tissues, it becomes evident that a somewhat different kind of diet is required for the nutrition of the former from that of the latter. In order to develope and support the muscular organisation, a large proportion of animal food is requisite; not so, when the object is to supply the waste of the more delicate and subtle tissue of the nervous system. Fatty matter and phosphorus enter largely into the composition of the brain. It has been estimated that the former (brain-wax, or brain-fat, as it has been called) amounts to about one-third, and the latter (phosphorus) to one-twentieth or one-thirtieth of its solid substance. It is now generally believed that exertion of the will and reasoning powers causes an expenditure of the brain-material, and a corresponding exhaustion of the nervous force. However, it must not be forgotten that prolonged bodily exercise exhausts the nervous force, as muscular contractions are commonly brought into action by nervous influence; hence the importance of a student's avoiding excessive bodily efforts, which expend that nervous energy so essential for brain-work. Whilst "training for the tripos," he should, however, take gentle exercise for at least two hours daily in the open air, and his diet should be light, simple, and nutritious. Large quantities of animal food and malt liquor conduce rather to somnolency than to mental activity. There is a common saying that "fish feeds the brain," which may depend on the phosphorus it contains; certainly there can be no doubt that some sorts of fish, such as soles, whiting, plaice, etc., are peculiarly suitable to a weak digestion. I may incidentally observe that I have found a fish diet especially serviceable for those predisposed to phthisis. A certain amount of rest and sleep, as well as a due supply of healthy blood, are absolutely necessary to maintain the brain in a working condition. Above all, the amount of mental work must be in proportion to the physical strength. I knew an instance of a gentleman who attempted to read ten hours a day, and, whilst doing so, his competitors got ahead of him; he then wisely reduced his time of work to eight hours. He then recovered his lost ground, and came out a wrangler. There are men of iron constitution who can afford to laugh at these precautions, and who can excel both in mental and bodily exercises. A friend of mine who went in for a public examination, surpassed most of his contemporaries, who were his equals in mental capacity, by sheer power of physical endurance. The suggestions I have offered are not for such as these, but for men of less physical stamina, and I hope they may lead to an improved system of academic hygiene.

THE HOSPITALS OF CHRISTIANIA AND COPENHAGEN.

By HENRY S. TAYLOR, Esq., Guildford.

Having recently visited the hospitals in two of the Northern capitals, I send a few notes of observations made therein, hoping that they may interest the readers of the Journal.

In the Royal Hospital at Christiania, I had the good fortune to find Dr. W. Boeck going round, who took the trouble to explain to me, in my own language, the nature of the more important cases under his care. The practice of syphilisation, which has had so zealous an advocate in that distinguished physician, is still pursued by him exclusively in all forms of constitutional syphilis, and was being carried out in a great number of the cases before me; and, as I was told, with unvarying success. His plan is to inoculate the patient in the first instance with virus from a fresh sore, and then to continue the inoculation every third day with discharge from the sores thus artificially produced, until it ceases to have any effect, when the cure is considered complete, the constitutional symptoms having disappeared *pari passu*. The parts selected for inoculation are the chest and abdomen, and the operation is performed with a large lancet, which, after being charged with h

virus, is placed vertically with its point on the skin, and twirled round so as just to penetrate the cuticle ; the point is then wiped on the puncture. As two or three punctures are made every time, and as the treatment may extend over a period of several months, it follows that the patient's trunk is sometimes diapered all over with cicatrices, as happened in more than one instance among those in the hospital. In one man the resulting sores had an ugly aspect from phagedænic ulceration, but in the great majority no undue action had followed, and the constitutional symptoms had certainly declined or disappeared altogether, whether from the influence of syphilisation, or from the natural cure effected by time, it would be hard to decide. As no other treatment, local or general, is allowed, except the light application of nitrate of silver to ulcers, the inoculation plan is credited with the cures. Notwithstanding this apparent success of syphilisation in Dr. Boeck's hands, it is not practised by any of his colleagues in the hospital, nor by the profession in general. The objection I heard made to it was that it was "too cruel."

In the female wards I saw two examples of the *Spedalskhed*, or Norwegian leprosy. In both women the lower part of the face had been attacked, and was covered with large red elevations, like those of inflamed psoriasis; the features were also much swollen from infiltration, causing great disfigurement. Dr. Boeck informed me that in severe cases the whole body may be affected, the eyes dropping out, and the joints of the fingers and toes falling off. Although the disease is said to be disappearing, it still prevails on the western side of Norway, where the coast is deeply indented with fjords and ravines, and elevated into lofty *plateaux*. Bergen, which is the centre of this region, has a special hospital for lepers. While the disease is said to be endemic in certain districts, and even in particular farms, it is attributed to exposure to cold and wet, and also to unwholesome food, as stale fish, which is often eaten by preference in a putrid state. Dr. Boeck and other high authorities maintain that the disease is hereditary, upon evidence which seems incontestable.

The theories of the causation of spedalskhed appear not to harmonise with all the facts of its history. It is undoubtedly the same disease as the eastern leprosy, which is not attributable to cold or bad weather, and questionably to bad food. The only case of leprosy I had ever seen, was a young gentleman from the Mauritius, in whom none of the above causes had been in operation. In that instance the skin of the lower part of the face presented the same appearances as in the women at Christiania, and several joints of the fingers had been lost from a sort of necrosis.

Beside its pathological importance, this singular disease possesses an antiquarian interest in the fact of its having once overspread the whole of Europe. In many parts of France remains of the old *léproseries* may be seen, generally in the form of a quadrangle with separate cells and a chapel dedicated to St. Lazarus. That it was well known in England is proved by many evident traces of its presence ; for example, in Guildford we have a street still bearing the name of the "Spital" or leper-house, which once stood there ; and in the old church of St. Mary, in this town, a small square window was brought to light some years ago, which is believed by archæologists to have been the "leper's window," from whence the sacrament was administered to the lepers outside.

Chronic inflammation of the large joints, here called "arthroitis", formed a large proportion of the cases, and were treated generally by shampooing, after the method of Dr. Metzger of Amsterdam. This treatment, as I saw it applied by Dr. Boeck, consists in simple friction with the hand, at first gentle, then hard, both circular and in the direction of the long axis of the limb. Swelling from effusion and thickening are said to subside more quickly under its use than by other modes of treatment ; and joints stiffened by disease and long disuse soon recover mobility and strength. Great efficacy is also attached to the practice of flapping the muscles with the backs of the fingers as a means of restoring the tone of the debilitated limbs.

In the surgical wards I followed Dr. Nicolaysen, who is in great repute as an operator and scientific surgeon. His treatment of injuries and surgical diseases was conducted on the same principles as with us. The plan of extension by a falling weight was generally adopted in scrofulous affections of the hip and knee, which seem as common in Norway as in our own country. This method was sometimes combined with counterextension, which was effected by raising the foot of the bed some six or eight inches by means of blocks placed under the casters, and by wedge-shaped cushions under the patients' feet. The weight of the body is thus made to oppose the extending force at the foot. One application of this principle struck me as ingenious, if not original. It was in a case of amputation of the leg, which had been followed by sloughing and great retraction of the soft parts. The bones had protruded considerably, but were now nearly covered over by the skin, which had been coaxed down by four strips of adhesive plaster attached by their free ends to a falling weight.

Lister's antiseptic treatment of wounds and suppurating cavities does not seem to have found its way to this hospital; carded oakum being the dressing in general use. The only cases of operation under treatment were two excisions of the hip-joint, which appeared to be successful ; and one of vesico-vaginal fistula by Dr. M. Sims's operation, which had completely closed the opening.

My next visit was to Copenhagen, which possesses two large hospitals —the Fredrik's Hospital, connected with the School of Medicine in the city, and the new Commune Hospital outside the walls. The latter is in the best position, and is a truly palatial building both in style and proportions, containing eight hundred and fifty beds, with wards of various sizes, well lighted, and affording ample cubic space. It is built on the corridor system, which, whatever may be its sanitary defects, is unquestionably superior to the pavilion-plan in convenience of administration, as well as in architectural effect. In both hospitals, as in that of Christiania, the cases of chronically inflamed joints and scrofulous diseases of the hip and knee outnumbered all others in the surgical wards. Here the treatment chiefly consisted in fixing the joint with splints and gypsum bandage, while extension was kept up by falling weights. Some cases of fracture of the leg were put up in a splint of peculiar construction, devised by Professor Stein of this city, which appeared to act efficiently in cases attended with lateral distortion, as in Pott's fracture. The apparatus consists of a wooden fracture-box, of greater width than the leg, having a sliding foot-board and three binding screws in each side-piece, which can be made to press against the sides of the limb at its centre and both extremities. Small hollow side-splints are first applied to the leg, and receive the pressure from the screws, which are tightened at the points most requiring it. This application of pressure, acting from points unconnected with the limb, nearly resembles the action of the surgeon's hands in rectifying displacements, and is not effected by any other splint with which I am acquainted.

At the Commune Hospital, I found Dr. Holmer in the surgical wards, who kindly pointed out to me the cases of chief interest. In a case of ununited fracture of the humerus, Dr. Holmer had cut down on the fragments, sawn off the ends, and tied the bones together with silver wire, which was passed through holes drilled in them on both sides. In order to ensure perfect quiet of the limb, an ingenious form of swing had been erected, made out of lengths of small gas-pipe : two uprights at the head of the bed, and two at the side next the arm, supported two cross-pieces, from which the splint was slung. Three weeks had elapsed since the operation without any untoward symptoms showing themselves.

Two resections of the knee-joint which I saw had turned out unfavourably : one in a middle-aged woman, the other in a young girl, and amputation had been performed in both cases by the circular method. (Dr. Holmer uses the silver-wire sutures for fastening the ends of the bones after excision, and leaves them in six or eight weeks.) The woman had a narrow escape from death by secondary hæmorrhage a fortnight after the amputation, and owed her life to the tourniquet having been left on loosely, so that the nurse could screw it up on the first occurrence of bleeding—a precaution which is always taken in this hospital. I found Lister's treatment of wounds carried out here in all its details with scrupulous exactness, the surgeon himself applying the dressings. The cotton-wool which is used so largely in this mode of treatment is all carded by the patients.

After visiting the wards, we adjourned to the operating-theatre, a spacious room lighted by a large window at one end, and with benches for spectators at each side. The only case for operation was a man with epithelial cancer of the tongue, which Dr. Holmer excised with great dexterity and neatness. The patient being chloroformed, and an assistant having drawn the tongue forward with forceps having the blades covered with linen, the operator seized the sore, which was at the side of the organ, with a vulsellum, and removed it with a few cuts of a scalpel. The bleeding, which was copious, was restrained by syringing with iced water while the edges of the wound were being brought closely together with six points of suture, which were inserted with small curved needles carried by forceps of the kind used by Mr. Spencer Wells.

I cannot conclude this hasty sketch of the Northern hospitals without expressing my obligations to the accomplished surgeons whom I met there. Their command of modern languages, and intimate acquaintance with the medical literature of other countries, combined to render a stranger's visit both agreeable and profitable.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

GUY'S HOSPITAL.

OPERATIONS, TUESDAY, SEPTEMBER 24TH, 1872.

Warty Growths in Larynx removed by Thyrotomy.—This was a deeply interesting case of a little boy, now about five years of age, named Alfred Mobbs. About eighteen months ago, he complained of a cold, and became hoarse, and was brought to Guy's Hospital to be examined. He came under the care of Mr. Davies Colley, assistant-surgeon, who found some warty growths in the larynx, and attributed all the symptoms to them. His dyspnœa increasing very much, tracheotomy was performed on the 28th of June, 1871, with marked benefit, and he improved much in health. But, whenever the tube was removed, the greatest distress immediately followed. Accordingly, thyrotomy was performed on the 3rd of August, 1871, and the warts removed. Some further growths were removed by the mouth on December 6th of the same year; and the child improved so much, that he exhibited all the characteristics of health, and when the tube was removed, he could speak in a hoarse whisper. The warts, however, were not much checked by this treatment; and thyrotomy was again performed on the 8th of March of the present year, and after the removal of the growths the parts were well rubbed with solid nitrate of silver. The child was discharged well in a month after, but could not breathe with comfort without the tube; and, unfortunately, he has again been admitted suffering from many small warts growing from the anterior parts of the larynx, and from the left false vocal cord in particular. Mr. Colley proceeded to operate again in the same manner as before: first inserting the tube in the trachea; then dividing the thyroid cartilage completely in the middle and removing the warts, cauterising the whole of the diseased surface with solid silver nitrate; and, lastly, closing the wound with a couple of stitches, leaving the tube in the trachea.

During the operation, the boy at one time ceased to breathe—blood having apparently run down the trachea into the bronchial tubes, and the chloroform acting powerfully on the lungs. But, after artificial respiration had been carried on for several minutes, the little patient recovered, and the operation was proceeded with, without any further anæsthesia. It struck me at the time that it would have been better to have used chloroform in a spray about the wound and tube than to have saturated lint blocking up the tube. It is Mr. Colley's intention to apply a solution of silver nitrate, ten grains to the ounce, to the larynx in the course of a week, the patient being well, and to keep applying it occasionally until all likelihood of further growth ceases.

GENERAL HOSPITAL, NOTTINGHAM.

HYDATID TUMOUR OF THE LIVER: PUNCTURE: ILLUSTRATED BY THREE CASES.*

(Under the care of Dr. RANSOM.)

By GEORGE ELDER, M.B., Resident Surgeon to the Hospital.

I PROPOSE to bring before the notice of the members of this Branch the epitomised accounts of three cases of hepatic hydatid tumours treated by puncture of the cyst-walls. All the cases were under the care of Dr. Ransom, to whose kindness I am indebted for the use of the notes.

CASE I.—Emma B., a well-conditioned, healthy-looking girl, aged 20, was admitted into hospital on August 30th, 1871. Four years previously, the patient had first felt a tumour of about the size of a nut in the left half of the epigastrium, since which time its growth had been slow, occasionally painful, and complicated by frequent sickness and discomfort after meals. A physical examination of the abdomen revealed the presence of a well defined, globular, smooth-surfaced, painless, elastic tumour, occupying the epigastrium, the right hypochondrium, and part also of the left hypochondriac region. The history of the case, the absence of any constitutional disturbance, and the character of the tumour itself, pointed to its hydatid nature. On September 25th, the late Mr. Thompson punctured the cyst-wall at its greatest prominence with a very fine trocar and cannula, and drew off a limpid fluid to the extent of four and a half ounces. The fluid had a specific gravity of 1009; a slight although decided trace of albumen; an abundance of chlorides; several entire and perfect echinococci, with a few corpuscles, either modified exudation-corpuscles or the result of histogenesis—probably the latter. The usual precautions were taken in withdrawing the cannula; and a pledget of lint, steeped in collodion, was placed over the wound. No epigastric tumour could be seen or felt immediately after the operation. Although no uneasiness was experienced by the patient during the performance of puncturing, pain and sickness directly followed its termination. For the relief of these symptoms, opium was at first given internally, but was soon afterwards rejected, so that recourse had to be made to hypodermic injection of morphia, much to the comfort of the patient. An urticarious eruption appeared, on the day after the operation, all over the patient's body. On the fourth day, the temperature and pulse were normal, and the patient sat up in bed. Three days thereafter, a relapse took place; the temperature rose; the pulse increased in frequency; and acute lancinating pains were felt all over the body. It was noted that a tumour not so large as that before the operation, but possessing the same characters, occupied the epigastric region. On October 21st, the patient was dismissed, with the tumour still to be felt, although smaller than at last note. Dr. Ransom has several times since seen the patient, and has found at each examination a diminution in the size of the swelling. The general health of the patient has, since the operation, been satisfactory.

CASE II.—Annie W., a well-conditioned, healthy-looking woman, aged 21, was admitted into hospital on January 29th, 1872. Two years before admission, a tumour of the size of an egg was first perceived by the patient. Its subsequent growth had been slow, painless, and unattended by any impairment of the general health. On examining the patient, it was noted that the whole hepatic region bulged anteriorly, laterally, and to a less extent posteriorly, but most markedly in the anterior direction. The bulged region was for the most part dull, and involved the ribs and thorax proper. Anteriorly, the dulness reached nearly to the level of the right nipple, which in this case corresponded to the fourth cartilage. The vertical measurement of the liver at its greatest was ten inches. Besides the general bulging, there was a decided swelling, which came from under the conjoined cartilages, and formed a distinct elastic tumour, of about the size of the fist, in the right half of the epigastrium. It might be said to fluctuate as tense cysts do, and seemed to indicate a hydatid cyst situated in the part of the liver under the ribs, but escaping from under their lower margins. The hepatic dulness was high posteriorly, but there were no symptoms of lung-congestion. The pulse and temperature were normal. Seven days after admission of the patient, the cyst-wall was punctured by Mr. Elder, with the same precautions as in the former case. Thirteen and a half ounces of a clear non-albuminous fluid, containing an abundance of chlorides, and with a specific gravity of 1007, were withdrawn. No echinococci or hooklets could be discovered—doubtless from the fact that, owing to an accident, the fluid was not examined before it had become turbid from decomposition. Just at the conclusion of the operation, and for some days subsequently, the patient was very sick and faint. On the following morning, her body was covered by an urticarious rash, as in the preceding case. Whether its occurrence was due to the opiate which had been administered on the previous night, or to some other less intelligible cause, was not made out. For a few days after the operation, the temperature and pulse rose, and there were at times severe abdominal pains; but on the fifth day the normal state of health had almost again been restored. Three weeks after the operation, the patient was discharged from hospital, with a materially diminished hepatic dulness. The lower edge of the liver did not extend further than midway between the conjoined cartilages and umbilicus, whilst its upper limit was lower than prior to the operation. Nevertheless there was bulging under the right mammary region, which pointed to the possibility of a cyst still existing there. At the last examination, which took place about a fortnight ago, the portion of the liver to be felt below the ribs was decidedly less than on the previous examination; and the elastic swelling in the right epigastrium, which had been punctured, was distinguishable, but small. Still there remained the bulging of the right thorax.

CASE III.—Mary A. J., a woman aged 25, became an in-patient on February 14th of this year. Although, until four years previously, when a small tumour was first perceived by the patient in the epigastrium, she had never been laid up by any well defined illness, still through life her health had been delicate. Bilious attacks and acute lancinating pains on the right half of the body, extending at times up to the shoulder of the same side, had latterly been of frequent occurrence. On admission, the icteroid tint of the skin and conjunctivæ, the deep colour of the urine, the pale fæcal evacuations, combined with uncomfortable fulness after meals and other symptoms, were indicative

* Read before the Midland Branch.

seriously disturbed hepatic and gastric functions. On making a physical examination, a bilobed tumour, possessing characters similar to the two former, and filling the epigastric region, was felt, evidently in connexion with the liver. The whole abdomen being rather tense, there was some difficulty in finding the lower edge of the liver, which seemed to be on a level with the umbilicus. On the right side, the hepatic dulness rose to the lower level of the third rib, and on the left to that of the heart, where it passed into an area of comparative dulness under the left clavicle. The heart seemed pushed up, so as largely to encroach upon the capacity of the left lung in the supramammary region. There was some bulging of the lower right ribs, where also there was slight œdema of the superficies. Several of the superficial abdominal veins on the right side were turgid. Posteriorly, the hepatic dulness was very much increased. Eleven days after the admission of the patient, the cyst-wall was punctured at its most prominent part, two and a quarter inches below the xiphoid cartilage, and a little to its right. Thirty-three ounces of a fluid resembling in tint pale urine, proved by the play of colours with nitric acid to be due to bile-pigment, were drawn off, without any pain being felt by the patient. Towards the end of the operation, the fluid became of a deeper colour, and syrupy in consistence. Its specific gravity was 1014; it contained a trace of albumen, and abundance of chlorides. Echinococci in a state of disintegration, bacteria, free hooklets, and questionable pyoid corpuscles, were revealed by microscopic examination. No tumour could be felt after the operation, although the anterior and lateral thoracic bulging remained as before. The after-progress of the case was complicated by the occurrence of a severe attack of jaundice, coupled with great pain in the region of the liver. On the third day after the operation, the epigastrium was found again to be the seat of a tumour, which increased so rapidly as soon to become as large as the hydatid cyst before the tapping, and, like it, decidedly fluctuant. When she was discharged on March 27th, it was noted that, although the epigastric tumour had diminished somewhat in prominence and tension, yet the area of hepatic dulness was quite as great as before the operation. The patient is again in our wards, presenting much the same conditions, for the relief of which a second tapping will shortly be necessary. The history of this case, the frequent occurrence of acute pains, the serious interference with the hepatic function, and consequent impairment of the general health, and also the turgidity of the superficial veins—proving beyond a doubt pressure upon the inferior vena cava—pointed to a less unfavourable result from the operation than was obtained in the other cases: a prognosis borne out by the subsequent progress of the case.

P.S.—On July 7th, the tumour was again punctured. Fluid rather turbid, and of the colour of porter, was drawn off to the extent of seventy-two ounces; it contained a very large proportion of albumen, and gave with nitric acid the play of colours indicative of the presence of bile-pigment. The patient has progressed so far favourably.

ASSOCIATION INTELLIGENCE.

SHROPSHIRE ETHICAL BRANCH.

THE annual general meeting of the above Branch will be held at the Lion Hotel, Shrewsbury, on Monday, October 7th, at 1 P.M.; J. W. PROCTER, Esq., in the Chair.

Dinner will be served punctually at 3.30 P.M., for the convenience of the country members.

Members have the privilege of introducing friends, on transmitting their names to the President.

Chamber concert music by a select band of musicians, under the leadership of Mr. T. Hulley, will be provided as usual.

Papers have been promised by the President, J. R. Humphreys, Esq., A. Mathias, Esq., Dr. Styrap, and R. Wilding, Esq.

Gentlemen intending to read cases, etc., or to be present at the dinner, will oblige by notifying their intention, at their earliest convenience, to

JUKES STYRAP.

Shrewsbury, September 16th, 1872.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE autumn meeting of this Branch will be held at Pontypool, on Friday, October 25th; T. J. DYKE, Esq., F.R.C.S., President, in the Chair.

Members who are desirous of reading papers, etc., are requested to communicate their intention to one of the Secretaries, without delay.

ANDREW DAVIES,
ALFRED SHEEN, M.D., } *Honorary Secretaries.*

September 25th, 1872.

SOUTH MIDLAND BRANCH.

THE sixteenth autumnal meeting of this Branch will be held at the Cottage Hospital, Stony Stratford, Bucks, at 2.30 P.M., on Tuesday, October 15th. Luncheon at 1 P.M. previously, kindly provided by Dr. Mackay at his house. A. D. Mackay, M.B., President.

Gentlemen who intend to read papers are requested to forward their titles forthwith to Dr. Bryan, Northampton.

J. M. BRYAN, M.D.
WM. MOXON. } *Honorary Secretaries.*

Northampton, September 11th, 1872.

WEST SOMERSET BRANCH.

THE autumnal meeting of the above Branch will be held at Yeovil, on Thursday, October 17th. The following question has been settled by the Council as the one on which each member should be asked his opinion at the said meeting:—"What is your opinion as to the desirability of establishing the Provident System in connection with our Hospitals and Dispensaries, and as to the part which the profession should take in reference to this question."

The meeting, under the presidency of Dr. GARLAND, will open at the Hospital at Four o'clock, when papers and cases will be heard.

The dinner will take place at The Choughs Hotel at Six o'clock; after which, the question above-stated will be taken and discussed.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, September 14th, 1872.

REPORTS AND ANALYSES

AND

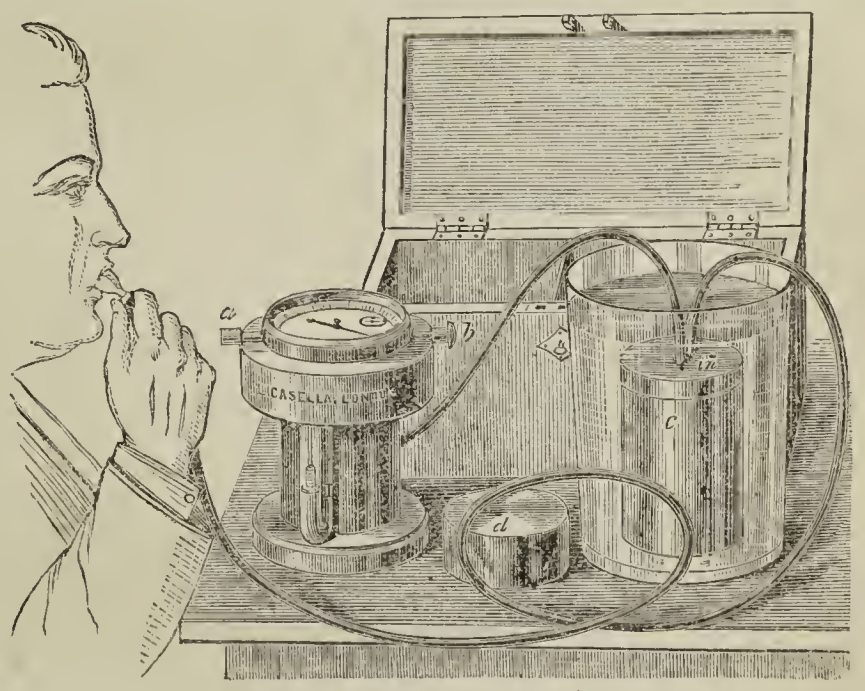
DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

IMPROVED PORTABLE SPIROMETER.

(L. P. CASELLA, 147, Holborn Bars, London, E.C.)

THIS admirable instrument may, with advantage, be brought under the notice of the profession generally, but especially of those whose practice and researches lead them much to the examination of the conditions of respiration. The use of Hutchinson's well known spirometer has, by its bulk and weight, been chiefly confined to public institutions, and there only to patients who could be easily brought to the machine. The new and very beautifully devised instrument here illustrated is



highly portable and singularly efficient. It is constructed on the principle of Casella's sensitive air-meter, first constructed for Dr. Parkes for measuring flow at the Netley Hospital, and now largely used in all public establishments. It consists essentially of finely balanced circular air-sail, which drives a hand over a dial, the graduations being obtained, by actual experiment, by means of machinery made for the purpose. The dial shows the force and amount of respiration and capacity of the chest. Casella's spirometer is destined to supersede those now in use, and greatly to facilitate the clinical use of spirometry.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 28TH, 1872.

PRINCIPLES OF SANITARY LAW.

"A SUMMARY of the Principles of a Comprehensive Measure for the Improvement of the Sanitary Laws" has been forwarded to us by Dr. Rumsey, to which we desire to call attention. The paper would have been read at the recent meeting of the Social Science Association, had Dr. Rumsey been able to have been present. Under twenty heads or principles, he frames a comprehensive plan of sanitary reform. The principles are as follows:—

I. The liability of property to bear the burden of sanitary improvement.

II. The distribution of the primary cost of permanent improvements over a sufficient number of years, to prevent the burden falling unreasonably upon the present generation.

III. The encouragement of local and provincial effort in administration.

IV. The selection and election of the best men that can be found to do the work in each place.

V. A distinction to be drawn, at least in administration, between those public health provisions which are common to the whole surface of the country, and those which are more or less special and applicable only to limited areas.

VI. The formation or definition of the areas in which all the common objects of health administration are to be carried into effect by single authorities throughout the whole country.

VII. The identity of areas for returns of vital statistics with those for common objects of sanitary management.

VIII. An improved organisation of the medical poor relief; by the separation of drug-supply from medical services, and the consequent general adoption of the dispensary system, as lately introduced into the metropolis, with modifications of that long established in Ireland. Also the comprehension, ultimately, of all public medical attendance among the poor in the machinery for health-preservation.

IX. The public registration of all sickness, including injuries, attended at the public cost.

X. The requirement of high qualification and special knowledge in those officers whom it is necessary to employ for scientific inquiry and reports, for advice to local authorities, and for supervision of corrective measures.

XI. The employment of men of local knowledge and experience as chief medical officers of health, if known to possess the requisite qualifications by having passed the test examinations. These officers to be debarred from private practice.

XII. The protection of these officers in the energetic, skilful, and independent discharge of duty.

XIII. The cost of the superior officers, so appointed, to be divided between the State and the communities.

XIV. The employment of the medical officers of district dispensaries or hospitals (who for the most part depend mainly on other sources of income) as contributors of facts, and as assistants or deputies to those more special officers who would be required to devote their whole time to the public service.

XV. The employment, in the same relation, of the certifying surgeons of factories and workshops, and ultimately of mines, for improving the health of operatives and the sanitary condition of work-places.

XVI. The combination of all central departments which have to do with matters of public health.

XVII. The compulsory combination or co-operation of those local authorities which are concerned with the "common objects" of health-management within the same registration district or first-class borough.

XVIII. The limitation of central action to consultation and advice, support and aid, including the diffusion of information obtained by the central authority from the chief medical officers of health, the county and borough engineers, and the legal officers: such information to be circulated generally, and applied to particular local emergencies.

XIX. The division of England and Wales into (eleven?) circuits of inspection, to correspond with the corrected divisions of the Registrar-General, and to be substituted for the districts of the late Poor-law inspectors.

XX. The consolidation and simplification of statutes; so that less trouble may be given to the lawyers in interpreting, and to the people in understanding, sanitary laws.

Under each of these heads, the details involved are clearly and concisely explained. The pamphlet is one which ably summarises the work in store for sanitary reformers and the directions in which it must be laid out.

STATISTICS OF OVARIOTOMY.

OUR appeal in aid of the report to the French Academy, now being prepared by MM. Boinet and Demarquay, has not yet brought forth much information. A few scattered cases have been sent in and published; and an imperfect account of a few cases, by Sir William Fergusson, has been sent from King's College Hospital; but we have not received anything like the amount of information we had good reason to expect from the registrars or house-surgeons of our hospitals. Many cases have occurred in the Hospital for Women, but we have no return of the results; and it would be very desirable to know if the early success at Guy's has been kept up; what have been the results at St. Bartholomew's; what at St. Mary's, where a cottage is devoted to this operation; and what at University College, where it is understood the physician-accoucheur has a private institution in the neighbourhood specially arranged for this and kindred cases. It would be also very desirable to have the necessary facts for comparing the results in London and in provincial hospitals, in cottage-hospitals, and in private practice. All this, we hope, we may be enabled to do without much delay, but it must depend upon the good will of our correspondents. In the meantime we are glad to be able to add this week the results up to the end of June of the two operators who have had the greatest experience in England and Scotland. Mr. Spencer Wells completed his five-hundredth case just before the end of the month. The results of his last 100 were 20 deaths and 80 recoveries. The mortality had steadily diminished from 34 in the first 100, to 28 in the second, 23 in the third, 22 in the fourth, and 20 in the fifth. The general result of the 500 cases was 373 recoveries and 127 deaths. Up to the same date, Dr. Keith of Edinburgh had operated on 144 cases, with a result of 117 recoveries and 27 deaths. Thus we have from two operators only a total of 644 cases, with 490 recoveries and 154 deaths.

Now that Mr. Baker Brown's health has caused his retirement, we trust, as a matter of surgical history, the whole result of his experience in ovariotomy will be made known; and the great success which he obtained after using the cautery to the peduncle is a fact which must have its full weight. The experience of Dr. Tyler Smith and Mr. Bryant is also considerable; and we trust that, for the credit of British surgery, a knowledge of the results they have obtained will be made available through these columns for the report of our *confrères* to the French Academy. It is not often that such a request for information has been made, and it ought not to be made in vain.

CLINICAL TEACHING.

THE deficiency of practical clinical instruction in hospitals, on which we have recently commented, is treated practically in an interesting article in the *Dublin Journal of Medical Science*, by Dr. Handsel Griffiths. He calls attention to, and severely comments on, the clinical ignorance of students at the end of their medical career, and asserts that, under present arrangements, it cannot well be otherwise, for it is not to be expected that a practising physician can expend his valuable time in illustrating and demonstrating to the students the elements of clinical science ; and hence it is found, from the hurried clinical instruction given at numbers of bedsides, that the student retains but a confused idea, and the valuable habit of exactitude of observation is not attained. Dr. Griffiths proposes, as the best remedy for this state of things, that there should be appointed on the staff of the hospital a clinical demonstrator, whose duties would be to instruct the junior students in the outlines of external anatomy or clinical topography ; to demonstrate the use and construction of the appliances for the recognition of physical signs ; to illustrate, by preparations and by recent specimens, when possible, the broad outlines of morbid anatomy and pathology ; and to indicate the association between physical signs and the alterations of structure. For the due fulfilment of these functions, it would, he thinks, be desirable that the clinical demonstrator should have no part in the treatment or care of the hospital patients ; his office should be solely and absolutely tutorial, and this, if he perform its duties conscientiously, being a laborious one, he should be untrammelled by any other hospital duty. The advantages to be derived would be both to the hospital and the students—the hospital would gain in dignity and estimation as an educational institution, and the students would be better fitted for the more practical examinations by which their clinical knowledge is to be tested in the future. Some such arrangements already exist in one or two of our medical schools, and their accomplishment is entrusted to a medical tutor. It would be a boon to students, were the system universally carried into practice.

THE death is announced of Dr. Horteloup, physician of the Hôtel Dieu.

THE Reigate and Redhill Cottage Hospital has reached its fifth year. During the past year, it treated seventy-seven cases, of an average duration of forty days, at an expense of £600.

A NEW infirmary has been opened at Oldham. The cost of the building, which is £7,500, has been defrayed by subscription, and a contribution of £1,000 from the surplus of the Cotton Famine Relief Fund.

THE inhabitants of Fiume, in Illyria, are the subject of a hideous ulcerative disease, affecting the nose and face especially, which is known as *Schiultro*, the name of the village where it arose towards the end of the last century. Dr. Barth presented drawings and descriptions of the disease at the last meeting of the Académie de Médecine. It appears to be a modified form of syphilis, aggravated in the inhabitants of an uncultivated and sterile country by want of medical succour and of the means of hygiene.

DEATH FROM CHLOROFORM.

ON Saturday last, Mr. Payne held an investigation at the Crown Tavern, Westminster Bridge Road, into the circumstances attending the death of Harriet Sophia White, aged 16, who expired at the South London Ophthalmic Hospital, Southwark, while under the influence of chloroform. It appeared from the evidence that the deceased was the daughter of a builder, and that, five years ago, in consequence of an affection of her eyesight, was placed under chloroform, and an operation performed. A few days since, upon returning home from a picnic party, she expressed a wish to her parents to undergo another operation, as she still suffered some pain. She was accordingly taken to the hospital, and directed to come again on the 5th instant. She was then seen by the medical men in the operating-room, and the usual precautions were taken as is necessary when chloroform is to be administered. She was laid on a couch, and the inhaler was placed over her mouth. She apparently became unconscious, and the inhaler was about being removed, when, showing signs of sensibility, it was readjusted. An instrument was then used to make an examination, when a change was observed, and it soon became manifest that the heart had ceased its action. Means were taken to restore animation, but without avail. On the part of the friends of the deceased, it was contended that their consent had not been asked as to whether chloroform should be administered ; while the testimony of the medical gentlemen examined showed that everything was done in the case that was consistent with its nature, and that the deceased, upon entering the operating-room, was aware that she would be placed under the effects of chloroform, having previously undergone an operation with its aid. The jury returned a verdict that the deceased died whilst under the influence of chloroform.

DANGEROUS MILK.

THE practice of administering medicines, such, for instance, as iodide of potassium, by administering them to the cow and so impregnating its milk with them, has been much recommended in the treatment of children. It may be reasonably doubted whether there is anything more than a fanciful advantage in it, and whether the notion that the salts are thus animalised and rendered more easy of absorption and more efficacious in action, is not altogether chimerical. A communication which we have received from Mr. J. P. Bieling of Hailsham describes an unintentional medication of this kind which may very probably have occurred in other cases without being detected, and which, as will be seen, may produce very serious mischief, and even death.

UNITED STATES MARINE HOSPITALS.

THERE are seventy-five hospitals connected with the United States Marine Hospital service. The Secretary of the Treasury has directed a detailed report of all operations performed and diseases treated to be sent to him, in order to have a report made out, giving statistics never yet collected.

SMALL-POX AMBULANCES.

THE authorities of Vienna, in view of the continued prevalence of small-pox in that city, have at last decided that ten ambulances shall be provided, of which one is to be stationed at the General Hospital, and the others at the district hospitals. The *Wiener Medizinische Zeitung*, in recording this fact, suggests an important question ; viz., How is it to be known that a patient for whom the carriage is sent, really has the small-pox ? In such instances, says our contemporary, the diagnosis is often a matter of doubt ; and ought a patient to be exposed, perhaps for the first time, to infection in a small-pox carriage ? Among other regulations determined on, is the institution of suburban mortuaries for the reception of the bodies of persons dying of small-pox.

THIRSTING FOR REVENGE.

THE most eminent of French scientists at this moment has taken out a patent, of which the avowed object is to slake his country's thirst for vengeance in a manner remarkable for its pleasing and profitable ingenuity. M. Pasteur has taken out a patent for a new mode of brewing beers, "applicable to mild and strong, brown or pale ales." In commerce, he desires that his beer may be called "Bières de la Révanche Nationale," and abroad that of "Bières Françaises." M. Pasteur's process of brewing is founded upon observations that contact with air is injurious to the manufacture of beer : he claims for his process that it makes more beer, better and stronger, from the same amount of material ; that there is no need of cooling-vats, ice-houses, or store-cellars for his beer. The notion of quenching the thirst of his countrymen for revenge in foaming tankards of unsurpassed home-brewed beer is eminently patriotic ; and if M. Pasteur can drive Dreher

from the market, conquer Bass, expel Viennese Lager Bier, and introduce the Bières Françaises in the Trink-Gärten, he will have achieved a pacific triumph of which even Prince Bismarck might be proud, and which he could not hope to rival.

POISON BOTTLES.

AT the last annual meeting of the American Medical Association, the preamble and resolutions adopted by the College of Physicians of Philadelphia, the preamble reciting the frequency of cases of accidental poisoning by druggists, and the resolution recommending that all bottles containing poison should not only be labelled poison, but should be roughed on one side so as to indicate their poisoning contents to the sense of touch, and also be labelled with the most ready and efficient antidote, was, upon motion, adopted by the convention.

THE SHEFFIELD GUARDIANS.

OUR Sheffield correspondent writes:—The Sheffield guardians have lately made an important alteration in the vaccination arrangements of the town. Previously to last Wednesday, there were four public vaccinators for the township (exclusive of the sub-districts); viz., Messrs. Herbert Walker, Griffith, Skinner, and Leach. These gentlemen would annually vaccinate, on the average, some five hundred cases a piece. Through the recommendation of Dr. Seaton, the guardians have cancelled these appointments, and thrown the four districts (as far as vaccinations are concerned) into two, thus forming a north and a south district. Mr. Griffith and Mr. Skinner were fortunate enough to poll the majority of the guardians' votes, and were thus elected. Mr. Leach, who had only recently come into office, has perhaps not so much reason to complain of the new arrangements; but they do seem to bear hardly upon Mr. Walker, who has creditably held his appointment for fifteen years. As a compensation to this gentleman, I trust the Poor-law authorities will recommend the guardians to increase his salary as district officer.

THE SUNDERLAND HOSPITAL FOR SICK CHILDREN.

THE local papers report a very ugly and unpleasant disagreement in the medical staff, and some irregular proceedings in consequence. The institution—a small but useful one—appears to have owed its origin mainly to the exertions of Dr. Pyle, with whom was joined Dr. Mordey Douglas as surgeon. Dr. Douglas appears to have done a large share of the work; and, some disagreement having arisen, Dr. Pyle and the treasurer appear to have agreed, on their own responsibility, to discontinue the institution, for which revolution the approach of the end of the term of tenancy gave facilities. Dr. Douglas naturally resented such proceedings, and very wisely called a meeting of the subscribers who did not show any intention of sacrificing the hospital; and accordingly it is likely to continue its career, Dr. Douglas remaining as its acting officer, and Dr. Pyle, having resigned, and, by his remarkable course of action, having interposed almost insuperable obstacles to his again taking office in the hospital which he has laboured to destroy after having succeeded in founding it.

INDIAN MEDICAL NEWS.

"PUBLIC attention," says the Calcutta correspondent of the *Times*, "is becoming still more painfully directed to the cholera reports. At Meean Meer 140 Europeans, chiefly of the 37th Regiment, have been admitted to hospital, and more than half that number have died. At Lahore 198 cases have been reported, and 100 deaths. Still there is no reason, I find, to believe that we are on the eve of having another great cholera wave over the land. The outbreaks, distressing as they are, seem partial merely. Dengue fever, which has abated greatly here, has broken out severely up country, at Allahabad, and elsewhere over a wide district. But as no one dies of dengue, very little attention is paid to it, when once it has left a district. Calcutta, for instance, would not be particularly distressed if it knew that all Allahabad was down in Dengue, dreadful as the pain is while it lasts. With cholera it is very different, and there are few intelligent persons who are not now watching the returns."—By telegram we learn that cholera is raging fearfully in Srinugger, Cashmere. In one day 367 cases occurred, of which 144 terminated fatally.—Cholera is still prevent at some stations in the Punjab.—The Government of India has given a grant of one lakh of rupees towards the fever relief operations in Burdwan and Hooghly.—The Government of India has ruled that the prohibition of inoculation is only justiable when complete means of protection by vaccination have been supplied to the people. It has lately been ruled that commissioned medical officers of the army holding civil medical appointments are subject to the same rules in regard to privilege and other leave as military officers in civil employ.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

FROM the calendar of this institution for 1872, which has just been published, it appears that during the year from Midsummer-day, 1871, to Midsummer-day, 1872, 422 candidates passed the preliminary examination in general knowledge for the Fellowship and Membership of the College; 649 were admitted to the primary examination in Anatomy and Physiology, of which number 429 passed, and 220 were rejected. The diploma of member was granted to 349 candidates, which shows an excess of 58 over the corresponding period of last year. The total income of the College, from all sources, in the year, is set down at £12,627 : 17 : 8. The disbursements over the same period amount to £12,038 : 7 : 7. The College department cost £2,492, of which salaries, wages, and pensions absorbed £1,655 : 12 : 3; and the museum cost £2,301 : 8 : 4, of which £1,707 : 9 : 2 went in salaries, wages, and pensions. The library cost £358 in salaries and wages, and £294 in the purchase and binding of books.

HYDROPHOBIA FROM THE BITE OF A CAT.

A FATAL case of hydrophobia occurred in Salford, on Tuesday, September 24. The man, William Wilkinson by name, had been bitten in the hand by a cat ten weeks ago, while attempting to drown it. The wound was not cauterised till the following day. He continued in perfect health up to Saturday, September 21st, when he was suddenly seized, while at the races, with inability to swallow. Symptoms of hydrophobia rapidly ensued, and continued to increase until the afternoon of Tuesday, when he expired in great agony. This is the second case of hydrophobia from the bite of a cat which has occurred in the neighbourhood of Manchester within the last few months. The former being a clergyman at Mottram, whose case was fully reported in the BRITISH MEDICAL JOURNAL.

MANCHESTER ROYAL INFIRMARY.

AFTER a lengthened period of incubation, the Infirmary Reform Bill has at last seen the light. By this scheme it is proposed to appoint two assistant-physicians and two assistant-surgeons, whose duties will be to attend to the out-patients, and to undertake the charge of the patients in the wards during the temporary absence of their seniors from time to time. In addition to these assistant officers, they propose electing an ophthalmic surgeon, an obstetric surgeon, and a dentist; but their precise duties are not yet accurately defined, as the scheme simply says that they shall take charge of any patients which the full surgeons may from time to time send them. No allusion is made to any change in the mode of election, so that if no further suggestion is made as to the appointment of a limited electoral board, the elections will, as heretofore, rest in the hands of the general body of Trustees, who will continue to be canvassed with all the ardour of political partisans, and who, it is presumed, will continue to give their votes, as they have hitherto done, by force of personal influence and importunity rather than by the guidance of any clear idea of the relative fitness and merits of the rival candidates. It is designed that the staff shall finally consist of four full physicians and four full surgeons, with two assistant physicians and two assistant-surgeons, an ophthalmic surgeon, an obstetric surgeon, and a dentist. A meeting to consider these suggestions is called for September 26th, and the entire scheme will either be passed or rejected on or before October the 11th, on which date the

four months' grace granted them at the last special general board will expire. It is presumed that if the scheme become law no time will be lost in proceeding to fill the vacancies.

THE FRENCH ASSOCIATION.

THE French Association for the Advancement of Science has held a successful and promising first meeting. The congress was not remarkable for the presence of any great number of eminent men, or the importance and originality of the papers read; but the attendance was numerous and respectable, and the proceedings were interesting and enthusiastic. On the occasion of a communication from M. Oré, in which he attacked the theory of Liebreich (the author of the medical use of chloral) as to the transformation of chloral in the blood into chloroform and formiate of soda, Dr. Bouillaud, the president of the section, took occasion to declare that France is still, and always will be, "the great nation," the nation, *par excellence*, of science and art; and, thanking M. Oré in warm terms for his important communication, embraced him amidst the plaudits of the whole assembly.

SCOTLAND.

ANDERSON'S INSTITUTION, GLASGOW.

THE vacancy in the lectureship on medical jurisprudence, rendered vacant by the appointment of Dr. Simpson to the like chair in the University of Glasgow, was filled up, on Monday, by the appointment of Dr. Alexander Lindsay. There were eight candidates. A donation of £1000 was intimated, at the same meeting, from Mr. J. Tennant, St. Rollox.

IRELAND.

THE WAGES QUESTION.

AT the last meeting of the Sligo Board of Guardians, the salaries of the medical officers of that union were increased 20 per cent., by a majority of twenty-one to nine; the grounds on which the increase was made being "the great advance in the price of the necessaries of life, and the consequent depreciation in the value of money." *O si sic omnes.*

A PATTERN TO GUARDIANS.

IN moving the increase of the salary of Dr. Harrison, the medical officer of the Killough Dispensary District, on the ground of the greatly enhanced cost of living, Major Nugent, one of the Downpatrick Board of Guardians, made a few observations, which we propose to have the pleasure of putting on record here, for the use and encouragement of other dispensary physicians who may justly and wisely bring them under the notice of their committees.

Major Nugent: It is not because I consider the merits of any on particular doctor more than another that I rise to support this motion. I look upon the matter from a broader principle, because I have always considered that the medical officers of this and other unions are greatly underpaid for the duties they have to perform. This movement, now that it has cropped up, must go on until it is settled; and I do not think that the clap-trap talk about distress is any argument in the matter. I do not think we are a bit worse off, as far as crops are concerned, than when the medical charities were established. [*Hear.*] I was always an advocate that no doctor should get less than £100 a year. Look at the work a doctor has to perform. Look at how many masters he is called upon to serve. He has to serve the Commissioners, this Board, his own committee, and the public; and he is obliged to be at the service of the country morning, noon, and night. He may be called out of his bed to attend a sick call at any hour of the night, and for what? for £80 a year. I put registration fees and all these other extras out of the question. He does work for these, and no more galling kind of work can be found than that matter of vaccination. What is £80? What is it a day? It is about 4s. 5d. a day. Labourers have got that for reaping the corn in some parts of the country. If he got £100 a year, what would that be? about 5s. a day; and, if you employ a plumber to do a job for you, he will charge you 6s.; and remember the plumber will not work more than eight or nine hours for you, while the doctor must work night and day. You expect him to be highly educated, and yet you give a common labourer nearly as much as him. I look upon that as a niggardly kind of economy; and I will certainly support, not only the increase to Dr. Harrison, but to all the other officers.—The motion was carried; and Major Nugent afterwards gave notice he would move, on that day fortnight, that the salary of the medical officer of Strangford Dispensary district be increased to £100 *per annum*.—The Board then adjourned.

COUNTY TYRONE MEDICAL ASSOCIATION.

AT a meeting of the medical gentlemen of Tyrone, held in Omagh on the 12th instant, the following resolution was unanimously adopted:—"That corporate union amongst the medical men of the county is required for the protection of their interests and the promotion of the public health. That for these purposes a county medical association shall be formed, to be called the County Tyrone Medical Association." Dr. Motherell, of Castlederg, having been appointed county representative, several other resolutions were passed, and copies were ordered to be forwarded to every medical man in the county. We have no doubt but that such union amongst the members of the profession will lead to much benefit both to the profession and the public.

THE POOR-LAW COMMISSIONERS AND SMALL-POX REMUNERATION.

THE Poor-law Commissioners, in a letter to the Cork Board of Guardians, state "that though the duties performed during an epidemic of small-pox fall within the regulations defining the ordinary duties of a medical officer of a dispensary district, yet if they were of a more than ordinarily arduous nature grounds would exist for additional remuneration." The medical officers in their application state that 7,000 cases of small-pox had occurred in Cork during the recent epidemic.

THE LOCAL GOVERNMENT BOARD, IRELAND.

THE *Gazette* of September 24th informs us that Her Majesty has been pleased to appoint, by warrant, Alfred Power, Esq., C.B. (Chief Poor-law Commissioner), to be Vice-President of the Local Government Board for Ireland, and John McDonnell, Esq., M.D., and Richard Montesquieu Bellew, Esq., to be Commissioners on the said Board. These, along with the President, who shall be the Chief Secretary to the Lord Lieutenant for the time being and the Under Secretary for the time being, constitute the Local Government Board for Ireland, which is now established on the date of the first appointment of a Vice-President.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A MEETING of the Poor-law officers of the county Tyrone was held at the White Hart Hotel. Owing to the inclemency of the weather, the attendance was not so good as was expected; there were present, Dr. Motherell, Dr. Robinson, Dr. Neville, Dr. Henry, Dr. Love and Dr. Maunsell, Dublin. Letters of apology were read from Dr. Fleming and others who were unable to attend. The following resolutions were unanimously passed:

1. That corporate union amongst the medical men of the county is required for the protection of their interests and promotion of the public health; that for these purposes a county medical association shall be formed to be called the County Tyrone Medical Association.
2. That a county representative, who shall act as secretary, and a treasurer be appointed.
3. That the county representative act as President of the Association, and that he be in communication with our Parliamentary representatives.
4. That the medical men of each Union be requested to appoint one of their number as Union Secretary and Treasurer, and to correspond with the county representative.
5. That the yearly subscription to this Association shall be 2s. 6d.
6. That Dr. Motherell, Castlederg, be appointed county representative for the county Tyrone, and that Dr. Love of Omagh be appointed Treasurer. That the following gentlemen be nominated as Union Secretaries: Dr. Devlin, Dungannon; Dr. Fleming, Omagh; Dr. Motherell, Castlederg; Dr. Graves, Cookstown; Dr. Todd, Strabane; Dr. Given, Gorton; Dr. Philips, Clogher.
7. That fifty copies of these resolutions be printed and circulated amongst the Poor-law medical officers in the county.

SOCIAL SCIENCE ASSOCIATION.

Annual Meeting held in Plymouth, September 1872.

DEPARTMENT OF PUBLIC HEALTH.

H. W. ACLAND, M.D., F.R.S., President.

Thursday, September 12th, 1872.

President's Address.—Holland and Stevens: Sewers and Sewage-poisoning.—Baker: Prevention of Disease.—Michael on the Principles of Sanitary Legislation.—Joint Committee's Report.—Bulteel: The Public Health Act and the Three Towns.—Acton: Medical Mission.—Hope: Pollution of Rivers.—Scott: Purification of Sewage.—Greenway: Hospital Construction.—Pearse: Ventilation of Ships.—Littleton: Mortality of Infants.

THE PRESIDENT, on taking the Chair, thanked his fellow-countrymen for electing him to that office, and expressed his regret that his brother, to whom it had been offered, could not take it. Matters to be discussed in that Section were of the utmost consequence to the public. What was wanted was, as Sir John Coleridge had said, complete and intelligent understanding of the immense importance of the questions within the walls of the legislature. The President then delivered an address, which will be found at p. 345 *ante.*

Lord NAPIER gracefully tendered the thanks of the Association to Dr. Acland; and, in doing so, said he would present to the meeting two illustrations of the importance of the first element to which Dr. Acland had alluded as affecting the health of communities. Air, water, and food had been set down by Dr. Acland as primary essentials to health. Whilst he (the speaker) was in India, there were about eight thousand prisoners in the presidency of Madras; and, a plan being laid down for the improvement of the gaol-accommodation, it became his duty to prosecute that plan with all the energy and vigour he could. They commenced by giving greater accommodation to the long-period prisoners, whilst those under short sentences were allowed to remain in their previous quarters with a little improvement. Before these alterations were made, the death-rate, calculated on the average daily strength, was 12 per cent. per annum; at the end of six years, it had fallen to within 2 and 3 per cent. With an improved accommodation, there was also some improvement in the dietary; but to what extent the lessened death-rate was due to the greater accommodation, and to what extent to the improved food, he had been unable to determine. At Calcutta, cholera was permanently located, and steps were taken to improve the water-supply. He was unable to give statistics; but, on visiting a hospital, which prior to the improved water-supply was crowded with cholera patients, he found a few months back one of the wards quite empty, and the number of patients far below the average of years previous to the improvement referred to.

The following explanatory details were referred to by Dr. Acland in the course of his address, as the basis of sanitary work.

Essentials of Life and Health, Personal and National.—1, air, water, food; 2, clothing, fire, habitation; 3, highways, cleansing, police; 4, education.

Subject Matters connected with National Health.—1, water-supply; 2, removal of refuse; 3, control of buildings (new and old); 4, sewage; 5, drainage; 6, prevention of overcrowding; 7, prevention of contagious and infectious diseases; 8, prevention of epidemics; 9, formation of sanitary areas; 10, registration of causes of death; 11, registration of sickness, as distinguished from death; 12, the laws of quarantine; 13, the superintendence of epizootic epidemics; 14, the inspection of hospitals; 15, the inspection of penitentiaries and prisons; 16, the inspection of dispensaries; 17, the inspection of druggists' establishments; 18, the inspection of factories; 19, the inspection of agricultural labourers; 20, the placing every district within reach of sanitary inspection by experts; 21, education and registration of medical practitioners; 22, education and registration of national health experts; 23, education and registration of nurses and midwives; 24, control of intoxicating liquors; 25, mode of obtaining analysis of air, food, water, etc.; 26, vaccination; 27, coroners; 28, rights of millowners to interfere with sanitary measures; 29, organisation of charities.

The constitution of central authority, the constitution of local authorities, the duties of central authority, the duties of local authorities.

India Water Analysis Report.—1, period of examination; 2, rainfall (yearly); 3, rainfall preceding week; 4, weather; 5, physical geography and geology (A to H); 6, opinion of people on sources; 7, prevailing diseases. Details—I, wells, 1-19; II, tanks, 1-14; III, rivers, 1-11. Analysis—Quality A, physical, a 1-6, b 1-2; B, chemical, a 1-11, b 1-6; Quantity A, suspended matter, 1-2; B, dissolved hardness, 1-3; general, 1-20; gaseous, 1-4.

Hospitals.—Site, garden, ward-unit, bed-space, number of beds, height, width, windows, warming, ventilation, latrines, baths, etc., minor wards, nurses' room, scullery, general offices, kitchen, etc., general ground-plan, mortuary, laundry, builders' details, mode of admission, class of patients, class of disease, nursing, quiet, cheerfulness, occupation, helping, recreation, exercise, convalescent rooms, dining-rooms, instruction in cookery, out-patients' waiting-rooms, food, medicine, chaplain, residence, chapel, ward-prayers, reading and teaching, furniture, decorations, prints, flowers, animals, amusements.

Public Offices and Acts concerned with National Health.—The Home Office, Privy Council, Board of Trade, Poor-law Board, Registrar-General's Office, Lunacy Commissioners. Local Government and Health Acts, Medical Acts, Lodging-Houses Acts, Artisan or Labourers' Dwellings Acts, Factory Acts, Workshop Acts. Hospitals for Insane. War Office, Medical Department; Admiralty, Medical Department; India Office, Medical Department. Adulteration of Food Acts, Markets and Bakehouses Acts, Vaccination Acts, Pharmacy Acts, Emigration Acts, Acts to Regulate Coroners and Witnesses in Forensic Cases.

SEWAGE-POISONING.—"What steps should be taken to guard against Sewage-Poisoning?" by Mr. P. H. HOLLAND. This paper, which was read by Mr. MICHAEL, Q.C., said that safety required filth to be got rid of and removed to a prudent distance before it became poisonous, as rapidly and as economically as possible; and no other way had been, or was likely to be, discovered so quick, so effectual, and so economical, as conveyance through the sewers by water. No collections of filth should be allowed at all. It was neither just nor prudent that the safety of any should be dependent upon the carefulness of all, as it must be if collections of "the filthiest of all filth" were allowed near dwellings, which could only be prevented from becoming actively injurious by the constant carefulness of every family and the untiring vigilance of the officers appointed to enforce such care. The only safe course, therefore, was to provide for the immediate removal of that which was disgusting and dangerous, and to take care that none of it lodged by the way; for it was less the sewage itself than deposit from sewage from which danger and annoyance proceeded. Sewers should, therefore, be so constructed, first, that as little foul air should form in them as possible; and, secondly, that any foul air which did form should escape when it would do least mischief. Two simple expedients were indispensable and effectual—free ventilation of sewers outside the dwellings, and absolute non-connexion of sewers with the interior of them. The external ventilation of sewers, even in the rude way common in London—namely, by openings from the crowns of the sewers to the middle of the street—though the cause of frequent annoyance, was almost infinitely safer than no ventilation at all. The danger might be entirely avoided by providing channels for the escape of sewer-air at places where it would not annoy, and, better still, by compelling it to pass through charcoal, by which any putrescent matter would be absorbed and decomposed before the air was allowed to escape. The other necessary precaution was effectually cutting off all communication between the sewers and the house-drains, by which sewer-air can be conveyed into any dwelling. It was not enough merely to interpose a water-trap, though that was a great protection, especially if it were itself ventilated by a pipe from the centre of an inverted syphon to the roof-pipe. Another good plan was to have the house-drains as short as possible, to have them conducted directly through the outside wall, and not along the floor of the basement, as was too common.

Mr. J. N. STEVENS, M.R.C.S. (Plymouth), read a paper on the same subject. He was of opinion that the very best sewers that could be used were those of Portland cement, in large blocks, fitted closely together, and surrounded by a thick bed of concrete, as through these no percolation of the sewage could take place. The sewers should be at such an angle as would allow a ready and rapid flow of the sewage to the outfalls. They should invariably be of large size as regards the main ones. The interior should be as smooth as possible, so as to hasten the onward flow of their contents; and, for the attainment of the same desirable and self-evident purpose, they should be oval or egg-shaped. Various methods had been devised for the ventilation of sewers; but the plan of ventilating tubes from the main sewers appeared to him not unlikely to carry poisonous gases into the bedroom-windows of the inhabitants. If the plan were adopted, the tubes should be carried above the tops of the houses. Wherever main sewers constructed in the manner he had mentioned, and on the principles he had named, were supplemented with a sufficient number of ventilators opening on the street, they should have trays of charcoal and chloralum in immediate connexion with them, so as to completely deodorise and disinfect them.

The discussion was opened by Dr. HEARDER, who said that, in

almost all cases, those who proposed the use of chemical means to prevent sewage-poisoning overlooked the difficulty which would exist in keeping these chemical processes in a proper condition. Who was to look after the charcoal-filters? And it must be remembered that it was necessary that they should be so far out of the reach of garret-windows as to make them incapable of carrying noxious gases there. Charcoal would have to be changed over and over again, and the result would be that by-and-bye this would not be done at all. The attempt to ventilate sewers by bringing up pipes from the ground to the top of the house would be found to be impracticable. Although the ventilation of sewers was a necessity, he had heard as yet no plan devised which was adequate to the purpose. He did not see why certain localities might not put up large shafts to serve as an outlet from the sewers; and he did not see why the church towers could not be used in order to carry up the shaft. There would be some little danger in applying heat for the purpose, because there were inflammable gases in these drains.

Dr. HARDWICKE, Medical Officer of Health for Paddington and Bayswater, said it would never do to ventilate sewers opposite people's windows, particularly if they were foul. Where this plan and that of tall shafts had been tried it was doubtful if the desired effect had been accomplished. Charcoal lost its virtue when it became damp or moist, and the result would be that providing and keeping charcoal ventilators would be very expensive. The chemical method was equally difficult. Carbolic acid was a stinking nuisance, and although chloralum was a tolerably safe thing he was not sure about the expense. The only practical remedy was to his mind flushing with a proper supply of water. A supply of thirty gallons per head of the population would carry away deposits before they could become dangerous or offensive. He also thought it desirable that storm-water should go down the drains.

Dr. NANKIVELL thought the best plan of ventilation was to have short shafts at no great distance from each other to intercept the passage of the foul air.

Mr. C. BULTEEL, F.R.C.S., said, although medical men were fully alive to the immense improvement of the new system of drainage over the old cesspools, if properly carried out, yet unless there was thorough attention paid to the details, he very much questioned whether, in some instances, the sewers and drains were not greater sources of danger than properly managed cesspools. It was of immense importance that the work should be most thoroughly superintended. He believed the occurrence of typhoid fever was rather due, not to the improper character of the drainage so much as to the carelessness in superintending the details of the execution of the work. To give an example, Mr. Serpell, ex-Mayor of Plymouth, built a house with the most recent improvement in a very healthy position just outside the town. Ventilating shafts were made, and the drains and sewers were contrived in the most perfect manner, no expense being spared. By and by, to Mr. Serpell's astonishment, a beautiful well of water was found poisoned with sewage matter. The earthenware pipes were dug up, and it was found that, whereas almost every junction at the top was most carefully cemented, the lower part, far the most important—only a little more trouble was required to do it—had been absolutely neglected. This showed how important it was that not only medical officers of health should be appointed, but men who would see the work of laying sewers thoroughly carried out. From what had been said regarding the prevention of sewage-poisoning, he thought local boards would do well as yet to hold their hands before going into any great expense. It was easy to say proper flushing was required, but at Stonehouse the difficulty on that point would be to get a proper supply of water.

Mr. VIVIAN objected to the short shafts spoken of by Dr. Nankivell for carrying off the gases, having had one erected almost close to his dairy near his house at Torquay, from which he derived anything but a pleasant experience. He was rather prepossessed in favour of tall shafts, but he would have them so constructed that the lee scupper should be opened during certain winds, and the weather scuppers during other winds.

Mr. MICHAEL, Q.C., was not sure, from his present acquaintance with Plymouth, that the sewers there might not prove a curse. The great thing to be aimed at was to have no connection between the sewers and the human habitations.

After a few words from Dr. LITTLETON, a vote of thanks was awarded to Mr. Holland for his paper.

PREVENTION OF DISEASE.—Mr. T. BAKER next read a paper on "The Prevention of Disease." It was the business of medical men to cure, but of their patients to prevent disease, which was an abnormal state arising from a violation of nature's laws. Every one ought to be sufficiently acquainted with human physiology to enable him to prevent disease, which, if not hereditary, must arise from poison absorbed into the blood, *i.e.*, unwholesome food, etc., the inhalation of foul air, or the inoculation of virus through the skin, or the possibility of contagion in epidemic disease, which was so much doubted. Mr. Baker considered that by no means sufficient care was taken in regard to the health of animals used as human food. The wonder was not that measles, scarlatina, and small-pox, etc., prevailed, but that their intensity is not ten times greater. Want of ventilation was the chief promotion of cholera in 1849. The advantages of sanitary appliances were proved in the late small-pox epidemic, by the model dwellings situate in the "fever-nests" of London, which contained a population four times more dense in proportion to the area they occupied than that of the "fever-nests" themselves; and yet, whereas the small-pox mortality was, during the year 1871, for the whole of London, including Belgravian and suburban districts, 24 per 1,000 of population, the small-pox death-rate in these dwellings was only one per 1,000. What was small-pox but an effort of nature to throw off poison from the system? The contagion theory, which assumed that every one was equally liable to be attacked by epidemic disease, was an absurd contradiction of universal history. That small-pox ought not to be made the subject of panic, being in truth a less mortal disease, or rather means of eliminating disease, than many others, was proved by the fact that in the first six months of this year, during and following the worst small-pox epidemic of the century, the London general mortality had been no less than 4,582 below the average of the last ten years.

Dr. SHRIMPTON said diseases were not contagious except under those conditions and in those places where they might be produced. If that axiom were accepted, it would facilitate much of their hygienic measures, and supersede entirely the barbaric use of quarantines.

Dr. HARDWICKE wished a veterinary inspector had been appointed under the late Public Health Bill to assist the medical officer of health, to whom he would be a most valuable adjunct. Besides such a person the officer of health should be assisted by an engineer and an analytical chemist, and he hoped these matters would be looked to.

Dr. PRANCE insisted that medical men should prevent disease as far as possible, as well as try to cure it; and did not think disease resulted always in consequence of a violation of the laws of nature. He defended the use of vaccination.

Dr. HEARDER wished the paper had given them something more than the prevention of disease under exceptional conditions.

Mr. SNEADE BROWNE spoke of the crowded dwellings as an incentive to disease, and Dr. LITTLETON and Earl FORTESCUE alluded to the necessity of veterinary surgeons and others as well as medical officers of health.

After a few words from Mr. OXENHAM, showing how impossible it would be for medical men to do all the duties which would properly fall to the veterinary engineer and analytical chemist, Mr. BAKER replied, after which the PRESIDENT appealed to him to withdraw from his paper the words "so-called" in relation to the science which had devised the word "contagion," and he did so.

Friday, September 13th.

This section met again at the Mechanics' Institute, Plymouth, when Mr. W. H. MICHAEL read a paper on "What are the Principles on which a Comprehensive Measure for the Improvement of the Sanitary Laws should be based?" In the course of it, he pointed out that the national wealth and power depended largely on the health of the community, which was governed by circumstances often beyond personal control. The conservation of the public health was a public duty. Whatever, therefore, tended to its injury or destruction was to be guarded against, and life protected by law, that was, so far as legislation could be made to apply to the more obvious causes of sickness, disease, and death. If, by the researches of science or the teachings of experience, certain conditions were essential to the preservation of health, the State should carry them out at the cost of all. Large numbers of persons aggregated together within a circumscribed area, constituted one of the chief difficulties of our civilised life. As no care bestowed on the sanitary condition of their own houses would compensate for neglect of many others, it was imperative in the interests of the individual and the community to impose restrictions, to enforce provisions, and to lay down regulations interfering with the rights of private property. The chief aims of sanitary law were to ensure pure air, pure food, and pure water, the protection against the spread of contagious diseases of man and animals, and the prevention of accumulations of foul matter. Patient inquiry had taught them and shown that ten years may be added to the span of man's life in localities where sanitary measures have been wisely and skilfully applied. There were towns where every year there was a saving of ten lives in a thousand of the population, representing the cessation of twenty times that number of attacks of

sickness, with all their accompaniments of pain, sorrow, and expense. In the place of the various amendments in Acts, let there be on every occasion of amendment a repeal, and a new statute be introduced to take its place. It had been one of the greatest evils of the present complicated state of things to find not only the most cumbrous state of the general law and of authorities for its execution, but a vast number of local Acts, causing great difficulty and operating most prejudicially by setting up different standards, widely differing powers, and altogether altering the general rules of taxation. In all cases the rights of private property should be interfered with as delicately and in as small degree as possible. In the new statute all public roads and ways should be vested in the local sanitary authority, not only as arteries of locomotion, and from the fact that there are regulations essential to proper ventilation, but also because in the roads, sewer, water, and gas-pipes must find a place. The repair of roads, their disturbance and reinstatement, should be in the hands of one body, both in the interest of the traffic and of the ratepayers. Sewer-cleansing must be in the hands of the sanitary authority, and water-supply could never be duly and satisfactorily arranged as between the needs of the public consumer, the private occupier, and a water company. For any real effective supply they must look in the last resort to compulsory measures, which can only be entrusted to a public authority. It was desirable that the local authority should acquire the property of the Gas Company, although it might be laid down as a general principle that local authorities should never be manufacturers, nor public funds raised by taxation be brought into competition with public enterprise. There should be a very jealous watch over pollution of rivers from the refuse of works or manufactories, and the defilement of the air by smoke, vapour, or other noxious exhalations. Overcrowding of houses should be prevented, there should be an effective water-supply, with ample power to secure land for that purpose, removal of refuse, lighting, paving, and general maintenance of roads and ways, provision, of markets, baths, and recreation ground. Mr. Michael recommended the establishment of public prosecutors as some guarantee for the detection and punishment of crime, and thus providing against the present too often repeated signal failure of justice. There should be a compulsory registration of births, marriages, and deaths, also of sickness and disease, provision of mortuaries supervision, and, where required, institution of public hospitals, infirmaries, and lunatic asylums, and generally protection of lunatics, the sick, infirm, and the infant population—by whatever means extended knowledge may suggest. These duties should be entrusted to one authority, uniform in constitution, equal in power, extending over such an area as would secure the greatest efficiency in action. This would necessitate a recasting of existing institutions ; for no previous legislation has secured any such uniformity as had just been described. Poor-law administration was not divided into urban and rural authorities, and not given the powers of the Public Health and Local Government Acts. He was unable to see any right reason in the division into urban and rural authorities. To every authority, however constituted, these words could have but a comparative significance and a limited application. If no part of a rural district be urban, it was certain that some part of an urban district must be comparatively rural. In every case of a borough the Town Council should, as at present, be the sanitary authority, but with a district added which would be determined by physical rather than political necessities. So existing local boards would in the same manner form centres of extended districts, and, in order to exhaust counties where necessary, the creation of a new authority on the model of existing local boards would leave no corner of the empire without supervision and control. The governing idea of size of districts would be furnished by considering each one of sufficient extent and importance to support first class officials, devoting their whole time to the duties of their respective offices. The clerk would, in all cases, be a solicitor acting as the legal adviser of the board, and public prosecutor of the district, undertaking the general supervision, and responsible for the conduct of its whole business ; and here it is as well to state emphatically that no system can possibly succeed which trusts, for its execution, to unpaid members of boards, instead of throwing the onus, both of action and responsibility, upon competent and competently paid officials. Administration and executive are separate branches of a perfect whole, but must be undertaken by different men if the working is to be harmonious and complete. The surveyor having the management of roads would act as the board's engineer, would advise on all questions as to building, etc., and to him would fall the duty of designing and carrying out all works required for the maintenance of a high sanitary condition of the district. No more important office or officer could be conceived in sanitary matters as medical officer of health. A gentleman of special training having had practical experience of the treatment of disease, a chemist versed in the use of the microscope, having devoted special study to hygiene and relieved poor from cures and restraints of private practice, would do incalculable good to the district which received the benefits of his services. Freed from fear of rivalry and competition, each professional man in his district would become his coadjutor and assistant, while each Poor-law medical officer would render incalculable service as his deputy, because daily in contact with those parts of the district most likely to engender or propagate preventable disease. These three officers, with subordinate assistants, inspectors of nuisances and lodging-houses, would complete the staff. It is essential to the effective working of officers appointed to carry out sanitary measures in local committees that they should be largely independent of local control ; that is to say, their energetic action should never cause supine and retrograde boards to procure their dismissals from office. Upon all appointments and dismissals from office there should, therefore, be a power of supervision lodged in the Central Board. It is contemplated that by this agency every case of endemic or epidemic disease would, as soon as occurring, be investigated, its cause ascertained, and, so far as possible, remedied or removed. The medical officer of health would be the police surgeon, and every case of death would at once come to his knowledge, and any involving suspicion of neglect, violence or crime, would by him be inquired into, and action taken according to such inquiry. Thus there would be a rigid supervision of the whole mortality of the district. Acting in conjunction with the clerk, who would be public prosecutor, the medical officer of health would be ready, as an expert, to give that scientific evidence now so needed to raise the coroner's court to the dignity and importance it is calculated to acquire when properly organised. The important influence which would then be exercised on crime cannot be over-estimated, for nothing more tends to its diminution than the certainty of its detection, and of its accruing punishment. The paper then touched upon the importance of detecting adulteration in food, of preventing the sale of food unfit for human consumption, and a variety of other duties all essential to the well-being of the community. No money should be raised for public purposes without those who were taxed having a voice in its distribution or expenditure. It would, therefore, be necessary to elect representatives for those districts beyond the boundaries of boroughs under the control of Town Councils on the scale, and according to the manner prescribed by the Local Government Acts. These representatives should act with the Town Council on all sanitary questions as to the sanitary authority, but not interfering with the matters solely appertaining to the borough. But it would be necessary for other purposes to have wider areas than were isolated sanitary districts. To secure a sense of being justly treated, apart from local influences, there should be for the ratepayer or owner of property an influential board of appeal which would command its confidence in matters in which he was at variance with his own local authority. There should also be an authority, which was equally necessary as the equitable conservators of water-supply, between different districts as guardians of rivers to prevent pollution of their streams. But the main question which had hitherto more largely than any other influenced sanitary action was one of expense, the pressure of local taxation being the great bar to local improvement. It was suggested, first, that all descriptions of property should contribute to local burdens in proportion to the benefits received by local taxation ; secondly, that exemptions if any should be on some definite principle, and should be uniformly applied in accordance with this principle ; thirdly, where expenses were incurred locally for benefits which were general, a portion of such expenses should be paid out of moneys raised by Parliament, such portion being estimated in accordance with the calculations in how far the purposes are local or imperial. This would necessitate an entire reconstruction of the mode of rating, and this might be considered as a main argument in its favour, for at present it might be said that the principle of an assessment to rates was entirely destitute of system or equity, and urgently called for amendment. These proposals contemplate the creation of a minister of health and justice, the minister a member of the Cabinet subject to the manners and customs of our Parliamentary constitution, according to the exigency of party, in with the ins and out with the outs ; but it is essential to successful working that there should be a permanent staff to act with him as a Council of Health. A permanent secretary of each division not removable by the casualties of Parliamentary contests, one each for health, destitution, and justice, with a chief of the medical department, a chief inspecting engineer, and a chief legal adviser would complete this body, whose duty it would be to supervise, to encourage, to advise, and, if necessary, supplement local action, compulsory interference only being employed when both district and county boards had failed. But all action would converge to it as to where the various threads of experience locally gained would be in the centre, woven and compacted into a strong rope, which would serve

to keep in safety a ship freighted with a nation's destiny. To gather up facts and experience from all distant points, and to give back the results of these varied records for the use of all, to inform the public mind and generally to regulate and to help on all sanitary action, so that the most distant and the most difficult of access might derive all the benefit of those more favourably circumstanced—this would be one of the first results of combined action in the mode here suggested. The institution of this system would remove the necessity for boards of guardians, highway boards, sewer and improvement commissioners, and relieve the magistrates of every county of much of their general business, and would tend to diminish existing agencies; while, so far as the Ministry of Health and Justice is concereed, it would aggregate to itself all the functions appertaining to health, water-supply, gas, quarantine, contagious diseases, enclosures, supervision of medical acts, lunatics, etc., now performed by the Privy Council, the Board of Trade, the Home Office, the Lord Chancellor, and various other bodies. The functions of power vested in the Minister and Council of Health must necessarily remain, subject to Parliamentary revision, with efficient local inquiry by competent officials as to local peculiarities, necessitating departures from general system, or as to powers to be granted to meet local exigencies. These inquiries, supplemented by the careful consideration and report of the Council, would satisfactorily replace present modes of granting, or refusing, or delaying professional orders, and in some cases inquiring into before Committees of Parliament. But in all cases the very first requisite is to ensure, on the part of local authorities, energetic and sustained efforts at sanitary improvement, and a well-grounded confidence that in times whether of ordinary action, or of exceptional difficulty, they may reckon on the support of the State, and that their efforts will not be rendered void by individual self-interest over everything, the action either of a ministry, or of Parliament.

Mr. JENKIN said, as a member of the Parliamentary Committee appointed by the Social Science and British Medical Association, to watch the Public Health Bill so-called, through Parliament, he took the opportunity of speaking a word or two, to express the hope that the spirit and the principles to a considerable extent, which had been enunciated that day, were those which they still believed, notwithstanding all the criticism which had been aimed at them, were the principles to which they as an Association, still adhered, and meant to adhere until they got them carried. He did not hold with such distinctions as rural and urban districts, for practically and in a sanitary point of view there could be no such distinction, but it altogether seemed to him that the manner in which Government was approaching the matter was not one calculated to bring about either a speedy or a happy solution of the difficulty. They should urge on the Government the necessity for a reconstitution of the unit, for an intervention of the county power or of the district power, and then for the consolidation of the whole of the statutes in such a manner as had been suggested, and, above all, that the central body should be one invested with sufficient power to enable it to overlook and supervise the whole sanitary administration of the kingdom, and in time of danger to be enabled to use such powers as should as far as possible keep us free from danger.

Mr. C. BULTEEL held that the relief of the poor and sanitary arrangements were two perfectly distinct things. It was quite necessary, right, and proper that they should be united under one head, but he thought they should constitute two separate departments, and that throughout the country the board which administered sanitary arrangements should be separate from that which administered relief. Then, in his opinion, all local bodies, as they now were, should be supervised by the Local Government Board in London, and the medical officer of health should register all diseases.

Dr. HARDWICKE considered the suggestions in the paper were most practicable and workable in every degree. What had been done heretofore in the way of carrying out the sewerage of towns was quite different, and they must make a retrograde movement for the purpose of obtaining a thorough reorganisation. The first and chief thing they should do would be to educate the House of Commons itself on matters concerning their sanitary condition.

Mr. SILLAR said the paper dealt with details as to what laws should be made for the regulation of those questions, rather than upon the principles upon which a comprehensive measure should be based. There were two rival theories held by political economists—one that all human interests were antagonistic, and the other that all human interests were harmonious; and the principle upon which comprehensive measures could be based entirely depended on one of those two theories, because if human interests were antagonistic all laws must be restrictive; but if, on the contrary, the fewer laws they had the more opportunity there would be for those harmonious interests to find full play. The body politic in one respect closely resembled the body personal. When in good health all functions were performed well and easily, but the restriction of one prevented the whole from working. However, if he went into the whole of this question, too large a question would have to be embraced, so he would only allude to one—that where they found a sanitary law had been neglected they could find out who was primarily responsible for looking after that law, and the reason why that person could not attend to it. Probably he would be found to be thoroughly engaged otherwise, and to go to first principles they must remove all difficulties so that he might be only properly engaged. They found society divided into two classes—one who had too much to do and the other who had not enough to do, and the latter invariably did the whole of the mischief. A medical officer of health must be one who had but a fair amount of work to do, and they must discredit as much as possible any local board having borrowing powers, unless in a very great emergency, for if they gave them unlimited power so to do there would be the greatest extravagance.

Dr. OXLAND stated that, whilst the water-supply of Plymouth contained potash and the wells plenty of lime, waters so differed in all parts, and so, in any health bill, it was desirable that a medical officer should at all times have the power to call in the assistance of an analyst, so that together they might easily solve the cause of the prevalence of a particular disease. The milk-supply of the neighbourhood was worse than the water, for, not only was it largely adulterated with water, but what was worse still, the cow-sheds were of the most disgusting character, and it was wonderful that disease did not exist to a much larger extent than it did. His own family had been strangely affected through the use of milk, and altogether there was a great necessity for more ready means for the examination of matters.

Mr. MICHAEL replied by regretting the hurried way in which the Health Act was passed, through which the whole action of this Congress was lost sight of. Nothing of course could now be done until the legislation of 1872 had been entirely swept from the statute book, and towards accomplishing this he asked the section to adopt the report of the "Joint Committee on State Medicine of the British Medical and Social Science Associations, 1872." This was done; and it having been determined to recommend to the Council that Mr. Michael's paper should be printed *in extenso* for the purpose of circulation, the business of the section was brought to a close for the day, Dr. James Edmunds, who was down on the proceedings of the day for reading a voluntary paper on "The Amendment of the Medical Acts," not having put in an appearance.

A printed "Report of the Joint Committee on State Medicine of the British Medical and Social Science Association, 1872", was read; and it was resolved that it be received and adopted.

Saturday, September 14th.

The Public Health Act and the Three Towns.—Mr. C. BULTEEL, F.R.C.S., read a paper on the Public Health Act, with special reference to Plymouth, Stonehouse, and Devonport; which, by special vote of the section, he was allowed to do at length. It was not the object of the paper to take a general review of the Public Health Act in all its bearings, but merely, in the first place, to refer to some of its more important provisions, pointing out where, in the author's opinion, the chief defects lay; and, in the second place, to give his opinions a local application to the three towns of Plymouth, Devonport, and Stonehouse. The first and most important defect was the want of a go-between, or immediate authority between the local sanitary district and the central Local Government Board; the arrangement preserving the worst features both of centralisation and of local government. The obvious suggestion was that each county should constitute an intermediate area, and that a county board should be an intermediate authority. The second defect alluded to was the inconsistency, as concerned rural districts, of placing some of them under one authority, and some under another, according to the accidental circumstance of their having or not having adopted the Local Government Act. The third defect with regard to area appears to be that the ultimate local area of a parish or union was far too small. For rural districts, at least, the whole county should be mapped out into larger areas, consisting of unions of increased size, or divisions of counties of larger or smaller extent. In urban districts, the Town Council, the Improvement Commissioners, or the Local Board, were to be, as before, the sanitary authorities, and in all probability they were as good as any other body selected by the ratepayers was likely to be; but let it not be supposed that they were as fit for the work as they ought to be. The opportunity might not unfairly be taken of suggesting to the Association, as a sphere of action not unworthy of social science, the desirability of bringing to bear on the general public, and especially on the upper classes, the importance of taking more interest than they did in the election of their local par-

liament. Could no means be adopted, such as the suggestion of a local standing committee, entirely free from political bias, who should voluntarily devote themselves to the task of pointing out to the ratepayers the kind of men who should be elected, securing them as candidates, and giving them active support? There could be no question that, within the last twenty years, the materials of which town councils and boards of guardians consisted had sadly deteriorated. It was to be feared that the ballot, desirable as it might appear in many ways, yet would have the tendency to make electors more apathetic than ever in recording their votes at municipal elections. In rural districts, the board of guardians was the sanitary authority. There were many objections to this. The relief of the poor and sanitary work were two entirely distinct and separate objects, each of which, if properly administered, should afford ample employment for a separate body of men; and boards of guardians, especially in some rural districts, were not distinguished for breadth of mind or superior intellect; and the manner in which they had exercised their sanitary powers under the Nuisances Removal Acts had not been such as to inspire confidence in their sanitary capacities; and then it was very questionable whether, with regard to expense, they would really be the most economical board. The 24th and 259th Act Sections distinctly pointed out the extreme advisability of placing the whole country under one uniform system of sanitary authorities, although Parliament had unfortunately hesitated to carry out what it appeared to have suggested as a desirable consummation. Such consummation, there could scarcely be a doubt, would ultimately be arrived at. The smallness of the local areas for sanitary purposes appeared as the great defect of the Act with regard to medical officers of health. A larger area was desirable on the following grounds. First, because a medical officer should in no case be allowed to engage in private practice; and secondly, because, with regard to expense, the machinery proposed under the Act would be most extravagant to the country. Many a mickle paid to the health officer of each trumpery district would make a muckle far greater than would be expended by the appointment of a fewer number of men independent of private practice, and presiding over a much larger area. No effort should be spared to remedy these defects, and to enforce the desirability of combining the office and duties of public analyst with those of medical officer of health throughout the country, and making the appointment of public analyst compulsory. It only remained to give the views expressed their local application to the three towns of Plymouth, Devonport, and Stonehouse. So far as area was concerned, it would probably never enter the minds of the members of the Association from a distance that there would be any distinction of urban and rural between the three towns in which the present congress was being held. They would scarcely be likely to realise—what was, nevertheless, a fact—that as they wended their way in the tram-cars from the urban district of Plymouth to the urban district of Devonport, they were passing through the *rural* district of Stonehouse. Had Stonehouse been wise enough some years ago to have adopted the Local Government Act, this ridiculous anomaly would not have occurred, as the local board would then have become the sanitary authority, and would continue to be so under the present Act. But, in an evil hour, the utterly false cry of increased expense was raised, and Stonehouse decided to appoint a sewer-authority, under the Sewage Utilisation and Sanitary Acts. The Public Health Act, 1872, had ruthlessly swept away all sewer-authorities, and thus the happy or unhappy medium which Stonehouse had chosen was no longer possible, and the Board of Guardians had become the sanitary authority of the rural village of Stonehouse. Stonehouse was, however, acting up to the emergency; and that it would soon be called upon to elect a local board was no longer a matter of much doubt. The voice of the ratepayers would soon be consulted on the matter in public vestry. Such a proceeding was desirable on many grounds; one being that the expenditure of the Stonehouse Board of Guardians, in certain items, was most extravagant; not, indeed, in the actual relief of the poor, where the strictest economy undoubtedly prevailed, but in the machinery through which such relief was administered. Taking the three towns of Plymouth, Devonport, and Stonehouse, the matter stood thus:

1866.

	Total.	Working expenses.	Percentage.
Plymouth	£19,648	£1,945	9.89
Devonport	£11,770	£1,876	15.93
Stonehouse	£3,795	£832	22.94

1871.

	Total.	Working expenses.	Percentage.
Plymouth	£23,825	£2,160	9.06
Devonport	£13,856	£2,419	17.45
Stonehouse	£4,787	£1,352	28.24

From this it would seem that the percentage of expenditure in machinery of Poor-law administration in Plymouth and Devonport was below the average of the whole country; in Stonehouse the average of England was slightly exceeded in 1866, and very considerably exceeded in 1871. Compared with the county of Devon, in 1871 Plymouth was still far below the average, Devonport somewhat above it, while Stonehouse approached a double percentage. In the case of single towns, however, it was necessary, to avoid fallacy, to compare the total expenditure of each place with the population, because the lowness of the percentage of working expenses might merely mean an extravagant expenditure in relief to the poor. This was the case to a marked extent with Plymouth, as compared with Stonehouse and Devonport, especially under the heading of out-door relief. It did not alter the question as between Stonehouse and Devonport. Plymouth, however, might still be proud, thanks mainly to the high and conscientious character of the clerk to the Board of Guardians, Mr. J. W. Matthews, that the working expenses were lower in Plymouth in 1871, with its population of 68,080, than in Devonport with its population of 50,094—the figures being for Plymouth, £2,160; Devonport, £2,419. In 1866, the total expenditure of the Three Towns, as compared with the population, gave an average cost per head of the population of 5s. 6d. In Plymouth, the average cost was 6s. 3d.; in Devonport, 4s. 8d.; in Stonehouse, 5s. 3½d. In Plymouth, the average of 6s. 3d. was made up of 5s. 7¾d. spent in relief and 7¼d. in working expenses; in Devonport, the average cost of 4s. 8d. was made up of 3s. 11d. spent in relief and 9d. in working expenses; in Stonehouse, the average cost of 5s. 3½d. was made up of 4s. 1½d. spent in relief and 1s. 2d. in working expenses. The similar figures for 1871 would stand thus:

	Total average of expenditure per head.	Average cost for relief per head.	Average cost of working expenses.
Plymouth	7s. 0d.	6s. 4½d.	0s. 7½d.
Devonport	5s. 6¼d.	4s. 6¾d.	0s. 11⅓d.
Stonehouse	6s. 6¾d.	4s. 8½d.	1s. 10¼d.

He urged the importance of the Three Towns combining to appoint one officer, who should be medical officer of health and public analyst. It had been said that the district was too large; but this would not be found to be the case provided that the officer appointed were debarred from private practice. Difficulties might indeed arise at starting, until such an officer, if a stranger, became acquainted with the locality; but, when once in working order, one efficient officer would be quite equal to the post. The opinion of the medical profession of the Three Towns would shortly be taken on this matter, with a view, should they think fit, of memorialising the three sanitary authorities on the subject. Could the sanitary authorities realise the true economy of the arrangement proposed, there could be no doubt it would be speedily executed; and yet, when the importance of the opportunity of obtaining an officer who would carry out the duties both of public analyst and of officer of health at a moderate salary, one-half of which would be paid by the Local Government Board, was considered, who could not but recognise the economy of the three towns of Plymouth, Devonport, and Stonehouse, combining for such an object? He did not believe such a combination impossible.

Dr. HEARDER could quite coincide with all Mr. Bulteel had advanced, but had some misgiving as to combining in one individual the powers of medical officer and competent analyst. When they considered that it took a man a lifetime to become a good analyst, he did not think it would be very easy to get a medical man who was competent to act in that capacity.

Mr. MOORE believed that medical men could become quite competent analysts of water, air, and food, for which their medical training fitted them.

Dr. HARDWICKE had no doubt of the difficulty, that had been very well expressed by Dr. Hearder. There was not a large number of the medical officers of health in London who were expert in analysis; and it was not very easy to decide what should be done. The way, however, that the difficulty could be got over was simply this: medical officers of health should be appointed public analysts, and they should be allowed a certain margin of petty expenses to obtain the services of expert chemists when needed.

Mr. A. P. BALKWILL felt exceedingly indebted to the medical profession of the locality for the kind attention they were giving to the question of public health. He was glad that Mr. Bulteel had spoken his views freely. It could not be too emphatically insisted upon, that a medical officer of health should not engage in private practice. He believed, also, that analysis would be best conducted by medical men who had taken it up as a specialty.

Mr. W. P. SWAIN held that public opinion required thoroughly to be aroused to the question of the election of the public bodies which

had to care for sanitary work. He protested most strenuously against such a practice as that current in his own town (Devonport), where elections to the Town Council were entirely dependent upon political motives. Both parties were in fault; and the result was, that the most respectable and influential men in the town would have nothing to do with municipal matters. Fortunately, there were in the council two or three master minds—their excellent mayor being one of them—who really did look well after sanitary matters. But what would be the case if they left, or were kicked out to suit the dictates of political exigency? He quite agreed that the duties of medical officer and analyst should be combined in one person: an ordinary medical man, however, knew little of the latter work, and special training would be needful. He agreed also with Mr. Bulteel that there should be one officer of Health for the Three Towns; and held that, if the governing bodies would not come to that conclusion of themselves, public opinion should be brought to bear upon them.

Mr. F. A. MORRISH, as a member of the Plymouth Council, stated that they were rather waiting for instructions from head-quarters, in order that whatever they did in the appointment of a medical officer, should be done in the best way. He rather agreed with Dr. Hardwicke as to the arrangement for analysis. He saw some difficulty in carrying out a joint local appointment of a medical officer.

Mr. MAITLAND held that no money was better laid out than that which was spent in the promotion of sanitary work.

Mr. WALLER had little faith in the sanitary knowledge or work of the upper classes. If they took the leading part in local boards, they would be very liberal of two things—their own advice and other people's money.

The Rev. Dr. STOCK, as illustrative of his belief that "public bodies (collectively) had no consciences", said that the Town Council of Devonport had neglected for fifteen months to check the flow of sewage from the Dartmoor prison into the Devonport leat. He rejoiced, therefore, at the passing of an Act which would put such matters as that under the control of one single energetic head.

Dr. ACLAND had the most absolute confidence in that particular gift and province of the English people, and of the individuals composing it—the power of rising to the discharge of their duties. The gravest political fallacy was that of those who asserted that the present generation were incapable of appreciating the present position of their thickly populated urban districts, and that when they had undertaken their duties they would be unable to discharge them. It was impossible in matters of the kind discussed in the extremely valuable paper they had heard, to draw a hard and fast line. Certainly he knew that some of the best officers of health were in private practice, and Mr. Bulteel himself was an instance that he was not afraid of municipal authorities. In the present transitional state of the law upon this matter, it was impossible to lay down hard lines upon points which must to a great extent be treated by experience. There had never been a public servant more sincerely desirous for the welfare of the country than the present President of the Local Government Board; never more self-sacrifice and higher intelligence exhibited than by the overworked persons in that department.

Mr. BULTEEL, in replying, suggested that it would be desirable, for many reasons, that the position of officer of health in the Three Towns should be held by a stranger.

A MEDICAL MIDNIGHT MISSION.—The next paper in the programme was by Mr. WM. ACTON, entitled "A Medical Midnight Mission in the Streets of Birmingham."—Previously to the author proceeding, however, the PRESIDENT stated that it had been deemed desirable that there should be no discussion at that meeting of the Social Science Congress of any matters connected with the Contagious Diseases Acts, upon which, in the Three Towns, there was considerable difference of opinion. This being so, there had been some doubt whether the paper prepared by Mr. Acton was within the limits laid down; and Mr. Acton would go on with it upon the understanding that there should be no reference to, or discussion on, the Acts referred to, and that it would be in the competence of any member of the section to move, at any stage, that he should not proceed.—Mr. ACTON treated the subject in accordance with this rule, and an animated and exceedingly earnest discussion followed, in which the opponents and defenders of the Contagious Diseases' legislation—putting that for the nonce aside—showed themselves heartily at one in their desire to promote the interests of morality by checking prostitution, caring for the fallen, and punishing those wretched people who trade upon the sins of others. Mr. W. Saunders, Mr. C. Bulteel, Mr. Raper, Mr. C. R. Ford, and the Rev. W. Arthur, participated in the discussion, which Dr. Acland said had made its occurrence for him the happiest time of the session. The right hand of fellowship had been given between opponents, and good results must follow.

SEWAGE TREATMENT.—Mr. SYMINGTON read a paper descriptive of the method of dealing with Sewage proposed by Mr. Strang, of Glasgow, now in operation at the premises of Messrs. Plimsal, Bedford Street, where it could be inspected at any time. The principal feature of the system consisted in the interception of each kind of sewage in detail at its source, by means of an apparatus designed for the purpose, which retained for separate removal all the excremental and other polluting matter, and allowed only the water in a harmless condition to pass into the sewers. Mr. Strang held that the only real remedy for the evils of sewer cases was the entire exclusion of all noxious matters from the house drains and sewers. The special questions set down for discussion recognised two evils—sewage poisoning and river pollution. The injury to health caused by the former had always appeared to him to be much greater than that proceeding from the latter. No sewage scheme would be complete, or would even touch the chief source of mischief, which aimed only at diverting the sewage from the rivers. The condition of the sewers themselves was a point of primary importance in this question, and should not be overlooked. The question which Mr. Strang's method sought to solve was this, whether poisoning and river pollution, springing as they did from the same source, could not be cured by one and the same means. The plan employed for the purpose was simply this, that all the pipes belonging to each block of houses should be led into an apparatus instead of being carried down to the drain as at present. All the waste water from the house or houses, whether from water closets or kitchen sinks, would pass into this receptacle, which was so constructed that all the liquid and solid impurities of the sewage were kept back and retained for separate removal, the water being allowed to flow off in a perfectly innocuous state. This method of dealing with sewage overcame the most formidable difficulty with which all schemes had to contend, viz., the enormous mass of water to be dealt with. In regard to the removal of the matter so collected various methods might be adopted to suit local circumstances. In some cases it would be best to remove it along with the ashes and other refuse daily, or at frequent intervals; in others it could be done by a vacuum cart, etc. Another advantage of this method of treatment was that it provided the means of applying to each description of sewage the special means required for its purification. For all ordinary house sewage, including water-closets, the apparatus itself, with common ashes as the filtering medium, was sufficient. The refuse from manufactories, etc., required special treatment. A most important feature, and a great advantage of the method, was that it left the water-closet system undisturbed, and removed all the objections to it. The residuum collected in the apparatus possessed a high manurial value, and among the other important advantages which would follow the adoption of this method were a saving of water and the utilisation of house ashes.

Monday, September 16th.

THE POLLUTION OF RIVERS.—Mr. HOPE read a paper entitled, "What means can be adopted to prevent the pollution of rivers?" Mr. Hope assumed that as he was selected to open the discussion, it was intended to be with reference to town sewage, and not to the various polluting matters coming from individual factories and mines. He divided the subject into two broad divisions, one composed of those schemes which professed to deal with a part only of town sewage; the other those which professed to deal with the whole. Of the first, he commenced by criticising what he called the great A B C bubble. He recalled the admission made by the general manager of the company at the meeting of the Congress last year at Leeds, that their published analysis was erroneous; the two exhaustive examinations and twice repeated condemnation of the process by the Royal Commission on the pollution of rivers; and the fact that Professor Odling had pronounced it as a "juggle." He described the visit which he had paid to the company's works at Leeds, and gave the various recipes used at different times by the company, showing that in the first they used ten materials; in the second and third only four. Among other criticisms he pointed out that the first, which was the patented prescription, added only ten grains of blood to seventy millions of grains of sewage; and whereas there existed in the same quantity of average town sewage seven thousand grains of chloride of sodium, the patented prescription proposed to add 109 more. He then went on to criticise the phosphate of aluminia process, and although he pointed out that as yet it was quite imperfect, he hoped it contained some elements of success which might some day produce better results. He pronounced Hillé's process to be no more inefficient than many others. Dr. Anderson's process was next touched upon. It was not Dr. Anderson, the well-known Regius Professor of Chemistry in the University of Glasgow, and there was nothing new in the chemistry of the process, while the mechanical appliances were laughable;

consisting of dressing up the sewage in flannel waistcoats. He next spoke of the new phosphate process, this time calcic instead of aluminic. Although it had not been fully investigated, and probably not fully perfected, it was one of those things which had been investigated by a committee of the British Association, of which he was a member, and was so far an improvement upon other so-called chemical processes that it did take out the organic nitrogen in solution, although it could not, any more than any of the others, extract ammonia in solution. He, however, said that it was a most promising process. Weare's charcoal process was pronounced empirical, the effluent water being still weak sewage. General Scott's process for making cement while at the same time precipitating the matter was a really sound process so far as it went, but the effluent water still required to be dealt with, so that the sewage question was not yet solved. The only means as yet proved capable of entirely purifying sewage was its direct application to the land. He passed the highest eulogium on Professor Frankland's scientific definition, intermittent downward filtration, claiming for it a more universal application than Professor Frankland, being proud to say that was the plan on which he had laid out his own experimental farm at Romford some time previously to Professor Frankland's publication of his experiments. To Professor Way he gave credit for first boldly stating that no means existed for purifying liquid sewage except by its application to land. If municipal bodies would only make up their minds to throw over quackery, the love of the marvellous and so-called practical men who had led them such a dance for so long a time, and stick to hard facts and sober sense, they would find that the sewage question had already been solved, and no longer existed.

Mr. SILLAR was sorry he was personally connected with the A B C system, as he might not be considered to be a candid exponent of it. He was connected with the process because he believed it to be true, genuine, and a great national benefit. He left it to the section to say how far any system should be ridiculed and abused, which he protested against.

Lord NAPIER did not think Mr. Hope insinuated that the society was established for swindling purposes.

Mr. HOPE pointed out that he had carefully guarded against saying it was a swindle.

Mr. SILLAR contended that it was for the interests of the people to get out of the rivers what never ought to be there. What polluted the rivers was dirt. Irrigation was only a partial solution of the difficulty, and he asserted that Mr. Crook, F.R.S., after very careful inquiry, would be able to refute all the calumnious remarks as to the chemical process adopted by the company. Not only by their plan was the water purified, but the deposit was left in such a form as to be very valuable for agriculturists. The company had splendid reports as to the fertilising properties of this deposit. He believed Dr. Frankland was biassed when he made his report. Blood, charcoal and clay did purify the water, and sufficiently to enable it to run into rivers without polluting them.

Mr. SPARKS HALL referred to the way in which the Earl of Morley had cultivated marshes in his neighbourhood by the use of sewage which others had thrown away.

Major-General H. G. D. SCOTT read a paper on "The cleansing of sewers and the purification of sewage." Surface drainage was always more noxious than house drainage, and would require more defecation and deodorisation than if the dry earth system or midden system was resorted to. The subject of the purification of sewages divided itself under three heads :—1. The remedying the effluvium from street sewers and house drainage. 2. The getting rid of the grosser fæcal matters at the outfall. 3. The rendering innocent the dissolved organic matter of the effluent water. For the sewer emanation General Scott suggested the introduction, as a precipitative material, of milk of lime converted partially into chloride of lime on the spot, and introduced at the head of each main sewer. It was stated that the plan had been tried with great success at Ealing. It was further proposed that the precipitate thus formed should be allowed to subside into tanks at the outfall, and the deposit be converted by distillation into charcoal (when the deposit was not converted by calcination into cement or phosphatic lime) to be used for the final purification. Again, it was stated that when the condition was not favourable for irrigation the most economical plan of procedure was to extract ammonia from the clarified effluent by the use of phosphated magnesia, and filter the water which would pass off from this operation through the charcoal prepared under the second head and through land. The paper also described the experiment by which, as the author stated, the phosphated magnesia might be economically and successfully applied.

Lord NAPIER, having again expressed his belief that Mr. Hope did not mean to reflect on the A B C Company, without expressing an opinion for either plan, remarked on the great importance of the question, and of the necessity of having it solved. It would be a great thing to discover some process by which liquid sewage could be made solid.

PURITY OF ATMOSPHERE.—Mr. W. J. COOPER, in a paper on "The most effective means of preserving purity of atmosphere," argued that the preservation of atmospheric purity should be the main object of sanitary action, for in a vitiated atmosphere food rapidly became tainted, water poisoned, and individuals sickened and died. The sources from which the air became poisoned should be detected at once, for the purpose of eradicating the evil. The writer recommended, as a preventive for the gases, chloride of calcium. At a cost of one shilling per head the population of London could be preserved from the operation of sewer gases. "It seemed to be entirely taken for granted that Government interference and restrictions upon the entrance into the country of persons or cattle suffering from epidemic disease are expedient and necessary. There was a time, twenty or thirty years ago, when it was disputed. The advocates of restriction at the present time say that protection against disease is precisely the same in principle, whether applied to the landing of cattle affected with disease or men suffering from cholera. Consequently, they further say, it has been necessary to establish a rigorous investigation of animals imported into Great Britain from foreign countries. It does not appear from the special reports, and generally from the practical experiences of those men qualified to judge, that such measures as regards cattle are so efficient as to recommend the system. Attention is asked to the opinions that prevailed among high authorities, though not without dispute, several years ago in this country, and specially in France, which went to show that epidemic diseases of human beings could only be dealt with by sanitary measures, not by restrictive measures or quarantine. There was not much fear of cholera at present, but cattle disease imported from abroad in various forms is the subject of immediate alarm. It is, then, suggested whether, supposing it to have been established at the period before mentioned, that quarantine regulations, as applicable to human beings, were inexpedient, it might not now result from patient scientific investigation that quarantine for cattle attacked, say, with plague or foot and mouth disease, are equally inexpedient, and prevent such patient scientific investigation into the cause of such diseases, to say nothing of there being no chance of improvement in the mode of carrying on the trade in foreign cattle, being what is comparatively a new trade, so long as Government enforces the restrictions."

Dr. SHRIMPTON quite sympathised with the author of the paper in his remarks, because they exactly accorded with his own, and he could not conceive in England that they could entertain the question of quarantine. It seemed to him an inconsistency, absolutely so. In 1666 the great plague occurred in London, which was then the centre of the contagion, and which then was most strictly kept under quarantine; but since the great fire, when the close streets were opened up, quarantine was done away with. Instead of such things as quarantine, what was desired was a thorough investigation of the causes of disease. Quarantine was most injurious under all circumstances. It legalised fear in case of contagion, and more than that, it became a focus of disease itself, fear making cholera contagious when it was not, in his opinion, really so.

Dr. STEWART said that where quarantine was enforced cholera was sure to make its way. The disease travelled faster than one could have gone either by land or by sea, and he having carefully studied this was convinced that atmospheric influence had much to do with the spread of cholera as well as human communication. He could not go so far as to say that cholera was not contagious, because he believed that excreta from persons attacked with disease, after being allowed to decompose for a day or two, became very contagious indeed.

Mr. HOPE maintained that there were other means of curing rinderpest than merely knocking animals on the head ; and he had cured 112 animals so suffering.

Dr. HARDWICKE was not afraid of cholera visiting towns so long as there was a good sanitary arrangement in them.

Tuesday, September 17th.

HOSPITAL CONSTRUCTION.—Mr. HENRY GREENWAY, M.R.C.S., read the first paper, on "A new mode of hospital construction." As a rule it has been found that the statistics of large hospitals would not bear comparison with those of small infirmaries, which arose partly from the greater facility of infection which existed in large wards, occupied by a number of patients, although the cubic space per bed might be ample. Occasionally they heard of infection breaking out in a ward without any apparent cause, and that might possibly arise from particles, originally harmless, having been absorbed by the walls, and afterwards undergoing a change in their nature and effect. To obviate all this, it had been proposed to do away with large palatial hospitals, and place the patients in small wooden huts, to be used only for a few

years, and then replaced by new ones. As this plan would require a large area, it would be impracticable to important cities where land was expensive, and under any circumstances it would prove difficult in administration. He had devised a plan whereby he hoped to secure the advantages of a large hospital without the dangers, and the safety of the hut system without its inconvenience. The building should be no more than two storeys high, but of any required length, according to the number of beds, and should be so divided that each patient would have the enjoyment of his own supply of atmospheric air uncontaminated by exhalations from his neighbour; the supply of air would be constantly renewed; the compartments being made of glass no absorption of morbid product or of emanations which might eventually become injurious could take place, and by occasional washing them in water they would ever retain their purity. Although the building just described was intended for the reception of all kinds of cases, Mr. Greenway ventured to suggest the advisability of making additions of this character to existing hospitals for the reception of infectious cases from the general wards, thus locating without intensifying infection—a condition which was not obtained in the fever hospitals. The reader also advised the erection of such buildings for the upper and middle classes of society.—In answer to inquiries, Mr. Greenway stated that his plan was now being examined into by the Army Sanitary Committee; that the number of patients to be accommodated would be immaterial, each patient being independent of his neighbour; and that the estimate for each bed was £150, as made by Mr. Hine.

Dr. ACLAND agreed with Mr. Greenway that glass would be very useful in preventing absorption, but found in great hospitals where there was ample ventilation that there was no spread of infection, and consequently there was no necessity for separating patients.

ECCENTRICITIES OF SANITARY LEGISLATION.—Mr. W. HOPE, V.C., put before the section one or two broad salient facts as illustrations, without any comment, remarking that they were so astounding that he did not know how to comment upon them. By the Metropolis Local Management Act of 1855, and its amendments, the ratepayers of London were heavily rated for the purpose of pumping the sewage of London in the Thames. By the Thames Navigation Act of 1870, the same fortunate body of ratepayers were made to pay for dredging it out again. Local boards were encouraged by the Government to obtain land, and apply their sewage to it for farming purposes. No farm, whether a sewage farm or not, could ever pay unless it were sufficiently stocked and supplied with farming capital; yet local boards were not allowed to raise the necessary capital of 10s. or 12s. per head of the population except by means of a direct rate. It was accordingly not raised, the farms did not pay, were not properly cropped and worked, and an additional burden, instead of a relief, has been thrown upon the ratepayers. By Section 49 of the Public Health Act of 1848 municipal bodies were compelled to receive into their sewers practically all the refuse that it might suit the inhabitants to turn into them; but the Court of Chancery granted injunctions whenever called upon, to restrain towns from polluting rivers or the sea. This Mr. Hope pointed by a reference to the awkward position into which the Corporation of Birmingham had got, arising out of their dispute with Sir C. Adderley concerning the disposal of the sewage of that town.

On the motion of Mr. C. BULTEEL and Dr. STEWART, the subject, so far as regarded Birmingham, was referred to the Council of the Association for their special consideration.

VENTILATION OF SHIPS.—Dr. W. H. PEARSE read a paper on "Ventilation and health in ships." He said that his experience had been gathered in Emigrant ships, which had a clear between decks, or divided by bulkheads, which allowed a passage of air, the ventilation being by deck openings. The whole body of the atmosphere in the between decks, moved *en masse* in an opposite direction to that of the upper breeze. He had provided a table showing the temperature below deck, and stated that it was necessary to provide means of escape at both ends of the ship, for whilst at the one end the escape was taking place, so at the other end the compensating downpour of cold pure air was going on. He then proceeded to shew the extent to which air affected the people of different nations, and concluded by saying that whilst they should give due and efficient ventilation, yet they should also aim to conserve the vital powers of the system, and they were led to methods of conserving rather than to those of battling against germs, poisons, etc. A discussion followed, in which Mr. Vivian, Dr. Littleton, and others took part.

MORTALITY OF INFANTS.—Mr. THOMAS LITTLETON, M.B., read a paper on the mortality of infants, in which he said that he desired only to call the attention of the Association to the means which might be adopted to remove entirely one quota from the sum of those distressing details. The section of the inquiry to which he wished to direct attention was that of the suffocation of infants from overlaying. In the *Times* of Feb. 5th, 1868, it was stated that the number of children suffocated in ten years (1858-67) from this cause was 3,612, or an average of 308 per annum in the first five years, and of 418 in the latter. Ten years ago the number of deaths by suffocation in a population of 100,000 in the metropolis was 8.6, whereas the proportional number now was 14.8, the deaths having increased from 230 in 1858 to 457 in 1867. Of 100 deaths of all ages, the returns shewed that 85 were those of infants under one year of age, about 51 of those deaths being caused by suffocation from bed clothes, 31 by over-laying, and 3 by food. Only a few of the deaths of infants from suffocation were returned at the coroners' inquests as murder, and those deaths were in many cases the result of accident through carelessness rather than of design, which might be inferred from the fact that the deaths were most fatal in cold weather. Thus, of 100 deaths in London in 1867, 37 occurred in the winter months; 26 in the autumn; 22 in the spring, and 15 in the summer months. In England and Wales, in the eight years from 1858 to 1865, there were 8,850 deaths referred to suffocation, the death rate in each year to 100,000 population being 4.6 in 1858, 4.9 in 1859, 5.4 in 1860, 5.1 in 1861, 5.1 in 1862, 5.6 in 1863, 6.1 in 1864, and 6.3 in 1865. Considering the immense mortality through overlaying, it was remarkable that the arcuccio universally used in Italy were not used in England, as by adopting them children might be safely laid entirely under the bed clothes in winter, without danger of suffocation. The apparatus bore some resemblance to the cradle universally adapted in hospitals to shelter an injured limb, and there could not be the least doubt that its introduction into general use would very materially reduce the number of deaths amongst infants from suffocation.

MR. RAPER remarked that the greatest number of infants were suffocated on Saturday and Sunday nights, and that, no doubt, was attributable to drink.

Mr. VIVIAN thought the arcuccio would do capitally for drunken people.

The CHAIRMAN thought they must also look to the extra composure of children on Saturday nights.

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

FIRST CONGRESS AT BORDEAUX.—MEDICAL SECTION.

Meetings of September 6th, 7th, 11th.

Ollier: Growth of Long Bones.—Dupuy: Animal Heat.—Fleury: Functional Inequality of the Two Cerebral Hemispheres.—Leudel: Unilateral Ephidrosis.—Bitot: Veratrine in Cardio-vascular Affections.—Trelat: Lymphosarcoma.—Renaud: Glycosuria.—Le Fort: Glaucoma.—Voisin: Histology of Simple Insanity.—Oré: Intravenous Injections.

THE Section nominated Dr. Bouillaud, of the Institute, President; M. H. Gintrac, Director of the Bordeaux School of Medicine, Vice-President; and Dr. Lande, of Bordeaux, Secretary.

Dr. OLLIER (Lyons) stated the results of his recent experiments on the mode of growth of the long bones. The theory of peripheric growth, which he has held for a long time, has been lately combatted by the learned German doctors, Wolff, Calmann, and Meyer, who are supporters of interstitial growth. M. Ollier has observed anew a great many times that two nails placed on the diaphysis of a bone, at an accurately measured distance, are separated by the same space when the animal, having become an adult, is sacrificed. In very young animals, there is sometimes a slight divergence, never exceeding more than a fourth of the whole length of the bone. This fact would seem to weaken the theory, if one did not know that very young, and in consequence soft bones, are under the general law of growth of soft tissues, of which the development is interstitial. A more considerable divergence of the osteoplasts in adult bones has also been made an objection to the theory of peripheric growth; but the researches of Rauvier have demonstrated the variableness of these elements, and in consequence their utter uselessness in this question. When the cartilage of conjugation is removed, the growth of the bone is stopped, or at least diminished. Interstitial growth is observed occasionally in certain birds, and in some mammals; but in this last case the anomaly explains itself, because the bone, softened by inflammation, has taken the properties of the soft tissues. Moreover, this growth is never more than a very small fraction of the length of the bone, which is the seat of it. Passing from the normal to the pathological growth of bone, M. Ollier remarked that since 1867 he has shown that irritation of the diaphyses of a long bone provokes the lengthening of this bone; whilst the irri-

tation of the cartilage of conjunction leads to the arrest of its development, and that not by the more rapid solidification of the epiphysis, but by a simple perturbation in the work of ossification. The clinic confirms the results of experiment. Another fact, which has great practical importance, is the inequality of the part of the two cartilages of conjugation in the development of bone. The humerus grows especially by the superior cartilage of conjugation ; the radius and the ulna, on the contrary, by their inferior cartilage, in such a way that the constituent parts of the elbow are only of very slight utility in the general development of the superior limb. The reverse takes place in the articulation of the knee and the bones which form it. M. Ollier insists on the importance of these facts, because of the results that attend articular resections practised on children. He has observed since 1861 that, after resections of the elbow in young children, the superior limb continues to grow, whilst the inferior limb hardly grows any more after resection of the knee. The deformity which results from this stoppage of the development is more and more exaggerated as the fellow-limb continues its normal growth. After resections, as after certain inflammatory lesions, a growth lengthwise of the limb operated on is sometimes observed. This lengthening is not accompanied by hypertrophy of the bone ; it becomes, on the contrary, lighter. Hence M. Ollier has called this growth the atrophic lengthening. M. Ollier explains this anomaly by the diminution of the pressure which the bones exercise on one another. The diminution of this pressure leads, in fact, to an atrophic lengthening. This it is easy to observe in the bones of a paralysed limb, but without waiting for that general atrophy which soon succeeds the functional inertia of the limb.

Dr. DUPUY read a paper called "Some Desiderata of the Theory of Animal Heat". Dr. Dupuy treats the question from three points of view. 1. What is the part of chemical action in producing animal heat? Is it the blood, as Frankland thought? or does the chemical action take place in the constituent elements of the tissues—thus supporting the views of MM. Berthelot and Bernard? In this last case, it remains to be proved that, considering the transformation of forces, this chemical action could give a sufficient equivalent of the mechanical work. Relying on universal experience, Dr. Dupuy rejects the theory of Frankland, who considers that mechanical work requires nourishment essentially formed from fat and starchy bodies. 2. How is the transformation of forces accomplished? In the first place, the conversion of molecular movement into movement of the mass is accompanied in machines by a diminution of heat corresponding to the work accomplished. With men, according to M. Becquerel, the reverse is produced. What is the explanation of this anomaly? What is, physiologically, the method of the conversion of movement in the mass into molecular movement? 3. What is the mode of action of dynamorphous aliments? These aliments—alcohol, tea, coffee, cocoa, as well as arsenic—exaggerate certain functions. It has been shown that they do not increase chemical action, and that they are not sufficient by their own combustion to explain the production of the work which follows their injection. Is not chemical action, then, not the efficient and producing cause—the principle—but only the condition of certain functions, in particular of intellectual activity?

Dr. FLEURY compared the dynamism of the two cerebral hemispheres. Serre and Broca have for a long time pointed out the functional inequality of the two cerebral hemispheres, and a great number of clinical facts confirm their ideas. Gratiolet has observed the same inequality in the development of the brain in the fœtus. The left hemisphere excels the right. Dr. Fleury explains this functional inequality by the unequal distribution of blood in the cerebral hemispheres. Relying on the physical laws which regulate the course of the blood in the veins, and on the results of numerous measurements, he shows that the left hemisphere receives a more considerable quantity of blood than that which reaches the right hemisphere. The measurements taken of the jugular veins also confirm this opinion. Finally, we have to mention the agreement of a greater afflux of blood to the right superior limb.

Dr. LEUDEL (Rouen) spoke of the case of unilateral ephidrosis on the face of a woman of neuropathic disposition ; the sweat spreading over the entire regions innervated by the two branches of the trigeminal, and coinciding with an amblyopic. This ephidrosis showed itself suddenly, without either heat or redness of the parts affected, and without the patient moving. Limited sweats were observed as often a consequence of contusion of the nerves or of neuralgia. Dr. Leudel has been able to find only three cases resembling this one, in which this abnormal secretion was not accompanied with any other phenomenon. The ephidrosis observed by Dr. Leudel was modified and considerably diminished by the use of sea-baths.

Dr. LABORDE related a similar case, recently reported to the Biological Society by M. Barretti.

M. DE RANSE observed that a dozen years ago he had a case of unilateral ephidrosis on the face of a young woman. The sweat did not appear unless after violent exercise.

Dr. BITOT read a paper on the Employment of Veratrine in Cardio-vascular Affections not yet arrived at the Period of Cachexia. In consequence of experiments in the laboratory, and clinical observations, M. Bitot has been able to determine what is the mode of action of veratrine ; and, comparing these results with similar ones obtained with digitalis, he has deduced the following conclusions. Veratrine is a precious agent for vascular troubles, more particularly for those troubles which accompany functional hypertrophy of the heart. Contrary to digitalis, in physiological doses it is, with regard to the heart, atonic and hyposthenic. In physiological doses, it is not spoliative as digitalis. Continuing its use has not, then, the same dangers. Its use seems to be as an indirect compensator. In superexciting the sensibility and contractility of animal life, it causes morbid activity of the nervous system and the contractile fibres of vegetative life. Its action is very distinct from that of digitalis. When the latter is ineffectual, the former may be appealed to as well as digitalis. Veratrine is contraindicated in the last period of cardio-vascular affections and in asystole. Finally, there is ground for trying it in all the diseases which affect the nervous system and vegetative life.

Dr. LABORDE related the experiments of MM. Oulmont, Prevost, and others, on veratrine. He thought that it acted on the two muscular systems. The facts observed by M. Bitot were probably cases of nervous palpitations.

Dr. BITOT admitted that veratrine acted on the two muscular systems, but successively, and not simultaneously, and thus brought about a sort of balance between the activity of the two systems—a balance to re-establish the equilibrium upset by the disease.

Professor TRELAT made a communication on Lymphosarcoma or Lymphadenoma. This affection he has studied so thoroughly, that his recent works throw great light on the subject. He has arrived at the practical conclusion that, in lymphosarcoma, surgical intervention should be avoided.

Dr. REYNAUD, in his own name and in that of M. Falieres, stated that the essence of absinthe and camphor had a favourable action in glycosuria. Dr. Reynaud quoted a case of this affection well advanced, and in which camphor, taken internally, was followed by a very notable amelioration.

Dr. ROLLET was led by the preceding communication to make known a mode of treatment of epilepsy from which he had obtained great success. He used a mixture of powder of valerian and of purified terebinthin, in the necessary proportions for a consistent pill—11 parts of valerian to 10 of terebinthin, administered in pills of 20 *centigrammes* to the dose four times a day.

Dr. LE FORT read a paper on Acute Glaucoma. He combated the theories of Von Græfe and Hancock, and rejected the therapeutic means proposed by these two celebrated oculists—iridectomy and the section of the ciliary muscle. According to Dr. Le Fort, acute glaucoma is anatomically characterised by a veritable dropsy of the serous tissue which separates the choroid from the sclerotic. He showed how this lesion explained all the symptoms of acute glaucoma ; and he prefers, as a means of treatment, the sclerotical paracentesis of the eye. Twice already this method has been employed by him, and it has been followed by a very prompt and happy result.

Dr. AUGUSTE VOISIN communicated a series of studies on Pathological Histology in Simple Insanity (not general paralysis). Dr. Voisin showed many plates representing brains of insane attacked with lypemania, sensorial madness, and dementia, showing that, even in the case where the disease is the result of causes essentially moral, it produces alterations in the vessels and cells of the brain; atheromatous alterations; ampullary dilatations; nuclear aneurisms of the arteries ; hyperæmia, without proliferation of the conjunctive tissue ; necrosed lesions of the vessels and cells. The different forms of delirium and madness coincide indistinctly with each of these alterations. Finally, madness is not, as has long been said for want of sufficient anatomical study, an affection *sine materia* ; it is always accompanied with alterations of the nervous centres.

Dr. ORÉ called attention to the method of Intravenous Injections. He remarked on the importance of chloral as an anæsthetic agent, and made evident the advantages to be derived from this method and this agent in therapeutical applications. He combated the opinion of Liebreich, and showed in what conditions chloral has a just title for being considered an antidote to strychnine. Finally, he opposes the opinion of the German physiologist, and brought evidence in contradiction of his theory of the transformation of chloral into chloroform and formiate of soda.

Dr. LABORDE presented, in support of his opinions as to the oxida-

tion of steel in the living tissues, a needle which had been imbedded for fifteen years in the breast of a young girl, and which was almost completely oxidised.

CORRESPONDENCE.

THE SOCIAL SCIENCE ASSOCIATION AND THE CONTAGIOUS DISEASES ACTS.

SIR,—Having had an opportunity of looking over the abstract of a paper assumed to have been read at the Plymouth Congress by Mr. W. Acton, I beg to say a few words about it.

First, as to the paper itself: it really is a most startling *exposé* of the facilities which exist for a refined and luxurious prostitution in our great towns. It shows the efficacy of the Contagious Diseases Acts in suppressing the lower brothels, and in curing and reforming the unfortunates who belong to them. It shows also why Mr. Jacob Bright and his party in the House have so many supporters in their insane attempt to repeal those most necessary Acts; and why the "higher" class of prostitutes, backed by their parliamentary patrons and their feminine sympathisers, applaud Mrs. Josephine Butler, and prefer being left to the private hygiene of their "landladies", and to medical inspection and attendance of *their* selection.

Secondly, as to the action of the managers of the Social Science Association on this occasion: I do not see why Mr. Acton should have been stopped and "shut up", or why the sanitary results of the Contagious Diseases Acts should have been excluded from the subjects to be considered by the Health Department. Have the Association and its founder abandoned the rational course they have hitherto taken on this question? Is there any infectious disease which tells more seriously on the general health of the population—on the constitutional integrity and vigour of the race—than syphilis? It is said that the Acts are as thoroughly and discreetly administered in Plymouth as in any military or naval depôt of the kingdom. Is not Plymouth, then, the very town in which the working and effects of the Acts should have been fairly ascertained and discussed? I can only infer that the Council of this Congress and the President of the Health Department had not the moral courage to support what they know to be truth and right against the clamour of the fanatics who are driving on our "petticoat" government to the repeal of these truly reformatory laws.

I am, etc.,

AN OLD MEMBER OF THE SOCIAL SCIENCE ASSOCIATION.

September 21st, 1872.

FOREIGN MEDICAL DEGREES.

SIR,—I have just seen the letter on the above subject from the editors of the *Medical Directory*, and, while thinking that their proposal is likely to be received with satisfaction by those who wish to enrol foreign degrees, I would suggest that they should print each year an alphabetical list of the gentlemen who sign the certificates, in order that each may have the power of checking it. When they are dealing with shady customers who have no scruple in using a degree which only guarantees that they could once scrape together sufficient money to buy it, they cannot take too many precautions against roguery, while, of course, the honourable gentlemen who are in possession of *bona fide* foreign degrees can have no objection to a plan which will tend to confirm the respectability of their qualifications.

I am, etc., F.R.C.S.

THE STUDENTS' MICROSCOPICAL SOCIETY.

SIR,—I have to thank you for the kind way in which you have taken up the subject of the proposed Medical Microscopical Society.

With regard to Mr. T. C. White's remarks in the last number of the BRITISH MEDICAL JOURNAL, which I have but just now read, I beg to make the following comments. Mr. White suggests that there should be formed a Medical section of the Quekett Club. Now this club is one which, as you remark, "is already large and active enough;" it is, moreover, composed of gentlemen who, with some few exceptions, prefer podura scales, diatom markings, etc., to medical subjects; and it appears to me that if a Medical section were added to it to which ALL the members, *medical or otherwise*, were admitted, the lay portion would seriously inconvenience the professional, in consequence of their imperfect knowledge or almost total ignorance of medical subjects; in fact, were they present, it seems to me that they could be so merely from idle curiosity.

I quite agree that it would be advisable to make the Medical Microscopical Society a section of some existing society, but then it should be of some society devoted to medical subjects, and not of one at which questions of *general histology* are discussed.

The notice I had printed and published was intended as a preliminary notification of what it was proposed to do, and to invite the opinions of the members of the Medical profession on the subject; so far it has been successful, for I have received kind wishes and suggestions from most of our leading histologists, and shall lay these communications before those who may be present at the preliminary meeting, of which notice will shortly be announced, and it will be for the gentlemen then present to decide what shall be done.—I am, etc., J. W. GROVES.

Dover, September 18th, 1872.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received certificates to practise, on Thursday, September 19th, 1872.

Smith, Richard, Digbeth, Birmingham

The following gentleman also on the same day passed his primary professional examination.

Twort, William Henry, St. Bartholomew's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

BARONY PARISH POOR-HOUSE, INFIRMARY, and LUNATIC ASYLUM, Barnhill, Glasgow—Assistant Medical Officer: £80 per annum, house, coal, and gas.
BATH UNION—Medical Officer for the Batheaston District.
BELFORD HOSPITAL, Fort William, Inverness-shire—Resident Surgeon: £150 per annum, board and lodging.
BETHLEM HOSPITAL—Two Resident Medical Students.
BIRMINGHAM GENERAL DISPENSARY—Resident Surgeon: salary £130 increasing to £150, residence, coals, gas, and attendance.
BLACKBURN UNION, Lancashire—Medical Officer for the Billington District.
CARLISLE DISPENSARY—House-Surgeon: £80 per annum, residence, coal, gas, and attendance.
CHORLTON UNION, Lancashire—Dispenser.
CLITHEROE UNION, Lancashire—Medical Officer for the Whalley District.
GLASGOW ROYAL INFIRMARY—Extra Physician to the Dispensary.
GLENTIES UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Dungloe Dispensary District: £100 per annum, and fees.
HARROW SCHOOL—Surgeon.
HENDON UNION, Middlesex—Medical Officer for the Harrow District: £90 per annum.
HENLEY UNION—Medical Officer and Public Vaccinator for the Nettlebed District: £80 per annum, and extra fees.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Two Resident Clinical Assistants.
HOSPITAL FOR WOMEN, Soho Square: House-Physician.
HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square—Consulting-Physician.
KINCARDINE O'NEIL, Aberdeenshire—Parochial Medical Officer.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Hon. Surgeon.
NOTTINGHAM UNION—Medical Officer to the Workhouse: £150 per annum.
ST. AUSTELL UNION, Cornwall—Medical Officer and Public Vaccinator for District No. 2: £25 per annum and fees.—Medical Officer and Public Vaccinator for District No. 7: £30 per annum and fees.
ST. GEORGE, Hanover Square—Medical Officer of Health: £350 per annum.
SEAMEN'S HOSPITAL (late *Dreadnought*), Greenwich—House-Physician.
SUNDERLAND INFIRMARY—Dispenser.
TOXTETH PARK TOWNSHIP—Assistant Medical Officer to the Workhouse: £100 per annum, and allowances.
TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.
TULLAMORE UNION, King's County—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Clara Dispensary District: £100 per annum, and fees.
WARWICKSHIRE LUNATIC ASYLUM, Hatton—Assistant Medical Officer.
WEST LONDON HOSPITAL, Hammersmith—Assistant-Physician.
WESTMINSTER HOSPITAL—House-Physician.
WHALLEY, Lancashire—Certifying Factory Surgeon.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

ALLCHIN, W. H., M.B.(Lond.), M.R.C.S., L.S.A., has been appointed a Physician to the St. Marylebone General Dispensary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

HARRIS, Thomas, M.R.C.S.E., at Wardington, Oxon, aged 78, on August 31st.
MULVILLE, Wm., M.D., at his residence, Prospect House, Gort, co. Galway, aged 77 years, on September 16th. He was forty-six years an eminent and distinguished practitioner in this county, and his loss is much felt and regretted.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Mr. Lowndes, "On the Registration of Still Births"; Dr. Snow Beck, "On Pelvic Hæmatoma"; and other papers —Royal Microscopical Society, 8 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

C. W. desires references to articles on Puerperal Septicæmia in English literature.

THE papers of Dr. Crichton Browne, Dr. Kelburne King, and Mr. S. Messenger Bradley, shall have immediate insertion.

MR. MARKWICK.—The difference between Homœopathy and Isopathy is the difference betwixt Tweedledum and Tweedledee.

DR. CRISP and MR. HAVILAND.—Next week.

INQUIRER (Cardiff).—An L.R.C.P. of Edinburgh is not entitled to call himself "Dr." in virtue of that diploma.

X. Y. Z.—We have no further information at present.

DR. LIPSCOMB.—Mr. Pye Henry Chavasse's "Advice to a Young Mother." Churchill and Co.

DR. WADE (Birmingham).—Many thanks. Not only does the French journal mentioned contain three reproductions of articles extracted from the BRITISH MEDICAL JOURNAL, but we observe, with pleasure, that every journal which we receive this week (twenty-three in number) includes one or more. One American medical journal has eight extracts. It is a source of satisfaction to find that the value of the contents of the JOURNAL are as highly appreciated now abroad as at home, and still more so that the benefits of the labours of British workers and writers are, by our system of exchange, now widely and continuously diffused throughout all parts of the world, and translated weekly into every language.

MR. LEIGH (Liverpool), Dr. BELL TAYLOR (Nottingham).—The Contagious Diseases Acts do not legalise prostitution, but prescribe means for preventing the spread of a hideous disease, which is essentially hereditary, and from which innocent women and children suffer not less severely than those who incur the risks of physical disease in transgressing moral law. If any of those who oppose these Acts do so from a desire to repress prostitution, they labour under error. These Acts themselves impose a penalty on prostitution additional to any which previously existed, and are themselves repressive. If the excellent persons who disapprove of any toleration of the existence of prostitutes in a State, can propose any means, moral, theological, rational, or parliamentary, of arresting the growth of that monstrous evil, which so many ages and so many peoples have hopelessly deplored, they will find the most earnest support from the framers of the Contagious Diseases Acts, and from their supporters. They will do well, however, to review the history of past legislation on the subject before making any hasty propositions. Penal and prohibitory legislation, in the most varied and severe forms, has proved formerly ineffectual; and it remains an unsolved problem how to stop fornication and prevent prostitution. We are unable to understand why those who have not yet been able to solve this problem or to assist in its solution, should violently oppose the efforts made to lessen the physical evils resulting from the practices which no one has yet been able to check.

MR. HARDING.—We are unable to give the address of M. Chervin, the author of the apparently successful and highly physiological mode of treating stammering, which we last week described; but Mr. Harding will find very full details in the *Lyon Medical*, No. 18, September 1st, 1872. Lyon, Megret; Paris, F. Savy.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

CURIOUS PRESCRIPTIONS.

SIR,—I have met with a prescription even nastier than that reported by Dr. C. D. H. Drury, in the JOURNAL of September 21st.

Not long ago, I was requested to see a child. After examining it, the mother told me she had been giving it some medicine for its liver. I naturally asked what she had given; and was informed, without any hesitation, that she had made the child drink a teacupful of its own water every morning.

Urine, known here as chamberley, is frequently used for chapped hands and chilblains.

I am, etc.,

Howden, September 1872. R. T. MANSON, M.R.C.S.E., etc.

MEDICAL ETIQUETTE.

SIR,—In your valuable JOURNAL of last week, I find there is a letter signed Edward E. Campbell, M.B., C.M., upon medical etiquette in the county of Durham; and in that letter he charges a Dr. Parker, of Easington Lane, with a want of etiquette. Now, sir, as you have been good enough to publish his letter, may I ask you to publish mine. The accident he alludes to happened to a Mr. Dodds, of South Hetton, a patient of mine of thirteen years' standing; and, being the family medical attendant, I was sent for. When I arrived at his (Dodds's) house (which is over a mile from mine), I found three persons attending to him, whom I took to be medical men. At least, one was stitching a lacerated wound on his nose with a needle. I said nothing until he or they (as there were two others, strangers to me, lookers-on) had finished, when I introduced myself as the family medical attendant, stating I had been sent for; not wishing to take the case out of their hands, on account of being too busy to attend to it, but would help in the putting up of it. I examined the injuries, and then we walked outside the house, and held what your correspondent calls a consultation, which amounted to this. Mr. Fothergill, the chief actor in the case, asked my opinion. I said there was comminuted fracture of the humerus (which had somewhat the appearance of the half of the letter S), and also comminuted fracture of the bones of the nose—viz., the nasal, nasal processes of superior maxilla, and vomer—in fact, the bridge of the nose was knocked flat; and I proposed to elevate the fractured fragments, so as to keep the symmetry of the face. Mr. Fothergill said it was impossible to say what bones were injured, but he thought the inferior spongy bones were. After we returned to the house, he offered me a fine steel-wire probe to elevate the fractured fragments. I proposed to use the back of a director; and, if I am not mistaken, Mr. Campbell lent me one, which spared me using my own; and I elevated the nasal bones. Then came the putting up of the arm. While one went for the splints to the colliery surgery, I asked for some calico, and helped to make the bandages; and more than that, I got this young man Campbell (to save time) to bandage the hand and forearm before the splints arrived, not interfering with the fracture, and leaving the arm in charge of Mr. Campbell. The splints soon arrived; and Mr. Fothergill cut three pieces, and applied them to the arm without making the least extension, or offering to adjust the fractured pieces. I asked him to make extension and adjust the fragments, and continue the bandage over the fracture underneath the splints. But no; these individuals would not. Mr. Fothergill replied that he had set the arm, was a bone-setter, and a M.R.C.S.; and contemptuously refused, saying that it was time enough in eleven days to put it right, and that he was only putting it up temporarily. I then said that I did not wonder at bone-setters being called in over M.R.C.S.'s if they acted like him; and I now repeat it. Mrs. Dodds his wife, and Mrs. Shanks his sister, asked me several times to take the case, but I declined (in this part it is usual to send the colliery surgeon to colliery accidents, whether the injured person wish him or not). I am astonished that the principal did not write the letter to your paper instead of the young assistant. I must decline taking any further notice of such letters. In conclusion, allow me to ask your readers, does not the early setting of bones remove pain, stop internal hæmorrhage, prevent or lessen the swelling; and last, but not least, give great consolation to the patients? Apologising for the length of my letter,

I am, etc., A. J. E. PARKER.

Easington Lane, Co. Durham, September 24th, 1872.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Sept. 21st; The Manchester Guardian, Sept. 25th; The Tewkesbury Record, Sept. 21st; The Aberdeen Daily Free Press, Sept. 20th; The Cambridge Express, Sept. 21st; The Homeward Mail, Sept. 18th; The Jersey Express, Sept. 19th; The North British Advertiser, Sept. 21st; Saunders's News-Letter and Daily Advertiser, Sept. 24th; The Bath Express, Sept. 21st; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Henry Thompson, London; Dr. W. M. Kelly, Taunton; Dr. Samelson, Manchester; F.R.C.S.; Dr. J. M. Winn, London; R. E.; Mr. R. T. Manson, Howden; Mr. Jukes Styrap, Shrewsbury; Dr. C. Bell Taylor, Nottingham; An Associate; Dr. G. Elder, Nottingham; Dr. Douglas Powell, London; Dr. Julius Althaus, London; Dr. James Johnston, Birmingham; Dr. J. C. Murray, Newcastle-upon-Tyne; Mr. E. Lund, Manchester; M.D.; Mr. Wanklyn, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. R. H. Wickham, Newcastle upon-Tyne; Our Sheffield Correspondent; Dr. Wade, Birmingham; Dr. F. J. Brown, Rochester; Mr. Bulteel, Plymouth; Mr. Walters, Reigate; F.R.C.S.; Our Manchester Correspondent; Dr. Downey, Sileby, Loughborough; Mr. Soutter, London; A Member; Mr. H. S. Taylor, Guildford; Mr. Walter Reeves, London; Mr. Alfred Markwick, London; Mr. Blower, Birmingham; Mr. Bassett, Birmingham; The Medical Officers and Lecturers of the Charing Cross Hospital; Dr. Playfair, London; Dr. Crisp, London; Mr. Haviland, London; Mr. S. M. Bradley, Manchester; Dr. Kelburne King, Hull; Dr. Allen Thompson, Glasgow; Mr. Groves, Dover; Dr. Wilks, London; Mr. Bellamy, London; Mr. Wm. W. Dunkley, Stoke-on-Trent; Dr. W. H. Allchin, London; Dr. Parker, Durham; Dr. Clifford Allbutt, Leeds; Mr. Ingram, London; Dr. Heaton, Leeds; Our Manchester Correspondent; Mr. White, Warrington; Our Dublin Correspondent; Dr. Parsons, Dover; Dr. Gibson, Bedford; Dr. Lyle, London; etc.

LECTURES

ON

THE CONNECTION BETWEEN THE CHEMICAL PROPERTIES AND THE PHYSIOLOGICAL ACTION OF ACTIVE SUBSTANCES.

Delivered before the Royal College of Physicians, Edinburgh.

BY

THOMAS R. FRASER, M.D., F.R.S.E., F.R.C.P.E.

LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—In addressing those who possess some familiarity with the subject I have the honour to bring before you, it is scarcely necessary to make the statement that a connection exists between the chemical properties and the physiological action of substances. The slightest effort of memory, or, at most, a glance at a table of elementary substances or list of chemical compounds, is sufficient to convince any one of the truth of this statement. For, among the numerous elementary substances or chemical compounds whose action has been investigated, it is difficult, if not impossible, to find two that possess exactly the same physiological action—that produce the same train of symptoms, and modify the functions of the same histological elements in the same way and with the same activity. Now, as one elementary substance is distinguished from every other elementary substance by the possession of certain distinctive chemical properties, and as one compound substance is likewise distinguished from all other compound substances by the possession of certain special chemical properties, it is obviously suggested that a relationship exists between the chemical properties and the physiological action of active substances.

Substances resembling each other in chemical properties possess actions that resemble each other.—No doubt, analogies, often of a close and striking description, occur between the physiological actions of different substances; but these analogies tend to bring more distinctly into view the relationship referred to, by shewing that similar physiological effects are often produced by substances which resemble each other in many of their chemical properties. For instance, the various salts of potash in a remarkable manner paralyse the heart's action, those of ammonia accelerate the circulation and produce spasms and general convulsions; and, indeed, the general truth of the proposition, enunciated by Dr. Blake in 1839—to which, however, there are several exceptions—that the salts of the same base have analogous actions, is now universally recognised. To the industry of this observer we are also indebted for another general proposition of great interest which bears upon this relationship. Several chemical substances possess the property of crystallising in the same form, and of replacing each other in crystalline compounds without alteration of the characteristic geometrical figure; in other words, they possess the property of isomorphism. The physiological action of a large number of inorganic substances belonging to different isomorphic groups has been examined by Dr. Blake. The symptoms that were observed have led him to believe that, with a few exceptions, a striking analogy exists between the isomorphic relations and the physiological action of the substances examined, an analogy to which he has given expression by the statement that "isomorphous substances produce similar effects."

Substances which resemble each other in certain of their chemical properties, possess similar degrees of poisonous activity.—Not only is there evidence to show that substances which resemble each other in their chemical properties may possess physiological actions of a similar kind, but a correspondence may likewise be traced between certain of the chemical properties and the physiological activity, or poisonousness, of substances. The combining or atomic weight of elementary bodies forms an important character by which they may be distinguished from each other, and Dr. Rabuteau has published an extensive and valuable series of experiments, which he had undertaken for the purpose of determining whether any relationship exists between the atomic weight and physiological activity of elementary bodies. As a result of this investigation, he has found that *the metals are more active physiologically according as their atomic weights are more elevated.* For example, in reference to sodium, potassium, and thallium: sodium, with an atomic weight of 23, is almost inert; potassium, with an atomic weight of 39, is active in moderate doses; and thallium, with an atomic weight of 204, is a dangerous poison, nearly as poisonous, indeed, as lead, whose atomic weight is 207. On comparing magnesium, zinc, and cadmium, it is seen that magnesium, with an atomic weight of 24, is scarcely more active than sodium (23), for the salts of the former are prescribed in about the same doses as those of the latter; while zinc, with an atomic weight of 65, is a dangerous substance, although much less so than cadmium, whose atomic weight is 112. In reference to the metalloids, Dr. Rabuteau has found that those which are *diatomic*, as oxygen, sulphur, selenium, and tellurium, conform to the same law as the metals. The monatomic metalloids, however, are governed by a law which is the reverse of this; a fact which had previously been pointed out by Bouchardat and Stuart Cooper, who observed that chlorine (35.5) is more active than bromine (80), and the latter more so than iodine (127).

By changing the chemical properties of a substance, we may modify the physiological action.—These various facts show that resemblances between the chemical properties of substances may be accompanied with certain similarities in their physiological action and activity. The support that is thus given to the theory of a relationship between chemical property and physiological effect, is greatly strengthened when we find that the physiological action of substances may be modified by changing their chemical properties. Among the many examples that might be brought forward in illustration of such change, one of the most remarkable is that afforded by amygdalin. This neutral principle is derived from bitter almonds, and it is a substance that is devoid of physiological activity. There occurs along with it in the bitter almond, another principle, emulsin, which also is a substance that possesses no physiological activity. A large dose either of amygdalin or of emulsin alone may be injected into the circulation of an animal without any effect whatever being produced. When, however, the two substances are together injected, even at points far removed from each other, physiological effects are produced with great activity, and death occurs. The originally inert amygdalin has become a powerful poison, and this change is the result of a modification in its chemical properties—a modification which you will easily recognise by comparing the odour of the moistened amygdalin with that of the mixture of amygdalin, emulsin, and water, which I now place before you, and which may be represented by the equation:—

$$C^{20}H^{27}NO^{11} + 2H^2O = C^7H^6O + CNH + 2C^6H^{12}O^6$$

Amygdalin. — Hydride of Benzole. — Prussic acid. — Glucose.

Another example of a similar kind, which may be here adduced, has been made known within recent times by the chemical researches of Matthiessen and Wright, and the physiological observations of Drs. Gee and Pierce, and others. The two chemists whom I have here named, in the course of their elaborate researches on the opium-alkaloids, found that when morphia was acted upon by hydrochloric acid at a high temperature its chemical properties are modified, and its composition changed so that one equivalent of water is separated from it. The action of morphia thus modified has been examined, and it has been ascertained to possess a physiological action very different from that of morphia itself. In place of producing hypnosis, this changed morphia—to which the name of apo-morphia has been given—acts as a powerful emetic substance, so powerful, indeed, that in man emesis occurs within a very few minutes after the one-thirteenth part of a grain, or even a smaller dose, has been subcutaneously injected.

The general law, that the physiological action of a substance may be modified by changing its chemical properties, is, indeed, one whose truth is widely recognised in medical science. On it has been founded the application of chemical antidotes for poisons; that is to say, of substances that modify the physiological effects of substances by changing their chemical properties. The chemical properties of arsenious acid are changed by hydrated sesquioxide of iron or of magnesia, those of tartar emetic by tannin or albumen, those of lead by sulphate of magnesia, those of prussic acid or soluble cyanides by proto and persalts of iron, those of oxalic acid by carbonate of lime, and those of morphia, strychnia, and various other alkaloids by tannin or iodine; and as a result of this change the physiological properties of these substances are modified.

To the recognition of this law, likewise, therapeutics has become indebted for the introduction of a remedy which everyone must admit has proved of the greatest value in the treatment of disease. Although chloral was discovered more than thirty years ago, it was not until 1869 that Liebreich ascertained its important physiological action. The belief that a certain change in its chemical properties would enable it to produce a well defined physiological action, induced Liebreich to investigate the action of this substance. I need hardly say that the chemical change anticipated was the decomposition of the chloral, after its introduction into the circulation, by the alkaline salts present in the blood. This decomposition may readily be seen by adding, as I now do, some caustic alkali to a tolerably strong solution of chloral hydrate; the

result being the precipitation of minute globules of chloroform and the simultaneous formation of formiate of the base that is added :—

$$C^2Cl^3HO + KHO = CCl^3H + CO^2KH$$

Chloral — Chloroform. — Formiate of Potassium.

The physiological action of an active substance may be accompanied with obvious chemical reactions between it and certain of the constituents of vital structures.—The principle which I am now endeavouring to illustrate, namely, that a connection exists between the chemical properties and the physiological action of active substances, receives a further and obvious support from several well-known facts, which show that the physiological action of active substances may be accompanied with distinct chemical reactions between them and certain of the vital structures. Thus, in producing its violent corrosive action, sulphuric acid withdraws the element of water from the tissues, liberates the carbon of their ternary hydrocarbons, and separates from them their basic constituents. The analogous corrosive effects of nitric acid are accompanied with the oxidation of tissue-elements, and combinations with electro-positive substances, and with the formation of xanthoproteic acid—by the last of which reactions the characteristic orange staining of the skin and fibrous tissues is caused. It is needless to point out how the local effects of the caustic alkalies are also accompanied with well-defined chemical changes in the vital structures on which they act.

One of the most striking examples of a definite change of chemical property accompanying the physiological action of a substance is that afforded by carbonic oxide. You are aware that this gas is largely present in the fumes of burning charcoal, and that it acts as a violent poison. Its special effects have formed the subject of a well-known investigation by Claude Bernard—an investigation that marks an era in the history of pharmacology. This distinguished physiologist discovered that carbonic oxide renders the blood of a marvellously florid colour, that it thrusts out oxygen from that fluid, and that its action is in some way related to the latter effect. More recent investigations, especially those of Lothar Meyer and Hoppe Seyler, have confirmed Claude Bernard's results, and also shown that carbonic oxide forms a definite chemical union with the hæmoglobin of the blood. The resulting compound is one of great stability; so much so, that carbonic-oxide-hæmoglobin resists the action of powerful reducing agents. The connection of these results with the action of this substance is easily seen. The physiological action is the direct result of the change in the chemical properties of hæmoglobin—a change which has, among other effects, that of preventing those chemical interchanges between it and the oxygen of the air on which life depends. The relation of the great stability of the combination between carbonic oxide and hæmoglobin to certain of its physiological effects is also apparent, for the serious symptoms which are produced by the most minute quantity can be recovered from but slowly. They can, however, be recovered from; and again we find that a chemical explanation may be adduced for this physiological change, as it has been recently discovered that, under the prolonged influence of oxygen, the carbonic oxide is at last liberated from its combination with the hæmoglobin.

There is some reason for supposing that somewhat similar chemical effects are produced during the action of prussic acid; and it has been shown by the careful and elaborate observations of Dr. Gamgee that nitrites conduct themselves towards hæmoglobin in an analogous manner to carbonic oxide—a fact which may explain certain of the phenomena produced by nitrite of amyl.

Gentlemen, these various illustrative examples are, I think, sufficient to convince you that there are good reasons for supposing that *resemblances between the chemical properties of substances may be accompanied with certain similarities in their physiological action and activity; that the physiological action of many substances may be modified by changing their chemical properties; and that the physiological action of a substance may be accompanied with distinct chemical reactions between it and certain of the vital structures.* It is on these generalisations, and the facts by which they are supported, that the belief in a connection between the chemical properties and the physiological action of active substances has in all probability been originated.

Various attempts have been made to determine on what special chemical properties the physiological action of substances depend; and I have had occasion to refer to several of these attempts, of which those of Blake and Rabuteau are undoubtedly the most important. It is also worthy of mention, that Dr. Broadbent of London has advanced the opinion, supported by many ingenious arguments, that the physiological action of a substance is related to a property which he terms *chemical tension*, and defines as the amount of energy developed by any possible rearrangement of the constituents of the substance; while Dr. Benjamin Richardson has shown that, in a series of bodies belonging to the same chemical type, the character of the symptoms somewhat depends on the volatility and solubility of the various members of the series. It is not necessary to occupy your time by discussing these theories. Whatever germ of truth they may contain, their value in indicating a connection between the chemical properties and the physiological action of active substances is a comparatively limited one. I prefer, therefore, to pass without further delay to the consideration of some other investigations which bear upon this subject.

Before doing so, it is necessary to inquire on what the chemical properties of substances are dependent. It is quite obvious that these properties depend on the chemical *composition* and *constitution* of substances; the latter term implying the mode of arrangement of their constituents, or the way in which these constituents are united together.

Chemical Composition and Physiological Action.—There are numerous indications of a relation between the chemical composition of a substance and its physiological action. Thus, as I have already mentioned, the salts of the same base have generally a common action—a law that is departed from when the base is united to an acid which itself has a distinct action. Similarly, the compounds of the same acids with physiologically indifferent bases produce the same effects. When, however, we consider more fully the relationship between composition and physiological action, we fail to discover the cause of the peculiar action of substances in the presence and proportion of particular elements. Many substances having identically the same composition—termed by chemists isomeric—possess very different physiological actions. This, for instance, is the case with the isomeric series represented by oil of turpentine, oil of lemons, oil of juniper, etc., all of which have the composition $C^{10}H^{16}$; and with that represented by nitrite of ethyl and glycocol, both of which have the composition $C^2H^5NO^2$. Kakodylic acid likewise very well illustrates the insufficiency of composition alone as an explanation of physiological action; for, although it is a soluble substance, and contains more than 54 per cent. of metallic arsenic, it may be administered in large quantities without producing any effect whatever. And, finally, the action of the organic alkaloids is obviously opposed to this explanation—an opposition which becomes apparent when we consider that aconitia paralyses the spinal cord, and also the inhibitory cardiac ganglia; while strychnia increases the activity of the reflex apparatus in the cord, and stimulates rather than paralyses the cardiac vagi nerves, although both substances are alike composed of carbon, hydrogen, nitrogen, and oxygen.

[*To be continued.*]

A CASE OF EVULSION OF THE IRIS.

By W. H. FOLKER, F.R.C.S.,
Surgeon to the North Staffordshire Infirmary.

On the 26th May, 1872, a railway pointsman, named Samuel Tew, aged 42, met with the following accident. He was pulling at a piece of wood, the opposite end of which was held down by a weight, when a portion of it, about a foot in length, suddenly broke off and flew up, striking him in the right eye with the splintered end. Feeling that he was severely injured, and suffering great pain, he came directly to my house, about a quarter of a mile from where the accident happened. On examination, I found a wound in the outer and lower edge of the cornea. The anterior chamber had some blood in it, and chemosis was setting in, but at the time nothing more was made out, owing to the pain any examination produced. I at once applied atropine, and employed antiphlogistic treatment.

When all inflammation had subsided, and the corneal wound had healed, the iris was found to be completely torn away, a piece of the size of about two pins' heads only remaining at the corner of the wound. There was for a long time great intolerance of light; which, however, has gradually subsided, and the patient is now able to bear any moderate amount of light. At the present time the lens is perfectly clear. If anything the eye is slightly contracted. On closing the other eye he can see, but cannot discern distinctly.

When tested with Jäger's types he could read nothing, but looking through a circular hole, one-sixteenth of an inch in diameter, in a piece of dark paper, he could read Jäger No. 19. With a test spectacle (No. 9) covered with the same piece of paper, he could read No. 16. When the hole in the paper was enlarged to the eighth of an inch he could not distinguish anything; and with neither aperture did any other spectacles suit him.

There are on record some cases of congenital absence of the iris, but such cases as the one just related of complete evulsion of the iris without other damage to the lens or sight, and with perfect restoration to the eyeball, are, I think, sufficiently rare to justify me in thinking this a case worthy of being recorded.

CLINICAL LECTURE
ON A
CASE OF HYDROPNEUMOTHORAX.

By HENRY THOMPSON, M.D., F.R.C.P.,
Physician to the Middlesex Hospital.

GENTLEMEN,—I have already lectured more than once on the varying phases of the following case as they have presented themselves successively during the life of the patient. I propose now, in the first place, to repeat the sum and substance of my preceding lectures, and then to describe and comment upon the mode of dying and the revelations of the dead-house. I use the term hydropneumothorax, in its widest acceptation, to denote the presence of fluid of any kind along with air in the pleural cavity.

John Brygenshaw, aged 22, was admitted originally on the 12th of August last, under Dr. Cayley, to whom I am indebted for the preliminary notes up to the date of his discharge in October. His own antecedents and his family history were good; his appearance was that of a healthy and well-made man.

On admission, the heart was found beating most distinctly in the third right interspace, just beyond the sternum; there was considerable apparent bulging on the left side, which was dull from apex to base, and failed to expand on deep inspiration. The breath-sound was feeble everywhere, quite inaudible towards the base of the lung, fairly blowing at the front apex, where there was comparatively little resonance.

August 15th. The left side measured $18\frac{1}{4}$ inches, the right $17\frac{3}{4}$.

August 17th. Paracentesis was performed by Mr. Hulke between the sixth and seventh ribs, and 98 ounces of clear serum, of specific gravity 1020, were withdrawn. During the operation, the heart returned towards its normal position.

August 21st. There was fair resonance in front as far as the fourth rib; in the axilla, to the level of the fifth; and at the back, as far as the angle of the scapula.

September 16th. Friction-sounds were audible over the left front. There was dulness anteriorly below the fourth rib, and posteriorly from the base of the lung up to the middle of the scapula. Over the dull space, the breathing was feeble and bronchial; and there was an ægophonic twang with the voice.

October 3rd. The patient left the hospital for Eastbourne without any signs of pneumothorax.

October 23rd. He returned from Eastbourne. He never lost his dyspnœa entirely. About Christmas last, he had a "bilious attack", accompanied by much retching. Shortly afterwards, the dyspnœa became more distressing, and the "washing sound" described in the following notes began to be heard. On the 23rd of January, 1872, he was again admitted, and placed under my care.

On re-admission, little or no breath-sound could be heard over any part of the chest on the left side. Over the upper three-fifths of the same side posteriorly, the percussion-note was clear, though short; in front it was inordinately clear and full. At the posterior base there was absolute dulness, and, in the same region, splashing and tinkling sounds might be elicited on succussion. The heart's impulse was most distinctly seen and felt at the midsternum and in the third right interspace, and again it was well perceived at the ensiform cartilage. The heart-sounds were widely diffused over the front of the thorax on both sides of the sternum, but they were more plainly audible on the right side.

In the above description, reference is made to the ordinary postures of the patient during examination; when he changed his posture, the limits of dulness and resonance at once interchanged places.

He was himself quite conscious of the splash within his chest whenever he moved, and in particular when he rocked himself; he called it a "washing sound", and was much annoyed by it. He was able to walk a short distance without distress, but was incapable of prolonged exercise. He was ordered a draught containing aromatic spirit of ammonia, spirit of ether, and syrup of tolu every four hours; with four ounces of port wine daily.

January 24th. There was no albuminuria. There was dulness over the main seat of the heart's impulse in the third right interspace, extending an inch and a half beyond the margin of the sternum.

January 26th. The measurements of chest at the nipples were, right side, $17\frac{5}{8}$ inches; left, $18\frac{3}{8}$; at the upper border of the ensiform cartilage, right side, $17\frac{3}{8}$ inches; left, $18\frac{1}{8}$. With two florin pieces, the bell-sound might be easily demonstrated on the resonant surface of the left side.

January 31st. Metallic tinkling could be heard in unison with the movements of the heart.

February 3rd.—Over the right supraspinous fossa, the breathing was bronchial, and there were creaking sounds of indeterminate character. Respiration was audible, though feebly, over nearly the whole of the left back.

February 8th. Up to this date, the pulse ranged from 88 to 120, and the temperature from 97 to 100.8 deg. These were extremes, the maximum of the pulse-rate and the minimum degree on the thermometer occurring only once. The prevalent average was, for the pulse, about 99; for the temperature, about 100 deg.; for the respirations, 27. On this day, paracentesis thoracis was performed by Mr. Hulke in the sixth interspace; and thirty-six ounces of greenish-yellow inoffensive pus were withdrawn bodily by an aspirator, and an indefinite amount afterwards removed by washing the pleura with water—probably about twelve or thirteen ounces. Along with the pus, bubbles of air were seen passing through the cylinder of the aspirator. During the operation, the heart's dulness and impulse were perceived to subside downwards and leftwards, and in the end they reached nearly the normal position, where the heart-sounds were more distinctly audible than on the right side of the sternum, as hitherto. The measurements were, right side, $18\frac{5}{8}$ inches; left, $17\frac{3}{8}$.

February 9th. The patient stated that, on moving in bed, he no longer heard the washing, but, on succussion, the tinkling was still perceptible. Gurgling metallic *râles* were very distinctly heard over the upper part of the left front. Posteriorly, on the left side, the breath-sound was audible down to the level of two inches above the extreme base, where there was dulness on percussion. The heart-sounds were best heard about half an inch to the left of the sternum and two inches below the level of the left nipple. At this point, the apex-beat might be indistinctly felt.

February 10th. The expansion of the left side was almost *nil*. *Râles* of high pitch and ringing tone were heard as before, under the left clavicle. Posteriorly, metallic tinkling with every respiration. Bronchial breathing was heard over the upper region of the left scapula. The heart's impulse was conspicuously visible over the sternum opposite the nipple.

February 11th. There was pain in right hypochondrium when the patient lay on the left side. He shivered slightly in the afternoon, and in the evening there was a marked rise in the pulse and temperature.

February 12th. He passed a very restless night. On taking a deep breath, he complained of pain beneath the right mamma, where friction-sounds might be heard. There was dulness below the third right cartilage for the space of an inch from the margin of the sternum. He was ordered a pill containing three grains of quinine, one-third of a grain of opium, and half a grain of digitalis, twice daily. The ether and ammonia draught was repeated. Dry cupping was ordered to painful part of right side.

February 13th. He was said to have vomited this morning a quantity of greenish-looking pultaceous matter.

February 16th. Pain of an aching character was felt along the left clavicle, and in the upper region of the scapula, aggravated on taking a long breath. The pulse was soft, compressible, and undulating. He was ordered six ounces of port wine daily.

February 19th. At the right apex, there was a prolonged expiratory murmur. At the right base, sonorous *râles* were heard anteriorly, harsh breathing posteriorly. The heart-sounds were louder to the right of the sternum than to the left. Moist *râles* were heard under both clavicles. The pulse was full, feeble, tremulous, and jerking. He was ordered four ounces of port wine and four ounces of brandy daily.

February 23rd. The sputa were very abundant and very offensive to the taste. They were expectorated gently in small quantities at a time, and consisted of muco-purulent matter, in which pus largely predominated.

February 26th. The porringer was nearly filled since last evening with greenish-yellow sputa, much resembling the fluid withdrawn in the operation of the 9th.

February 29th. He looked pale, with a slight flush. The nails were beginning to be curved. There was continued profuse expectoration of pus. Sonoro-sibilant *râles* were heard over the right back; and sounds of mixed creaking, gurgling, and sucking characters under the left clavicle.

March 2nd. The pulse was full, thrilling, soft, and dicrotous. The face was flushed. The sputa were much as before described, but more homogeneous. He was much emaciated.

March 5th. He expectorated most abundantly and most easily in the morning, after a slight cough in the first instance, without apparent straining of any kind. He stated that he feels as if large quantities of air escaped along with the sputa. He perspired copiously during the

night. He was ordered a pill composed of one grain of sulphate of zinc and three grains of extract of henbane.

March 7th. The night-sweats continued. The sulphate of zinc was increased to two grains, which held the perspirations in check.

March 9th. Friction-sounds were heard almost universally throughout the right side; at the front apex they were replaced by bubbling *râles*. On percussion, the left infraclavicular region yielded a short sonorous note, and offered marked resistance to the finger. The pulse was smaller and more compressible, in other respects unchanged. The sputa continued unchanged in every respect. From February 8th up to this day, the pulse had oscillated between 90 and 138, the respirations between 24 and 36, and the temperature between 99 and 103.6 deg. This last reading, however, was only once noted. As a rule, the temperature rarely exceeded 102.6 deg.; and there were not more than two or three occasions on which the pulse-rate fell below 100, or rose above 130.

March 11th. Pulse, 144; respiration, 42; temperature, 103.2 deg. Loud, coarse, characteristic friction could be heard and felt over the lower two-thirds of the right front, and over a corresponding area towards the right posterior base. The patient declared that he himself felt the rubbing very distinctly when he placed his hand on the right side of the chest. Pus, as before, was expectorated in large amount. He was ordered a pill containing two grains of quinine, one grain of sulphate of iron, and a quarter of a grain of opium, to be taken three times daily. At 10 P.M., the patient was much distressed by the incessant outpouring of sputa. About this time, the exhaustion was very great, and the cough began to slacken in force.

March 12th. At 4 A.M., the cough, expectoration, and outflow of pus, all ceased entirely; the breathing became hurried; and there were loud liquid rattles in the throat with each inspiratory act. Respirations 68. Between 9 and 10 A.M., on being raised, the patient seemed to breathe more easily for a few minutes, when his head fell back, and he became livid, and died in a quarter of an hour afterwards.

NECROPSY, twenty-four hours after death.—For the particulars, I am in the main indebted to Dr. Robert King. *Thorax*. On opening the chest, there was no rush of air from either pleural cavity. The pericardium, with the heart and left lung, were pushed over to the right, away from the side walls of the chest. The lung, however, was firmly attached by its greatly thickened pleura and by fibrous bands to the apex of the pleural cavity, along the left edge of the upper half of the sternum, and, through the medium of two tail-like prolongations, to the diaphragm. The lung-mass itself was not much larger or thicker than a man's hand; its lower two-thirds being of a dark slate colour, and completely collapsed; while its upper third was riddled with large irregular cavities, which freely communicated with each other, and by three or four openings with the pleural sac. The widest of these orifices would admit the tip of the little finger. The pleural sac itself was nearly filled with thin watery pus, and more than six pints were removed. On opening the trachea, the lungs remaining *in situ*, water could readily be made to flow through it along the left bronchus and through the aforementioned vomicæ at the apex into the cavity of the pleura. On making sections of this lung, a few old cheesy deposits were observed; but no trace of miliary tubercle could be found. The parietal layer of the pleura was thickly covered with corrugated masses of lymph, which, along the crests of some of the larger rugæ, were fully an inch and a half in thickness. The *right lung* was coated with recent lymph, especially over its lower lobe and between its base and the diaphragm. This lower lobe was everywhere intensely congested, and scattered freely throughout its substance were numerous patches of lobular pneumonia. The upper portion of the lung was densely indurated, apparently by the coalescence of a number of patches similar to the last in origin, but differing in the greater amount of caseous change which they exhibited. In two places, the caseous material had broken down, and left considerable cavities. No unequivocal example of grey miliary tubercle was discovered anywhere. The upper division of the *left* bronchus was traced continuously into the anfractuous cavern at the apex before described. Having been washed with water from the trachea before it was opened, no pus was discovered in it. The right lung, however, contained pus, along with frothy mucus, in its bronchial tubes. The bronchial membrane in both lungs was deeply in ected. The vocal cords were immensely thickened. The heart was to all appearance healthy, its valves being competent and free from deposit. There was no excess of fluid in the pericardium.—*Abdomen*. The liver, especially its right lobe, was attached by recently organised lymph to the under surface of the diaphragm. Glisson's capsule was minutely studded with grey miliary granulations, perfectly distinct, nowhere coalescing, of a definite rounded form, almost transparent, and nearly uniform in size, the largest being scarcely bigger than a good-sized pin's head. The substance of the organ was fatty and somewhat friable; it contained no visible traces of tubercle. The kidneys appeared healthy, and their capsules were non adherent; they presented no tubercle. The spleen, on section, showed numerous whitish points, whether they were Malpighian corpuscles or true miliary tubercles. The omentum and mesentery were thickly studded with tubercle throughout; and the intestine on its peritoneal surface—more particularly the ileum—was beset with similar granulations, which occurred in patches corresponding to irregular and dirty-looking ulcers on the inner surface of the bowel. These ulcers were met with throughout the large intestine as low down as the rectum, were most numerous at the lower end of the ileum, and extended quite to its upper extremity. They were not found, however, in the jejunum or duodenum.

You have in the case just detailed a good example of hydropneumothorax, with most of the characteristic signs fairly developed. I am not going to enumerate all these signs; you will find them well described in the several text-books—perhaps too well described. The distinctions I mean are too elaborate and too finely drawn; and too much significance has been awarded to some of the signs, in comparison with others. Two or three, however, in the catalogue, are of importance in differential diagnosis, when we wish to ascertain whether we have to deal with pneumothorax or simply with an intrapulmonary vomica and nothing more. The bell-sound, which I have demonstrated to some of you, affords the strongest assurance that the reverberating air-containing cavity is a very large one, and therefore presumably the pleural cavity itself. The splashing or succussion sound, and the interchange of dulness and excessive resonance, concurrently with the changing posture of the patient, give unimpeachable evidence of both air and fluid within the sac of the pleura. All these signs, and many more, were abundantly exemplified in our case; and there was no question whatever about the existence of hydropneumothorax.

The question naturally arose as to the existence of phthisis. I had no reason, judging from the history and from the physical examination of the chest, to suspect the presence of advanced phthisis; and in some degree advanced it must be in order to perforate the pleura through the medium of a vomica. I had no reason to believe that there was any orifice of communication still patent between the bronchial tubes and the pleural cavity. At the time, I laid great stress upon these points—greater stress, indeed, than they deserved, as the sequel appeared to show. Under the circumstances, assuming the absence of these pathological states, and knowing that the man was feverish and disabled, incapable of work, and even of ordinary exertion—knowing also that, without surgical aid, he must be doomed all his life long to hear the worrying splash within his chest, and that, sooner or later, his health and strength must give way—I thought myself warranted in submitting him to the operation described in the notes. For a day or two, the result was all that could be desired. A small residue of pus, it is true, and a considerable volume of air, still remained; but the breath-sound was heard more freely and extensively over the upper region of the lung, and the heart had regained nearly, if not entirely, its normal position. Soon there ensued a period characterised by shivering fever, vomiting, and pain in the right side of the thorax. In a word, he was suffering from an attack of pleurisy on the side hitherto comparatively unaffected. Fortunately, this attack was unaccompanied by any large amount of liquid effusion, or we might have been compelled, under peril of immediate death to the patient, to tap the right pleural cavity within a few days after the original operation on the left side. Unfortunately, along with the pleurisy, so suspicious in itself, a number of new and alarming signs and symptoms began to declare themselves, and to assume prominence. Sounds of grave significance were persistently heard under both clavicles; and, although in the beginning we indulged the hope that they might only be pleuritic friction-sounds on one side, and on the other intrabronchial *râles* more or less modified by the neighbourhood of a resounding cavity, and that all might disappear in time, we found that, although they changed, they did not disappear, but remained, obviously suggesting the idea of confirmed pulmonary phthisis. In the meanwhile, pus issued freely and almost spontaneously with the sputa; the left side rapidly refilled; and the heart again occupied its old place beneath the sternum and to the right of that bone. The characters of the pulse were of the worst omen; there were night-sweats and emaciation; and the fever degenerated into well pronounced hectic.

We were now in a position to give a fair interpretation of the case, and it appeared almost impossible to resist the following conclusions. The man was originally phthisical, although for many months the true state of the lungs escaped observation. In August last, he was tapped for simple pleurisy with effusion; a certain amount of fluid remained after the operation, and increased until the beginning of October, the date of his discharge. Shortly after the ensuing Christmas, a vomica

at the apex of the left lung broke through the pleura, and introduced air into the pleural cavity, converting the simple sero-fibrinous effusion into pus, and establishing empyema with pneumothorax. I will not stop to inquire what were the agencies at work in the process of conversion: whether the perpetual influx of air was alone sufficient to accomplish the change, or whether it was in great measure owing to the simultaneous introduction of puriform and putrid materials from the vomica—an event which must surely take place in phthisical pneumothorax, although its possible influence has been strangely overlooked. For a while, the broncho-pleural fistula remains open; at length it closes; and in this state the patient comes under my care. Ultimately, in consequence of the expansion of the lung and its renewed activity after the operation in February, the closed orifice in the pleura reopens. At the time, I expressed sorrow and contrition for having authorised the paracentesis. I think differently of the matter now; but let that pass for the moment, and let us proceed to the autopsy.

The *post mortem* appearances were in the highest degree satisfactory, in so far as they verified to the letter the interpretation we had put upon the case. I will not dwell at length upon the immunity of the lungs from tuberculisation, so strikingly contrasted with the presence of tubercle elsewhere, however interesting this may be from a pathological point of view. It is true that, even practically regarded, the possible development of tubercle, as a result of infective processes, is a matter of serious moment when we are deliberating on the treatment of a pleuritic effusion which may be, or may become, an empyema. In our case, however, the tubercles were unimportant, and had nothing whatever to do with the fatal issue. The points of real importance were the disorganisation of the right lung, the quantity of pus in the pleural cavity, and the wide, straight, unbroken channel of communication between that cavity and the trachea. And now, gentlemen, that we are in possession of all the facts—the disclosures of the dead-house, and the history and progress of the case from beginning to end—dare we venture to affirm that we could have prolonged the life of this man for a few days or weeks? I cannot say more: he was too far gone for a new lease of life. As a preliminary to the solution of this problem, let us examine the mode of dying. An immense amount of pus had been long as it were overflowing in successive gushes through an open and capacious broncho-pleural fistula. Now reflect for a moment on the mobility and incoherence of pus pure and simple, as distinguished from the comparative viscidity of sputa in general, and you will be prepared to acknowledge that there is reason in the following remarks. With declining strength, with sharp pleurisy and a damaged lung on the right side, with a feeble cough and failing powers of expectoration, it became almost inevitable that a portion of the outgoing pus from the left pleural sac must find its way backwards—regurgitate, so to speak, through the right bronchus into the corresponding lung, the only lung on which devolved the duty of such expectoration as could be accomplished by lung-tissue under the circumstances. For some time the right lung continues to perform this duty, resents the invasion of pus, and eliminates it; but all the while, of course, it is suffering from irritation; and in the end the irritation becomes inflammation, or quickens pre-existing inflammation. The elasticity of the lung is profoundly impaired, and its intrinsic powers of elimination are reduced to a minimum. Empyema with pneumothorax on one side, and extensive phthisical pneumonia on the other, must of necessity prove fatal in a short time, even without the oozing of pus into the trachea, or its regurgitation through the opposite bronchus. *With* this oozing, and *with* this regurgitation, you may easily understand how it might prove immediately fatal. The least movement of the chest-walls, the slightest change of posture, propels the fluid into the trachea, where part remains, while part regurgitates; a far stronger movement is demanded for its expulsion; under the co-operating influences of exhaustion and inflammation, that movement is not forthcoming, and the patient dies asphyxiated. This is the great danger we have to dread. Can we obviate it? I believe the best thing we could have done, now that we are enabled to read the case backwards, was to have inserted the drainage-tubes in the first instance after the operation in February. We were not then, however, in possession of all the data; and, in deference to the recognised custom of inserting the tubes when the pus is fœtid, and withholding them when it is inodorous, it was determined to close the wound, and reserve the chest for a future operation, if necessary. The question now arises, Was there a necessity for a second operation? In my own opinion, there was. I candidly own that, if twelve great authorities, surgical and medical, had met in consultation, six might have ranged themselves on one side, and six on the other; or perhaps the majority might have pronounced against paracentesis. Any how, there would have been no unanimity. Nevertheless, I adhere to my opinion. Undeniably, the drawbacks were serious. Hectic fever and far-gone consumption are not to be lightly rated. On the other hand, the event which actually occurred in our case must occur almost as a matter of course in a similar case without an operation. Understand me rightly, however. The second operation should not have been delayed until the pleural cavity became brimful of pus; it should have been performed, and the drainage-tubes inserted, as soon as there was evidence that the pus, though evacuted in immense amount, was steadily gaining ground, while the air was fast disappearing.

I have dwelt in detail upon this case, inasmuch as it offered from the beginning, and even yet offers, the amplest scope for speculation and discussion. Moreover, cases of pneumothorax are few and far between even in the large experiences of hospital practice; and this particular case requires in great measure to be estimated on its own merits. You will derive little advantage in the solution of the problems propounded by consulting the text-books. For the most part, they content themselves with saying that, in pneumothorax with phthisis, paracentesis should be reserved for an emergency. By emergency is meant, in all probability, the *existence* of dangerous dyspnœa. It is not so certain that the *prospect* of dangerous dyspnœa is contemplated under the term; but I am convinced in my own mind that, even prospectively regarded, the operation may be justifiable.

Gentlemen, as I have already intimated, on second thoughts, after mature reflection, I have been induced to modify some of the opinions I formerly expressed to you. To recapitulate and to conclude. I am of opinion now that, whatever the view taken of the case on admission—whether, in our judgment, the man was phthisical, or not—whether a gap in the pleura existed at the time, or not—whether such gap had ever before existed, or not—under all circumstances, an operation was unavoidable. But the drainage-tubes ought to have been inserted either on the instant, or, at any rate, after the discovery of the following conditions: free and direct communication between the left pleural cavity and the trachea, advancing disorganisation of the right lung, and ever-increasing accumulation of pus, in spite of its enormous discharge. By adopting these measures, we might have kept the pus within bounds, and diverted it from the trachea and bronchi; we might have arrested for a while those pneumonic processes which were so rapidly disabling the only lung of any real use in respiration; and, although the man must inevitably have died an early death from combined exhaustion and apnœa, we might at least have saved him from dying of downright suffocation—literally drowned in pus.

ON THE DISINFECTION OF AIR.*

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Few physicians will be inclined to deny that the material poisons of many of the spreading diseases are capable of being wafted by the air from place to place and from person to person, and that in this manner the maladies of infection are in many instances transmitted. In certain diseases—among which may be especially enumerated variola, scarlatina, rubeola, pertussis, pyæmia, erysipelas, and diphtheria—the subjects are centres whence the evolution of disease-inducing particles takes place. It is obvious that complete isolation of an individual, and removal of all the chances of his directly infecting others, are practically impossible; and, even if such were possible, the disease-poison would yet be cast off to attach itself to any surrounding material, still capable of inducing its effects in the future. It would be a measure of the highest importance if the disease-poison, while existing in, or wafted by, the air, could be rendered inert. This is what I mean by disinfection of air—the rendering inert of the disease-poison which in some infectious disorders is contained in, and transmitted by, the atmosphere.

Many practitioners have attached an importance to the attempt to disinfect the air poisoned by the emanations of those sick of an infectious disease, as a positive duty; and have adopted various methods of carrying it out. Others, however, urge that all attempts in this direction are futile—that it is impossible to disinfect the air.

Let me discuss briefly what is the nature of the material, which I have for convenience called *poison*, that we desire to render inert. It is ponderable, and obeys physical laws. It often remains active for long periods of time, and hence is unaffected by the frequent mutations of the atmosphere; but is so minute as to be entirely undemonstrable by any ordinary direct physical means, and undetectable by the highest

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powers of the microscope. The diffusion-experiments of Chauveau and Sanderson have given convincing proof that in vaccinia, variola, and sheep-pox, the poison is a *solid*, insoluble and indiffusible. This conceded, the area of speculation becomes narrowed; for it is impossible to imagine the material an agent merely organic and gifted only with the properties of inanimate matter. If it be an organic solid, neither solid nor diffusible, how does it interpenetrate the tissues of the body it so profoundly affects? and how can we explain its immeasurable powers of reproduction? It is not my purpose to trace the analogies of the disease-poison, nor to follow the evidence which points to the probability that it is endowed with the properties of *living* matter. We must admit one of these two views—that it is vitalised, or else that it acts by an inexplicable process of catalysis; and, if the analogy of other so-called catalytic processes be invoked for the elucidation, we shall find that, as science progresses, these become less and less explicable, on the hypothesis of causation by dead organic material in any state whatever. In fact, I believe it to be true, in the present state of science, that no kind of catalytic change of organic bodies ever takes place without the intervention of living things or their active secretions. I will now turn to the consideration of the methods which have been hitherto adopted for the disinfection of air, and the *rationale* of their action.

First come what are called OXIDISING DISINFECTANTS.

1. Foremost among these are the alkaline permanganates, which, when dissolved in water, it is recommended to expose in open vessels to the air of a sick-room, or to diffuse in the form of spray throughout the atmosphere. The theory is, that these yield up oxygen to the disease-poison, and, altering its chemical constitution, impair its morbific properties. Now it must be remembered, in the first place, that these agents are entirely non-volatile. There can be, therefore, no commingling with the air. The particular portions of air which happen to come into immediate contact with the surface of the solution, no doubt have their contained organic particles oxidised; but how feeble a proportion do these bear to the atmosphere of an apartment! The nauseous products of putrefaction, the permanganates have a remarkable power of oxidising, and thus rendering inodorous; they are excellent *deodorants;* but I have shown them to occupy a very low place both as arresting putrefaction and as killing the low forms of life. A little consideration must show that agents which operate by oxidation only can have but little effect upon the specific poisons of disease. Imagine the minute particle of disease-poison as it is after a long continued relation with large volumes of air, this air frequently containing its special oxidising constituent—ozone; or imagine it commingled with vast bulks of water: surely here are enough conditions for its speedy oxidation and destruction, if it be capable thereof. How insignificant must be the superadded effect of the oxidising permanganate! In whatever bulk employed, the permanganates do not destroy the microzymes inducing putrefaction existing in the air superincumbent upon them. From my view, therefore, of the nature of disease-poisons, I am justified in concluding that the employment of the permanganates as means for the disinfection of air is at once frivolous and futile.

2. Chlorine is also an oxidising disinfectant; but this stands on higher ground as an air-purifier, because its volatility allows it to come in immediate contact with the particles suspended in the air. It is of very high value as a deodorant; but its action on fermentation, putrefaction, and on the life of low organisms, is but feeble. I have seen fungi living luxuriantly in and amongst the particles of chloride of lime.

3. Iodine is much more efficacious. It is an oxidising agent, and hence a deodorant; but it is more—it destroys microzymes, and arrests decomposition. It is of very easy application. If placed in open vessels about a room, it evaporates spontaneously, and is a very useful agent for disinfection of air.

4. Sulphurous acid has also a double action; it is a deoxidiser, and hence a deodorant; and it is extremely powerful in destroying the life of low organisms. It has been used (the method of its evolution being merely burning brimstone from a metal plate), and, as the records seem to show, with much advantage.

5. Carbolic acid is a volatile agent, easily diffused throughout the air. It exerts no chemical action thereupon, and thus is not a deodorant; but in my opinion it holds the highest place as a disinfectant proper, for it kills the low forms of life existing in the atmosphere even when it is present in but small proportion.

Starting with the view that the poisons of spreading diseases are minute particles of living matter, I will now turn to some experimental evidence bearing upon the question of the efficacy, positive and relative, of air-disinfectants. Observation of the effects of different agents, when commingled with the air, upon the low organisms met with in putrefactions, must for the most part offer *à fortiori* evidence; for in many infective liquids the presence of the minutest bacteria cannot be detected. Dr. Sanderson has, however, observed bacteria as the characteristic inhabitants of the infective fluids which transmit pyæmia, "and therefore probably the carriers of infection." Without assuming, however, anything further than that the poisons are *living*, we can, I think, obtain valuable analogical evidence; for the influences which kill bacteria, monads, and germs of fungi, could surely with great probability kill also the minuter particles of living matter constituting the infecting poison.

EXPERIMENT I, *showing that Bacteria and Monads are killed by Air which contains Carbolic Acid.*—A maceration of hard-boiled egg in cold water was observed on the third day after preparation. Multitudes of cylindrical and filiform bacteria and ovoid monads were observed in active movement (magnifying power, 500 and 750 diameters linear). A small drop was placed on a slide, and held for thirty seconds over the open mouth of a flask which contained a little carbolic acid. This was compared with another drop uninfluenced. At first, movements in each case were equally active. In about two minutes in the former, movements became more languid, and soon ceased in many instances. Some, however, continued perfectly active. Experiment was repeated with exposure to carbolic acid for one minute. Monads, at first active, began to move in smaller circles, then merely to revolve on their axes, and finally manifested merely a peculiar vibration. A very marked difference was shown between the exposed and the test-drops; in the former, a large number of bacteria were perfectly motionless. Experiment repeated with exposure for three and five minutes respectively: in the latter case, nearly all were dead. It was evident that the superficial portion was so affected as to render motionless all the bacteria; but in the deeper layer, some, though comparatively a very small number, manifested active movement.

Observation has shown me that, whilst the effect of carbolised air upon a fluid capable of putrefaction is to prevent the formation of the usually dense follicle formed by the dead bacteria, and to kill those which are superficial, it has no influence upon those below the surface-level, which continue to manifest active movement.

EXPERIMENT II, *showing that the Germs in the Air, which develope into Fungi, are killed by Air which contains Carbolic Acid.*—Two precisely similar glass flasks were taken, and into each was poured some well boiled paste made from wheat-flour. Each was provided with a cork perforated and fitted with tubes for the entrance and exit of air. Over the surface of the paste in A, 500 cubic feet of air were blown by means of a bellows, and then the flask was closed with India-rubber tissue. B was treated precisely similarly, except that the air first traversed the surface of six drachms of liquefied carbolic acid contained in another small flask. B was subsequently sealed. The loss of the liquid carbolic acid was half a fluid-drachm. The flasks were then kept in identical conditions. In flask A, after a few days, islands of mildew appeared; the paste fermented, and disengaged gas-bubbles; and now (thirteenth day) green mould covers the sides, and large masses of white and green mould are on the surface of the paste. In B, the paste remained perfectly unchanged, and now (thirteenth day) presents not a trace of fungoid manifestation. These flasks were exhibited to the meeting, and it was manifest that, although more than three weeks had elapsed since their preparation, the paste over which carbolised air had been passed remained without any sign of decomposition; the other presented a mass of mildew.

I have formerly shown that the appearance of penicillium and aspergillus can be entirely prevented by the presence of carbolic acid in the air supplied to the soil.

EXPERIMENT III, *showing that, whilst the presence of Carbolic Acid or Sulphurous Acid in the Air prevents Putrefaction and the concurrent Development of Living Forms, the so-called Oxidising Disinfectants fail to prevent either.*—Four small wide-mouthed glass bottles, of similar shape and size, were filled with small cubes cut from a hard boiled egg. They were then placed each in a glass trough, into which was poured the following disinfectant agent in each case: A, commercial permanganate solution (red), 1½ drachm; B, commercial chloride of aluminium, 1½ drachm; C, pharmacopœial sulphurous acid, 1 drachm; D, crude carbolic acid, 11 drops. Each was enclosed under a glass cover, so as to allow free communication of air both with the open bottle and the free surface of the disininfectant agent; but the cover itself was imbedded in cement, so as to exclude external air. At the and of seven days, the covers were removed, and the bottles containing the pieces of egg were each filled up with distilled water which had been well boiled and then allowed to cool. The covers were then reapplied, and the contents were examined three days afterwards. A, (permanganate) was extremely fœtid, so turbid as to be absolutely opaque, and with a thick pellicle covering its surface. It teemed with small bacteria, and presented many fungoid cells; and the portions of

egg were disintegrated; they were in a stage of advanced decomposition. B (chloride of aluminium): very fœtid and turbid, rather less so than A. Every drop examined swarmed with small monads and bacteria. The egg-cubes were broken up, and presented signs of advanced decomposition. C (sulphurous acid). Fluid presented no fœtor; was perfectly transparent. The cubes of egg appeared to preserve their shape and condition exactly as when first introduced. On microscopic examination, many fields presented no trace of motile organisms; but occasionally a few active bacteria were met with. D (carbolic acid). Fluid appeared almost clear, and the egg-cubes distinct. Very few bacteria presented themselves, usually five or six in a field; they were of unusual length. Decomposition was almost, but not entirely, arrested.

The evidence which I have adduced, I think, fully shows that the presence of certain volatile or gaseous antiseptic agents in the air is sufficient to poison the lowest forms of organisms, to prevent the appearance and development of fungi, and to arrest the putrefaction of organic material. I hope it will be allowed that we who counsel the employment of gaseous or volatile antiseptics for the disinfection of air do so with the clear understanding of a purpose to fulfil, and a train of analogical evidence that the means are adequate to the end. We believe the subtle poisons of disease to be minute particles of living matter; and that these, given off from a diseased person, can be contained in and wafted by the air. We do not pretend that they are equally numerous with the harmless germs of living things which the air normally contains; but they are with them and among them. We show that the presence of antiseptic agents in the air destroys the harmless germs; and we contend that it is probable that it also destroys the disease-germs, which have strong analogical relations with the former, which certainly do not exceed them in bulk, and are probably far more minute than those which are obviously destroyed. As regards the nature of an efficient air-disinfectant, we find that it must be volatile or gaseous, and therefore capable of equable diffusion throughout the air. The non-volatile agents are inert. It is not the action of a chemical agent upon an organic chemical compound which constitutes disinfection, according to our view; but the action of a diffused poison upon the living particles which are suspended in the atmosphere. The agents which I myself believe to be most efficient are sulphurous acid, iodine, and carbolic acid. Future experience will point probably to many others, but we have these at present to rely upon.

A few words as to the methods of practically employing these various agents.

1. *Sulphurous Acid.*—If the chamber to be disinfected is (*a*) *uninhabited*, all articles capable of being bleached should be removed; orifices communicating with the external air should be closed, and crevices pasted over with paper. A vessel containing burning sulphur should then be introduced, and the door closed. For the sake of safety from the chance of fire by the overflow of the molten sulphur, it should be kindled upon an iron plate, and floated upon a large vessel containing water. It is convenient to place glowing embers on the plate, and then dust over them flowers of sulphur. If the room is (*b*) *inhabited*, the sulphurous acid must be disengaged in less proportion. Dr. Hjaltelin, who has employed it in small-pox wards, considers that its power of exciting bronchial irritation has been exaggerated, and that patients may be accustomed to it in a high degree. It may be employed in the manner before described; the flame of the burning sulphur being extinguished by submersion of the iron plate in the water, if the fumes become too powerful. Or, as employed by Dr. A. W. Foot, flowers of sulphur may be dropped upon a heated shovel, and carried about the room. The generation of the gas should be repeated three or four times in the day. It is certain, however, that some people feel it difficult to tolerate the sulphur fumes.

2. *Iodine* may be used as an air-disinfectant in a very simple manner—first suggested, I believe, by Dr. B. W. Richardson. Solid iodine is merely exposed in glass or porcelain vessels in different parts of the room. The iodine vapour is given off at ordinary temperatures. This is a very efficient mode of attaining a constant disinfection.

3. *Carbolic Acid.*—To employ this agent when the room is (*a*) *unoccupied*—communication with the external air being closed—a quantity of the crude acid should be poured into a strongly heated metal cup, or upon hot bricks, and left to vaporise. Subsequently, the floors, ceiling, and, if practicable, the walls, should be irrigated or sprayed with an aqueous solution; and the floor scrubbed with carbolic acid or coal-tar soap. Or Savory and Moore's excellent vaporiser may be employed, whereby large volumes of carbolic acid vapour will be disengaged. If the chamber is (*b*) *occupied* by the sick, the vaporiser just mentioned, which is so constructed that the liquefied acid falls drop by drop upon a heated plate, should be put in action at intervals twice or thrice in the day. The objectionable odour of the carbolic acid may be greatly masked by its admixture with oil of wild thyme. It is obvious that this method gives off the carbolic acid too powerfully for continuous use. The agent, however, is so volatile as to render itself readily available for maintaining a constant antiseptic atmosphere. It has frequently been used in combination with inert powders for strewing about the room, or has been sprinkled upon cloths or other absorbent materials which have afforded surfaces for its volatilisation. These measures, however, have their inconveniences and even dangers; for the strong acid is irritant and caustic, and may inflict serious injury on those who inadvertently touch it. To obviate the difficulty, I have requested Messrs. Savory and Moore to construct for me an instrument consisting of a piece of canvas in the form of an endless band stretched between two rollers, and dipping into a tin trough to be charged with the acid. By turning a handle at the top, the roller is drawn through the trough, and thus moistened in its whole extent. After it has become partially dry from evaporation, a turn of the handle lifts up a fresh moistened surface. I have used this in several cases, and have found it to act most satisfactorily. I believe, from the data we possess, that in carbolic acid we have the most efficient and the most manageable of all agents for the disinfection of air.

THE GEOGRAPHICAL DISTRIBUTION OF PHTHISIS.

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The doubts raised by Mr. Armstrong in his recent communication to the JOURNAL call for discussion. Mr. Armstrong has used Dr. Crisp's figures, and not mine, in comparing the mortality from phthisis in the Great Ouseburn district during the "decade (?) 1861 to 1871," with that which occurred during the previous decennial period 1851-60. In January and February last year, I published my lectures on the Geographical Distribution of Phthisis, which I delivered at St. Thomas's Hospital during the winter session 1870-71; and I beg to refer your correspondent to them. They will be found at pp. 5, 6, 57, 58, 140, and 141, of the JOURNAL for 1871, vol. i, accompanied by a photolithograph map of the distribution of phthisis in England and Wales, reduced to one-eighth the size of the original, in which, of course, the lettering is too small for practical purposes; the names, however, of the districts can be read by the aid of a magnifying glass; and the colouring will give a general idea of the distribution of phthisis, if the reader will bear in mind that *red* indicates the low, and the different shades of *black* the high mortality districts, a guide to which will be found at p. 5. The black tints represent the *blue* in the map used for my lectures.

On referring to the above map, it will be found that Great Ouseburn belongs to the sixth or lowest degree of mortality, which ranges from *below* 17 to 20 deaths annually to every 10,000 females living. Although, however, this is the case, this district is far from being so exempt as Dr. Crisp states—viz., 1 in 88, or the lowest in the phthisis death-rate scale. In fact, the figures of the Registrar-General, who gives the annual average rate of mortality from phthisis to every 100 living, show at least ten districts which have a lower mortality from phthisis than Great Ouseburn; and, if we arrange them in the order of their low mortality, beginning with the healthiest district as regards this terrible cause of death, we shall have the following list, the numbers after the name being the annual death-rate to every 10,000 living: Ongar, 12.3; Easington, 15; Atherstone, 15.2; Belford, 15.4; Scarborough, 15.8; Tenbury, 15.9; Guisborough, 16 3; Sleaford, 16.3; Meriden, 16.4; Wheatenhurst, 16.4; Helmsley, 16.7; Great Ouseburn, 17.6; and *Whitchurch*, 20.8. We therefore see that, out of a dozen of the lowest mortality districts, Great Ouseburn exhibits the *highest*, instead of, as Dr. Crisp states, the *lowest* mortality. I have introduced Whitchurch in order to show how the discrepancy has arisen. This district, too, occupies in Dr. Crisp's list an unmeritedly distinguished position; its mortality from phthisis being represented as 1 in 62, which would make it rank above Meriden, 1 in 60; Wheatenhurst, 1 in 60; Guisborough, 1 in 61; Helmsley, 1 in 61; Sleaford, 1 in 61; and equal to Scarborough, 1 in 62. The Registrar-General's figures, however, have spoken for themselves. The fact is, Dr. Crisp has assumed that the number of deaths from phthisis placed to the account of Great Ouseburn and Whitchurch was the aggregate for the *ten* years 1851-60; whereas he will find, on referring to the Registrar-General's supplement to his Twenty-fifth Annual Report, pp. xciii and cv, that the figures in the first district represented only six and a half, and in the second seven and three-

quarters years' deaths, instead of ten, as in all the other districts. In the case of Great Ouseburn, had the death-rate during the first three and a half years been uniform with the last six and half, the total number of deaths would have been nearer 206 than 134; and the numbers in Dr. Crisp's list would have been 1 in 57, instead of 1 in 88; and then Mr. Armstrong would not have been so startled at the great increase in the mortality from phthisis; for the difference between the two periods, if his figures be correct for the last one, would only be 14, instead of more than half, 45. I would also ask Mr. Armstrong if he includes both the years "1861" and "1871" in the "decade" he has examined; for, if so, his deaths are those of *eleven*, and not of *ten* years; in which case a still further reduction would be the result, and, instead of the mortality having increased, as he says, it would have actually decreased, with the population of this district, in which the census returns for 1871 show a decrease of 413, when compared with those of 1861; the number of inhabited houses was also less in 1871 by 119 than it was in 1861.

In such a cause of death as pulmonary consumption, fluctuations in the mortuary returns must be looked for; and we naturally expect them, knowing as we do how this disease is influenced by weather; and I hold the opinion that maps showing even the annual distribution should be published, in order that it might be studied side by side with the winds and other meteorological characteristics of the year in which the deaths occur. Nay, more; no trouble should be spared by Government to show, even season by season, how each locality is affected, as regards this fearful scourge, by the ever-varying phases of our Protean climate. I therefore cannot endorse Mr. Armstrong's opinion that maps of the distribution of disease are of little permanent value if founded on data, however *inconstant* they may be. It is this very inconstancy which renders the periodical publication of such maps of the highest value, for thereby the progress of disease would be watched, its natural history revealed, whose lessons, perchance, would teach us what weapons to use in our defence, if by a timely forewarning we are placed on our guard by being shown where danger lurks and whence attack may be expected. Through Dr. Buchanan's world-wide known investigations, which I always think of with admiration, many of the secret hiding-places of phthisis have been shown up; and, after a careful study of the vast array of facts which he has brought to bear upon this subject, this eminent physician has by the most philosophical reasoning deduced what kind of arms to use when doing battle with this fearful destroyer of our youth. Like all true discoveries, Dr. Buchanan's is characterised by simplicity. He found *damp soil* to be one grand exciting cause of phthisis, and he suggested *drainage* as the grand means of counteracting its effects.

Now let us suppose that, owing to his wise counsel being followed in the high mortality districts where this cause predominates, the death-rate from phthisis should decrease in any one year or in any series of years, and this improvement shown on a disease-chart, it would not only tend to prove the correctness of his views, but would do more—it would show, perhaps in the progress of years, how health could be cultured, as it were, in these hitherto doomed localities; and eventually it would be seen, supposing the means recommended be still persevered in with increasing vigour, to how high an extent of healthiness any district might be brought; then would a standard become possible and useful ever afterwards as a basis for comparison. Possessing such a standard, how eagerly should we note, year after year, the colouring of the disease-map! How instantly would our eye perceive at a glance the slightest backsliding; and how at once we should set to work to see where the cause of the decline from the high standard, once attained, lurked; whether it was to be found in the exceptional weather of the year, or in some freshly imported social cause, or in the neglect of those means which in a former year had happily created the standard.

I hope Dr. Crisp will kindly excuse my referring to him, and pointing out the errors which has misled your correspondent. I can assure him that I am actuated by no other but the best feeling towards him, for I am deeply sensible of the value of his researches, from which the little oversight I have explained will in no way detract. I hope, therefore, he will forgive me for having drawn attention to it. As to Dr. Buchanan's opinions, we know that they have been confirmed in America by Dr. Bowditch; and in my lectures I have ever acknowledged how fully my own facts are in harmony with his. No maps faithfully pourtraying the geography of phthisis or any other disease will ever grow out of date: their usefulness will increase rather with their age, as standards of comparison; their inconstant data will ever prove a source of national interest as well as of national anxiety. In these maps each district will have its health-history recorded; and those who preside over the public health must ever remember that, whether good or bad, whatever has occurred once may occur again; that any district which has happily attained a high position in the health-scale by following wise sanitary regulations, may rapidly decline by neglecting them; but, alas! not so rapidly regain its lost position.

"Facilis descensus Averno;
Sed revocare gradum, superasque evadere ad auras,
Hoc opus, hic labor est."

CLINICAL OBSERVATIONS ON THE DENGUE FEVER OF INDIA.

By WILLIAM W. DUNKLEY, L.R.C.P.Edin., Stoke-on-Trent.

THE dengue fever having attracted some attention in England, I have thought that as I have been present in India during the recent epidemic, and have had many cases of the disease under my care, a short account of it might be interesting to some of your readers.

The term "dengue" appears to be a corruption of the word "dandy". The disease was formerly known as the dandy fever by the natives of certain parts of the East Indies, because persons suffering from it assume a peculiar stiff gait when the subjects of the painful joints so common in the disease. The disease often begins suddenly, with little or no warning. A man may be at work, perhaps in the sun, and he feels a pain in some part of his body, and he goes to the doctor, who discovers that he is going to have an attack of dengue; or he may complain of not feeling well for some hours, with slight aching pains in his hands or feet before he is compelled to lay up and go to bed. In the majority of cases, however, he is attacked suddenly, and the doctor has little difficulty in making out the nature of the case on his first visit. This is very easy if the primary rash be present, which frequently happens within an hour or two of the commencement of the illness. It generally appears as an erythematous eruption of a bright red colour, sometimes only on the face, and sometimes almost or completely covering the body. It very much resembles the rash of scarlatina. If you press it with the finger, the colour fades for a moment where the pressure was made, but returns immediately the pressure is removed. It is not constant, and the fact of its being absent does not by any means prove that the case is not one of dengue.

The state of the tongue is a valuable symptom in dengue. It generally has a silvery whiteness—not the heavy creamy coated tongue met with in some other diseases, but a thin silvery white coating, and frequently a very red tip and edge. There is occasionally a sore throat; but this is not at all a constant symptom.

The terminal rash appears about the third or fourth day. It is said to assume a variety of forms; but the forms which I have seen myself have resembled respectively measles, scarlatina, and urticaria, and in one case the eruption consisted of a number of boils mixed up with an urticarial rash. This rash is not met with in every case. In several cases I have seen myself it has been absent. It is very fugitive; and whether from this reason I have omitted seeing it or not I cannot say. It is said to come on suddenly at times, and disappear in two or three hours. I have not seen the rash remain longer than twenty-four hours.

The pulse in dengue is peculiar, the rapidity not being increased in the same proportion to the urgency of the other symptoms as in other fevers. The pain suffered, the eruption, and the other urgent symptoms, would lead you to expect a very quick pulse; but the pulse is often comparatively little higher than the normal standard, being often 95 or 98, and seldom rising much higher than 100, although Dr. Charles of Calcutta* has counted it over 140 per minute, and says that in fatal cases it is so quick that you can scarcely count it. One peculiarity of the rash of dengue is that there is little, or sometimes no, elevation in the temperature of the body at the time it commences. This fact would serve to aid in its diagnosis from measles or scarlatina, in each of which there is a considerable elevation of the temperature when the rash first makes its appearance.

The pains in dengue are various in character. Like the pains in acute rheumatism, they fly from one part to another, and often in a remarkably short space of time. The patient will complain of severe pain in the head, and this is the most constant pain—*i.e*, it has the least tendency to leave the head and go elsewhere. He will sometimes complain of "pain in all his bones", and when you next visit him the pain will be confined to his feet and shoulders. At times the pain is in the knees, and on your next visit it will have left the knees and gone into the feet or arms. Pain, like certain other symptoms, is not

* I must acknowledge a great deal of information concerning the disease given to me by Dr. Charles, Professor of Midwifery in the University of Calcutta, who first suggested to me that I should write an account of the disease for some of the medical papers. Dr. Charles has published a Clinical Lecture on Dengue, delivered before the students at the University of Calcutta, and it is well worth perusing.

invariably present ; and I have seen two cases where there has not been any pain at all, and another when the pains came on a week or two after the first attack of fever. The fever in this latter case was much more intense than I have seen it in any other case. In another case, swelling of the feet and ankles occurred from a week to a fortnight after the fever, and continued for three or four weeks, when it disappeared spontaneously. In this case, also, the fever was very severe. The pains often continue some time after an attack of dengue.

In dengue, as in many other diseases, it is possible to do too much. It is, I believe, better to treat the urgent symptoms in each case without adopting any routine plan of treatment. Purgatives at the commencement are not often desirable, for the patients are so exceedingly weak that they cannot well bear the effects of a brisk purge, and the patient seems worse after it than before : and, again, the pains are frequently so severe that the necessary movements during the action of a purgative are intensely agonising to the sufferer. When, however, the pain and debility are not great, a purgative is useful, as also is it when there is evidently great constipation, unless the other symptoms forbid it.

Following the advice of some Calcutta practitioners, I used the tincture of aconite in small doses, frequently repeated, with a little syrup, as a remedy against the severe pains, but I did not find it very serviceable. After reading Dr. Charles's clinical lecture on dengue, I tried the tincture of belladonna, and it proved very useful, in doses of from eight to twelve minims. The pain was quickly relieved, and the patient had sleep. The remedy need not be continued long after the pain is relieved, and the patient's restlessness calmed. It may be necessary, however, to repeat it if these symptoms should return. No other medicine is usually necessary, except perhaps a saline mixture, containing liq. ammon. acet., sp. ætheris nit., tinct. hyoscyami, and aqua camph.

The severe headache may be relieved by ice applied in a bladder to the head, and the strength should be kept up with nutritous soup or beef-tea, and milk, with occasionally a little brandy in it, etc. When the fever has abated and the terminal rash disappeared, a tonic is generally necessary, and a generous diet, with beer or wine, to bring up the patient's strength, which is often very much reduced. Patients often suffer from pains in the joints after an attack of dengue; but they usually pass off soon, and seldom require special treatment.

THREE CASES OF SUDDEN DEATH.*

By J. MILNER BARRY, M.D., Tunbridge Wells.

The first occurred in a man, aged 41, who during life had only complained of dyspeptic symptoms, including a peculiar choking sensation coming on at nights, and relieved by walking about. The heart and lung-sounds were apparently normal. Death occurred suddenly in the night. At the *post mortem* examination, the left pleura was found full of blood, which had escaped from a small sacculated aneurism, the size of half a walnut, of the descending portion of the thoracic aorta situated behind the heart. The case was characterised by a singular absence of the usual concomitant symptoms of aneurism. There was no dysphagia ; no erosion of the vertebræ. The choking sensation might be accounted for from the fact of the œsophagus being attached to the aneurism, lying directly on it. Dr. Barry mentioned that both Dr. Stokes and Dr. Walshe refer to the extreme difficulty of positive detection of small aneurismal sacs behind the heart.

The second case occurred in a young lady, aged 21, active, well-nourished, and with a good healthy colour. She was subject for nearly twelve months to nearly constant vomiting, and known to be the subject of heart-disease. On auscultation, loud blowing murmurs were heard over the pulmonary aortic and mitral valves, a thrill was perceptible over the situation of the pulmonary valves, and the area of præcordial dulness was increased. The vomiting continued unchanged, and, though apparently somewhat hysterical in character, seemed mainly attributable to irritation of the pneumogastric nerve from the diseased heart. She died suddenly in the night. At the *post mortem* examination, the pericardium was found generally adherent. The tricuspid and aortic valves were healthy. Two of the pulmonary valves were adherent by thin edges, and one of the mitral valves shortened and tied down. A short funnel-shaped canal passed through the septum ventriculorum from below the aortic valves to behind the tricuspid. Two rough ridges, one above and the other below the opening, probably impeded and roughened the current of blood, and gave rise to the peculiar "swashing" character of the murmur heard during life. The direction of the canal was such as to cause the blood to pass more readily from the left ventricle into the right than *vice versâ*. The entire absence of cyanosis was a noticeable feature in this case. No ulceration was found in the stomach ; but there appeared to be a sort of constriction midway in the greater curvature, where probably the spasmodic action was greatest, and this may have accounted for the peculiar character of the vomiting ; the food being suddenly and forcibly shot out, and in the convulsive effort made to reject it, a portion was probably dashed on towards the pyloric end, and then retained till the vomiting had subsided, thus, in a measure, accounting for the nutrition of the patient being maintained.

The third case occurred in a single lady, aged 41, five months previously. Dr. Barry had attended her with chronic peritonitis ; from this she quite recovered, and had never complained of any chest-symptoms. She died suddenly whilst dressing. At the *post mortem* examination, the pericardium was found distended with about eighteen ounces of serum and soft blood clots. The heart was loaded with fat and flabby, and showing fatty and granular degeneration, and almost total disappearance of muscular striæ under the microscope. The aorta was stiff, rugose, atheromatous, and dilated. A small aneurismal pouch, one inch above the aortic valves, as thin as a wafer, had given way, and allowed an escape of blood into the peritoneum. This patient's brother had died suddenly some months previously at the age of 52. The clinical lesson taught by the above and similar cases, as Dr. Barry insisted, was that, in cases of extremely sudden death our attention should be directed to the heart first, and not to the brain.

* Read before the East Sussex District Meeting of the South Eastern Branch.

ON THE TREATMENT OF WOUNDS BY ALKALINE APPLICATIONS.

By R. T. MANSON, M.R.C.S.E., etc., Howden.

Alkalies, as local applications, check alkaline secretions. Laudable pus has an alkaline reaction. The application of alkaline substances may, therefore, be supposed capable of beneficial action on pus-secreting surfaces. The officinal linimentum calcis, spread on fine cotton-wool and applied to the surface of a wound, seemed to afford the best method of testing the value of the theory. It has been tried by me in a great variety of surgical cases, from bruised fingers to amputations, and with uniform success. The advantages of its use are : lessening the secretion of pus from a wound ; easiness of application ; extreme adaptability to irregular surfaces ; prevention of the access of atmospheric air to the wound ; promotion of healing by first intention, or, when that does not occur, promotion of healthy granulation ; doing away with the use of nitrate of silver or sulphate of copper ; ease to the patient ; and saving of time to the surgeon. Used on lint, the linimentum calcis is not nearly so valuable as when used on fine cotton-wool. Lint does not get into the holes and corners of an irregular wound as cotton-wool does ; it is not removed so easily ; it becomes more easily dried and hardened, and possesses less of the nature of an artificial skin than cotton-wool. Linimentum calcis has long been used for burns and scalds. Some surgeons think it a nasty application ; but, when made with olive-oil instead of linseed-oil, as was formerly the case, the nastiness is abolished. The *modus applicandi* is as follows : On a piece of fine cotton-wool, rather larger than the surface of the wound to which it is to be applied, the linimentum calcis is poured and spread over the wool, which is then placed over the wound and covered with common wadding. Either bandages or strips of plaster may be used to keep the lint in position.

Case I.—H. P., a pitman, while riding "in bye" to his work, incautiously raised his head, which came in contact with the roof of the pit. When I saw him, in addition to concussion of the brain, his scalp was torn, scored and grooved from forehead to occiput ; one ear was cut through, and he had a bruise on the face. I put the bits of skin in position as well as I could, and applied linimentum calcis on cotton-wool. The case did well, no other treatment being used.

Case II.—J. S., also a pitman, was knocked down and a rail-plate forced into his mouth ; while he was so lying, the cage came down on his head. There were an extensive wound in the soft palate, fracture of the right superior maxillary bone ; the mouth was torn open ; he had scalp-wound, one ear cut, and a finger ripped up from end to end. The external wounds were all treated as in the last case, and the man made a good recovery.

Case III.—R. T., a pitman, had compound dislocation of the ankle, for which I amputated the leg in the lower third. The flaps did not unite by the first intention, and some unhealthy action was set up. Poultices were applied, but changed for the wool and linimentum calcis, and the stump has done well.

CASE IV.—W. T., a boy employed at a brickwork, had the thumb and forefinger of one hand caught in a pressing machine, which took off the finger in the middle of the second phalanx, and so injured the thumb that I found it necessary to remove the injured portion. The stumps were dressed with wool, etc., as in the other cases, and did well.

As accident-surgeon to four collieries, I have a fair number of injuries under my case, and I invariably use the method which I am recommending, and, so far, have no reason to be dissatisfied wit h the results. For anything I know, the plan is not new; but even if so, I can recommend it as a good one.

SCARLET FEVER AND SYPHILIS: A SUGGESTION.

By EDWARD WOAKES, M.D., Luton.

TO most physicians it has occurred to meet with cases of scarlet fever assuming from the outset a distinctly malignant character, at a time when the type of the prevailing epidemic has been of a favourable kind. Under these circumstances, the question must have propounded itself with perplexing urgency—What is it in these exceptional instances that constitutes their virulence? Why should scarlet fever be dreaded as a scourge of worse than Egyptian terror by the members of one family, while in the adjoining house, perhaps, it asserts itself as a comparatively mild ailment.

The following suggestion, towards the solution of this problem, resulted from the observation of four or five distinct epidemics of scarlet fever, and is based upon data supplied by a knowledge of the early medical history of the fathers of the patients. As the result of this historical information in the cases to be briefly detailed, the writer has adduced the conclusion that *their malignity was derived from the circumstance of inherited syphilis.*

CASES I, II.—About twelve years ago a gentleman came under my care with a large Hunterian chancre of the glans penis; and, while under treatment, informed me he was shortly about to marry. In spite of all remonstrance, he appears to have carried out his intention very shortly after the primary sore had disappeared, and in less than eight months afterwards I was informed that his wife had been confined in a distant town. It was not long before I was called upon to attend this child for very characteristic symptoms of constitutional syphilis; and frequently afterwards did this condition recur, or accompany and complicate every trifling ailment that befel it. In the course of two years another child was born, prematurely, but, by dint of much care, survived, and gave promise of arriving at maturity. Like his brother he manifested the characters of inherited syphilis. A girl was born in due course, also prematurely, but only survived its birth some three weeks. One or two abortions followed, but fortunately no live birth. In the autumn of 1871, during the prevalence of a not remarkably severe epidemic of scarlet fever—these children having attained the ages respectively of nine and seven years—fell with the disease. The elder one, who was first attacked, rapidly developed symptoms of severe blood-poisoning; stupor with low muttering delirium set in within twenty-four hours of the seizure, intense rash, a temperature of 105 deg., followed by severe throat symptoms and putrid discharge from the nose and mouth, presaged a fatal issue, which occurred on the sixth day. The second boy then sickened, and though at first with less intensity, he too sank at the close of the first week.

CASE III.—About the same time I prescribed occasionally for the child of a groom, aged a little over two years, the subject of scarlet fever. His father, I knew, had a venereal attack three years previously, but, as I did not attend him, cannot testify to its exact character. This patient progressed favourably for a fortnight, when malignant throat symptoms set in, under which he sank at the end of the third week.

CASES IV, V.—About the period at which the history of the first detailed cases commenced—twelve years since—I treated another patient with primary syphilis. He was apparently well acquainted with the phenomenon, made very light of the occurrence, and ceased his visits long before it was prudent to discontinue treatment. Almost my next introduction to him was in the early part of the present year, when the epidemic of scarlet fever, which had nearly disappeared during the winter, revived and became more general through the inclement spring months. At this period I was requested to see his daughter, about three years old, who was said to be very ill. I then ascertained that of five children born since his marriage this was the only one now living, an infant having died in convulsions, after thirty-six' hours illness three days previously. This infant, it should be stated, developed a rash a few hours prior to its death, which the friends supposed might be measles, but which there is little doubt was scarlatinal. I found the only surviving child in a moribund condition; an ill-developed dusky rash of scarlet fever was diffused over the entire body, sloughy tonsils, enlarged submaxillary glands, stupor, tympanitic belly, and a temperature of 106 deg., left no room for doubt, either on the score of diagnosis or prognosis. This child sank on the sixth day.

It is worth while to note, in passing, that the foregoing were the only fatal cases which came under my observation during the recent epidemic, including a period of nine months.

Here it is necessary to anticipate the objection, that five cases are an insufficient foundation on which to construct any hypothesis sufficiently comprehensive to embrace any large proportion of the special form of disease under consideration. But the purport of this paper being only to communicate instances in which the previous syphilitic history is so clear as to leave no room for cavil, necessarily precludes many cases in which hereditary taint was presumably present, but which lack the essential feature of direct medical testimony to the fact. It is hoped that the idea thus broached may lead others to search for indications of constitutional syphilis in the subjects of malignant scarlet fever. The evidences of such infection being not far to seek, it follows that the suggestion now offered will be speedily refuted or as readily confirmed.

The writer must also regret that he is not prepared to advance any satisfactory theory to explain the connection between the two conditions, which he believes he has observed. The facts recorded indicating, as they undoubtedly do, an intense tendency to disintegration on the part of the blood and tissues of these patients, when exposed to septic influences, recall forcibly the recent investigations of Lostorfer, and invest the germ theory of syphilis, as advanced in his researches, with a force of probability, independent altogether of their actual demonstration. But while these views are rightly regarded as at present *sub judice*, the facts so imperfectly submitted in this communication, as well as the inferences from them, must be judged on their own merits, and entirely irrespective of any such hypothesis.

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

CLINICAL MEMORANDA.

DISLOCATION OF THE JAW THROUGH TONGUE-SUCKING.

IN reply to Dr. Ballard, the young lady in question possesses more than an average amount of mental power, and is remarkable for her vivacity. This case confirms, however, the statement made by Dr. Ballard, that deformity of the jaws may result from tongue-sucking, etc., inasmuch as her jaws are narrowed and prolonged: the upper one so much so, as to cause the canine teeth to overlay the incisors. This is, however, in a great measure being corrected by a dentist, who has used mechanical appliances, which have expanded the upper jaw during its growth, and brought the teeth into much better position. The young lady is quite well, but insists upon the bandage being applied nightly, as a precaution; and every effort is made to break her of the pernicious habit.

EDWIN MORRIS, M.D., F.R.C.S.

Spalding, September 30th, 1872.

INGROWING TOENAIL.

AMONG the many different modes of curing this very distressing complaint, is one which, from its simplicity and ready mode of application, will doubtless recommend itself to all. I mean the insertion of a small piece of lint under the side of the nail. This can best be accomplished by the aid of a quill cut into the shape of a spatula, and bent flat. The instant relief experienced by the removal of the irritating nail is well known; and, in a great number of cases, the sore quickly heals without even the aid of nitrate of silver or nitric acid. I have cured several cases in this way, some of long standing, and can therefore confidently recommend it to the profession.

WYKEHAM H. LYDALL.

TONGUE-SUCKING.

AT the suggestion of Dr. Ballard, I beg to record two cases of abnormal sucking, premising that they were not occasioned by "fruitless sucking," neither were the faculties of the children in the least degree affected. One was sucking the thumb and forefinger, and, after many fruitless expedients, the habit was broken by wearing a splint on the arm, extending below the fingers. The other case was tongue-sucking, and,

not being so much under the notice of the parents, it went on for ten or twelve years, causing the decay of the six upper front teeth, which have been replaced by the skill of the dentist. There is little, if any, deformity of the palate. Were I to meet with the like again I would certainly have the child watched night and day until the habit was broken. I once (with Dr. Nottingham) had a patient, sixteen years of age, cured of wetting the bed by keeping him in a chair fourteen nights.

BENJ. BLOWER, Liverpool.

EXTEMPORISED FRACTURE-APPARATUS.

I HAVE read in the JOURNAL of August 31st a paragraph that Dr. Gilliam, being called to a case of fractured thigh, having no splints, wood, or tools at hand to make them, had recourse to a blanket as a substitute. I would lay down a practice which I have followed for many years in cases of emergency, in fractures of the thigh or leg, and that with success, to the relief of suffering, and in a great measure preventing further injury on removal of the patient to a distance. On seeing my patient, ascertaining the fracture, either of thigh or leg, I have the bed prepared, which, in the dwellings of the poor, I make by boards or a door, on which the mattress, blankets, etc., are placed. I then ask for some wheat straw and a strong sheet. I measure the sound leg. If the thigh be broken the whole length, I then double the sheet in accordance; tell one of the bystanders to hold one side of the sheet while I take the other. I then have the straw handed to me, and make a kind of *bâton* of it; make it straight, and fold the sheet three or four times over tightly; tell a person to hold it so till I take the opposite or inner side, which I make shorter. I fold up, telling my assistant on the opposite side to do the same till I think there is sufficient space left for the fracture. I then ask for a strong needle and thread to make the corners and body of my splints secure. I then place my fracture-box on the prepared bed. I use the eighteen-tailed bandage, which I previously place, as it looks better on either thigh or leg. I then have my patient carefully lifted in and placed in the apparatus. If a thigh, I secure the pelvis, and make extension by the foot. If the leg, I equally continue to secure it. Next day, on calling, if I find matters not satisfactory, I use Desault's splint for the thigh, and ordinary splints for the leg. In this way, I have succeeded in the dwellings of the poor, whose accommodation and means are limited, and who prefer the union surgeon sooner than be removed to the Infirmary. In cases of emergency, railway accidents, etc., straw, a sheet, or a large table-cloth, may be easily procured, as there is some house near at hand. When I have been called to a railway accident, or otherwise, I act as above. Some years ago, on a very stormy day, a railway station-master had his wooden box thrown down, which, falling on him, fractured both thighs and one leg. He was about to be sent to the Leicester Infirmary, about six miles, with his poor limbs knocking about in a railway van. I was sent for, and just arrived at the station. I said, "Allow me to say you ought not to send him so." I asked for a door; some sacks, easily obtained; made his bed, blankets, etc.; then had two sheets and straw; made my fracture-boxes; secured him on the door, had him lifted into the van, and he went to Leicester by train, to his own satisfaction in the relief of suffering, and without further injury to his limbs. PATRICK DOWNEY, L.R.C.S.I.

Sileby, Loughborough, September 10th, 1872.

STRANGULATED SCROTAL HERNIA, WITH COMPLICATIONS.*

E. H., aged 31, a shoemaker, had a hernia from infancy, which had never been treated. It had often been as large as a cocoanut, but generally lessened by rest and pressure. While sheepshearing, and attempting to carry a struggling sheep, he was attacked with severe pain, which, becoming worse, I was sent for, and found all the usual symptoms of a strangulated left scrotal hernia, and advised his removal to our Cottage Hospital at Ashford, where ice and opium were employed. The severer symptoms becoming somewhat abated, operative interference was postponed for thirty-six hours after his admission, when, finding no permanent relief, the usual operation for hernia—which, in this case, turned out to be a direct one—was performed. The sac was opened, and a large mass of omentum and a small knuckle of intestine were found. The latter was returned; the former, owing to its extensive adhesions to the sac, was left to slough away. With the exception of a threatened attack of peritoneal inflammation, which yielded to the ordinary treatment, and the subcutaneous injection of morphia, all was apparently doing well, the omentum having sloughed off; till eighteen days after operation, the bowels not having acted for four days, an enema was ordered, which had the desired effect, but with the sensation as if something had given way. Three hours after this, profuse hæmorrhage set in, which, for forty-eight hours, was restrained by the application of the strong liquor ferri perchloridi: it then became so severe, that it was found necessary, under chloroform, to enlarge the wound; and, finding the application of the perchloride insufficient, the actual cautery was applied to the source of the hæmorrhage, which took place from the stump of the omentum within the inguinal ring. This had the desired effect, and there was no return.

From the very exhausted condition of the patient, and the necessity for entire rest, a formidable bed-sore was formed; the latter, however, yielded to the proper treatment: and, with the exception of a fistulous communication with the bowel, which gradually became less and less, the patient slowly recovered, and though some slight foul discharge still takes place through the wound, the patient ultimately became convalescent, and at the present time is able to walk about the wards of the hospital.

C. A. NASON, Ashford.

* Read before the East Kent District Meeting of the South Eastern Branch.

OBSTETRIC MEMORANDA.

ERGOT IN ABORTION.

MR. ALFRED FREER, of Stourbridge, has called in question the opinion of Dr. Kennedy, delivered *ex cathedra* at our recent meeting, as to the value of ergot in cases of abortion. Dr. Kennedy said in effect, that ergot was an uncertain and sometimes violent remedy; that it produced contraction of the circular, rather than the longitudinal, fibres of the womb, and therefore that its influence was often injurious. As I heard Dr. Kennedy's opinion, and can endorse every word of it from an ample experience, I will state briefly what I have found as the result of careful observation. *Pain* and *hæmorrhage* are typical of the abortive state; we are called upon to combat these; on what do they depend? The hæmorrhage signifies the detachment of the whole or a part of the ovum from the side of the womb, or laceration of vessels without detachment. The pain arises from pressure producing distension, and from contraction of the fibres of the womb. To get rid of the offending matter—the blood, we seek to check both these; so that, if the ovum is not too much damaged, it may go on to perfection, or, if its life is destroyed, to give the womb time to take on regular expulsive action. To effect this purpose we have at our disposal, besides mechanical means, two remedies, about the virtues of which medical opinions would seem to differ; these are opium and ergot. Not a shadow of doubt exists in my mind that, in the majority of instances, all the indications we have to fulfil are carried out with a regularity and certainty by the former of these drugs, in such a way as to entitle it to our unabated confidence; whilst, as regards the latter, its known irregularity and uncertainty place it in an equivocal position. Under ordinary circumstances no difficulty is experienced in the treatment of miscarriage; hæmorrhage supervenes, the ovum dies, and is cast off in two or three days; in other instances the hæmorrhage is not so severe as to destroy the integrity of the ovum; in a third class of cases a part only of the ovum is cast off from the womb; or it may be that, owing to the decidua being the lining membrane of the womb in a state of evolution, it is so firmly attached that the muscular fibre has not power to throw it off, and that no part of the ovum is detached except we do it mechanically. It is under circumstances of this kind that we have to watch and compare the influence of the two drugs named above. Mr. Freer's experience seems to correspond with that of other observers, that ergot has the power of producing contraction of the fibres of the womb, and thereby closing the mouth and cervical canal. This is exactly the opposite result to that we want, for the end desired is that the uterus should take on regular expulsive action and get rid of its contents; or if it is unable to accomplish this unaided, that the os and cervix may remain open so as to facilitate the employment of mechanical means. It is admitted that where the hæmorrhage is slight and the case threatening only, ergot may do good; as also where the ovum is detached and merely wants expelling. But, as no more regularity of action can be secured for it in miscarriage than in labour, where its notorious uncertainty has caused it to be nearly banished, that it quite as frequently causes the uterus to contract upon its contents as to expel them, thereby rendering cases much more difficult and troublesome; and that from its uncertainty and irregularity, with its well-known power of producing contraction of the circular rather than the longitudinal fibres of the womb, ergot has deservedly fallen under the ban of our distinguished associate, Dr. Kennedy, so as to cause him to assert, with truth and justice, that "in abortion, ergot was generally inadvisable."

JOHN BASSETT, Birmingham.

REPORT

OF THE

MEANS EMPLOYED IN MEDICAL SCHOOLS OF GREAT BRITAIN FOR THE PRESERVATION OF SUBJECTS FOR DISSECTION.

THE importance of a good supply of subjects of dissection, and of means for preserving them in a fit state for dissection, increases in proportion as the examinations at the Colleges become more practical and searching, and impose upon the student the salutary necessity of obtaining actual and visual knowledge of the structures of the body. The extension of time allowed before burial, by recent alterations in the Anatomy Act, makes it possible now to apply with advantage preservative fluids which can increase the winter supply of bodies by laying in a store during the summer. This is successfully practised at one London school at least; and we are indebted to the anatomical managers of the various schools for kindly aiding us to procure materials which will make available for all the information possessed by each upon this important subject.

CHARING CROSS HOSPITAL.

MR. BELLAMY, Surgeon to the Hospital, writes.

Hitherto we have had no experience in injecting bodies with a view of keeping them beyond the prescribed limits allowed by the Anatomy Act (eight weeks). But we find that subjects, as a rule, keep wonderfully well, and are almost entirely free from smell. They are most skilfully prepared; the injection, in the first instance, being carbolic acid, diluted very much (about 11 to 40) subsequently, a preservative the exact proportions of which are, for some reason, made a matter of secrecy, but consisting essentially of bichloride of mercury, and finally a paint, which sets very rapidly and firmly. So fine is the material, and carefully introduced, that the conjunctiva of the eye is generally fully injected. The secret of the good injections we get, and the bodies being so well preserved, is a great deal owing to the time taken in making the preparation. Each fluid is slowly introduced (through the aorta), and allowed to remain until absorbed, when the process is repeated as often as the body seems to require it. During the process of dissection, the body, or parts of such body, are carefully wrapped up in wet carbolised cloths, until the work is complete.

There is little doubt, at least in my experience (eleven years), that the best permanent preservative is spirits of wine (distilled); of course it has the disadvantage of requiring frequent renewal, and is expensive, but far more satisfactory than others I have tried. I have frequently kept bodies for operative surgery, injected as above—*minus* the paint—and wrapped up in frequently changed carbolised cloths (or sleeze), absolutely unaltered for the full allowed time (eight weeks).

ST. GEORGE'S HOSPITAL.

THE methods employed at St. George's Hospital for the preservation of bodies and preparing them for anatomical dissection, are described as follows by Mr. W. H. BENNETT.

Subjects for immediate use are injected with a solution of 1 lb. of arsenious acid in 60 ounces of water, the fluid having been previously boiled for eight hours. The body then remains for twelve hours, when it is injected with a "paint injection", composed of prepared red lead, made fluid with boiled oil, the oil being added till the solution is of a creamy consistence; to this is added a sufficiency of turpentine-varnish. Twelve hours later, the subject is ready for dissection. The above applies to winter subjects; in the summer season, four ounces of bichloride of mercury are added to the arsenious acid injection.

With regard to the preservation of bodies for a lengthened period previous to dissection, our experience is at present too limited to allow anything of practical import to be said on the matter; but it is found that there is a considerable drawback to those subjects which have been immersed in fluid for this purpose, in the fact that the epidermis so easily separates from the surface of the body, that usually when the body is placed upon the table it is almost entirely denuded of this structure; and, if excessive care be not taken, the skin becomes dry and horny, rendering the dissection of the superficial structures excessively difficult. For a fœtus, an injection of a solution of carbolic acid (1 in 6), followed twelve hours later by the paint injection, is found most successful; or the subject may be immersed in a solution of carbolic acid (1 in 20), and the paint injection added subsequently to its removal from the fluid. The first of these methods is preferable, since the objection above mentioned, with regard to subjects immersed, is found to exist in the other. Wet preparations—viz., dissections of muscles, etc.—are usually placed in a solution of equal parts of spirit and water. For nervous structures, brain, etc., a stronger solution of the same kind is found to answer every purpose. These solutions should be occasionally renewed, and the preparations will be found to require cleaning at intervals. The methods above enumerated appear to give the best results of those which have been tried for the various purposes.

GUY'S HOSPITAL.

MR. H. G. HOWSE communicates the following results of recent experiment:

At Guy's Hospital, the method adopted for preserving subjects for anatomical purposes has been mainly that detailed in the last number of the Guy's Reports. Modifications, however, have been introduced. First the use of arsenised glycerine has been abandoned in all the later subjects, and a mixture of carbolic acid and glycerine substituted. The value of the arsenic consisted in its preventing maggots breeding in the muscles, etc.; it did not, however, prevent mould forming on the surface when left long exposed. Carbolic acid, on the other hand, answers both these ends; and, as it acts in itself as a powerful antiseptic, it is doubly advantageous. Second, the quantity of glycerine injected has been much reduced, and in place of three gallons, an average of two gallons per subject has proved quite sufficient. Third, an inferior quality of glycerine is employed, much cheaper than that first made use of, viz., the best foreign. This is of rather a dark colour, and occasionally requires filtration, but is of very good specific gravity. All these modifications have been gradually introduced as experience dictated their advisability. The earliest were injected exactly in the way stated in the paper before referred to. The general result of all of them has been to reduce most materially the expense of each injection, as stated in that paper. After injection the subject is preserved in a coffin covered over with sawdust, kept wet with a saturated solution of carbolic acid in water; and it has been found that the subject, once packed away, does not tend to *dry* at all. It is believed that this method of packing will enable us further very considerably to reduce the amount of glycerine injected. In three or four subjects preserved during the past summer, and which were in an advanced state of decomposition, one gallon of a mixture of carbolic acid and glycerine quite sufficed to stop decomposition; and though the full amount of two gallons was afterwards thrown into the arteries, this was done more for the purpose of preventing the fingers and toes drying than for any other reason. Our experience, however, now proves that this may be quite prevented by the method of packing above alluded to.

Experiments are now in course of progress to ascertain the smallest amount of the preservative which can safely be injected. These, however, can only be put completely to the test of experience next summer, by keeping several subjects from April to October. The proportion usually employed of the strong liquid carbolic acid to the glycerine, has been one quart of the acid in one gallon of glycerine. Subject preservation for the winter session commenced this year at the end of June. Upwards of twenty have been so prepared, and as the majority of these have endured the hottest part of the summer, it has been conclusively shown that the method of preparation adopted is effectual. It should be stated also that in April last a dozen subjects were prepared in the same manner, and were dissected throughout the summer without the smallest inconvenience resulting therefrom. The quantity of injection used gives them rather a dark, mummified aspect, and gelatinises the skin. They dissect, however, well. Should it be found possible to preserve the subject with six or eight pints of injection (and there is every reason to believe that this will be successful) the gelatinous, mummy-like appearance will probably disappear.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

MR. EDMUND OWEN, Demonstrator of Anatomy, writes:

As soon as possible after arrival, the subjects are injected by Marsh, the school-porter; and it is to him that the writer is indebted for much of his information. The ascending aorta is reached by dividing the second, third, and fourth costal cartilages, and turning back a trap door about six inches square; after the injection is completed, the flap is fixed again in its proper position. In this way, much less damage is caused to the subject than when the chest is opened through the median line, whilst the subsequent dissection of the important structures at the root of the neck is certainly more satisfactory when the manubrium has not been divided.

The first fluid injected is a hot solution of arsenious acid in water, and after it, with as little delay as possible, follows the red injection, which has the effect of driving the antiseptic further into the tissues. The second injection, which is composed of two parts of resin and one part of Australian tallow, is coloured with vermilion. The molten

resin is passed through a fine hair-sieve into a saucepan containing the tallow, and the resin and tallow are well mixed with each other and the vermilion. The formation of air-bubbles in the heated mixture is prevented by the addition, from time to time, of a little turpentine. The average cost of the injection of a subject is a little under two shillings. Occasionally the injection partially fails, through the upper part of the abdominal aorta giving way ; a diseased condition of this vessel in the old subjects is doubtless the cause of this untoward result.

For the preservation of the brain, all its membranes should be carefully stripped off, and it should be put into a small pan containing methylated spirit ; some of the spirit should be introduced into the lateral ventricles, by openings through the upper part of the hemispheres.

Moist dissections of the ligaments and other specimens which are occasionally required by the lecturer on anatomy or by the demonstrators, need not to be kept soaked in spirit, but may be as well preserved when merely supported on shelves or wooden gratings over a thin layer of spirit, in tanks or other convenient receptacles.

In the dissecting room, a student may keep his part "sweet" for months with a little care ; it is not necessary for him to *drown* it in the fluid (methylated spirit, for instance), but he should sprinkle a little of the spirit on his dissection, and also on the cloth in which he wraps it up. He should wash the cloth every other day, and envelope all in a piece of mackintosh. The low price at which parts can now be obtained has undoubtedly tended to increase the student's carelessness for their proper preservation.

EDINBURGH SCHOOL OF MEDICINE.

DR. HANDYSIDE says.

After having tried, I believe, every method that from time to time has been proposed for preserving bodies (entire and in part), "wet preparations", brain and nerve-substance, etc., I have arrived at the conclusion that nothing is better than pure malt spirit, or the methylated spirit of commerce, undiluted for entire and opened bodies, brain, and ordinary nerve-substance, and more or less diluted for the more delicate structures and tissues. Of course I here make no allusion to the methods and fluids used for microscopic sections, etc. Twenty-four hours before using the ordinary injection mass, I find it is advisable to throw into the arterial system of an entire adult about one pint and a half of spirit ; after the ordinary injection mass, to throw into the peritoneal, pleural, and pericardial cavities a like quantity of spirit, with a fair quantity also into the nares and mouth ; and then, if the body is not to be immediately dissected, to cover it with spirits in a close cistern of slate, or of wood lined with block-tin.

UNIVERSITY OF GLASGOW.

PROFESSOR ALLEN THOMSON favours us with the following note.

After having tried, in the course of forty years, a number of expedients for the preservation of bodies for dissection, I have not yet arrived at any plan which has proved entirely satisfactory. It has appeared to me that the preserving method should combine two objects : first, that which, of course, is most immediately important—viz., the furnishing of parts for dissection which are as nearly as possible of the natural appearance and consistence, and lasting during a period of several months ; and secondly, that the method adopted shall not be inconsistent (as, for example, it is when common salt is employed) with the permanent preservation, in the wet or dry state, of interesting specimens, healthy or morbid, which it may be desirable to keep for our museums, etc. Long ago, I used strong spirits with solution of nitre, and with good results, especially as regards colour. The chloride of zinc or Burnett's fluid diluted, which preserves well, I employed for some time, but abandoned on account of its discharging colour too much, and spoiling the dissecting instruments. For some years I used a strong solution of arsenious acid combined with alcohol, and I am still inclined to give a preference to that method of preserving, as securing most fully the combined objects stated above. But I, like many others, I believe, abandoned the arsenic injection on account of its tendency to produce ulceration in the fingers, not so much of the students, however, as of the attendants, whose hands were more constantly immersed in the dissected parts. A solution of corrosive sublimate combined with creasote and glycerine and methylated spirit has of late been our plan, and, on the whole (although, as happens with most plans, with failure in certain bodies), the result has been good. With carbolic acid or with hyposulphite of soda I have not yet been successful, probably from not having employed the proper strength of solution. On a recent visit to the continent, I found that in several of the German schools carbolic acid dissolved in coarse glycerine had answered well. I ought, perhaps, to explain that in the use of all the fluids previously mentioned the solution was injected into the arteries. At the same time, however, I believe it to be of importance to introduce it carefully into all the larger cavities of the body. For preserving the brain and nerves, I know of nothing better than alcohol of proper strength, care being taken to renew it when required. I shall be very glad to learn the result of your inquiries on this subject, which is of the greatest importance in connection with the extension of the practical form of medical education.

ANDERSON'S UNIVERITY, GLASGOW.

MR. H. E. CLARK, Demonstrator of Anatomy, writes, in the absence of Dr. Buchanan.

Preparation of Subjects.—Formerly subjects were injected with an arsenical solution before the injection of wax, and, on one or two occasions, an aqueous solution of carbolic acid has been tried ; but, as a rule, in the winter session, no preservative fluid is used, as subjects are very plentiful, and students are therefore encouraged to dissect the parts while fresh. In summer, the parts are preserved by treating them with methylated spirit or carbolic acid, and by wrapping them in oil-cloth.

Preparation of Brain.—The brain is always preserved by steeping it in a solution of nitric acid (1 to 10), which is found to act better than anything else in hardening the brain substance ; its great disadvantage is that it blackens the knives used in making sections. An aqueous solution of carbolic acid has sometimes been used ; it has an advantage over the acid in preserving more completely the natural appearance of the white and grey substance, but does not make the brain sufficiently firm. The same may be said of methylated spirit.

Wet Preparations.—For these, spirit, Burnett's fluid, and carbolic acid solutions, are used according to circumstances. The reporter has also tried chloralum, but cannot recommend it.

MANCHESTER ROYAL SCHOOL OF MEDICINE AND SURGERY.

MR. S. MESSENGER BRADLEY writes as follows.

The subjects at the Manchester School are injected from the thoracic aorta with a preservative fluid which is the private receipt of Mr. Stone, the lecturer on chemistry. He objects to making the preparation public, but has sent samples of it occasionally to other schools. This preservative injection is followed, three days afterwards, by a coloured injection for the arteries ; the latter is a cold red paint injection, propelled by a hand syringe. It is a very beautiful mode of injecting the arteries, generally filling vessels only a few degrees removed from capillaries, such as the ciliary arteries of the eye, and the minute vessels upon the intestines and in the skin. The preservative fluid is injected by means of hydrostatic pressure ; the fluid being placed in a reservoir ten feet above the subjects, and connected therewith by means of a narrow tube. This was the invention of Mr. Lund, who designed it for the double purpose of injecting both the preservative and the coloured fluids ; the latter was a hot wax injection, kept liquid, until it was used, by means of hot water, which was contained in a second cylinder surrounding the central tube. It was found, however, that this hot wax injection did not always succeed, in reaching the distant vessels ; and, if it failed at first, it was impossible to supplement it by a second injection, as it cooled and set so soon. In consequence of this, Mr. Sissom, the curator, introduced the cold red injection, which certainly leaves nothing to be desired ; or, if a fault can be found with it, it is that it is too good, running into arteries so small as sometimes to interferee with the clean look of a dissection. The constituents of this injection are red and white lead, dryers, turpentine and oil.

The preservative injection is in many respects an admirable one ; the subjects so injected keeping for any length of time, while the colour of the muscles is not at all lost. It has, however, certain disadvantages, the chief of which are, that it makes the fingers sore, sometimes even giving rise to small abscesses beneath the nails, and that it is apt to soften the tissues of the subjects. I have myself made some experiments with carbolic acid, and find that in the proportion of 1 to 40 it makes a most excellent preservative injection, without possessing the disadvantages which appertain to Mr. Stone's fluid, as it has the merit of hardening the tissues, both muscular and nervous, as well as preserving them from putrefaction for a considerable period of time. I ought to add, however, that these experiments have hitherto only been made on small animals, such as cats and rabbits, and that it has not yet been tried in the dissecting-room. As to the preservation of wet specimens, the experiments made at our school lead to the conclusion that nothing is so good as alcohol ; picric, osmic, chromic, and carbolic acids, have been severally and fairly tried, but the results obtained have not been satisfactory.

QUEEN'S COLLEGE, BIRMINGHAM.

MR. ROBERT W. EDGINTON writes on the above subject.

The method adopted by myself is that of injecting, either through the aorta or femoral artery, a fluid composed of arsenic, corrosive sublimate, liquor potassæ, and water, or simple methylated spirit, either of which I

find very good. For preserving individual parts, a solution of carbolic acid is very good ; and for temporary preservation a little common salt grated over, both hardens and preserves the colour of muscular tissue. For wet, and especially for injected, specimens, there is nothing better than pure (not methylated) spirit, although turpentine may sometimes be used, and, if the object is very delicate, glycerine forms an excellent preservative fluid. It is often difficult to expand the sawn sternum, in order to inject from the aorta, and I have designed an instrument with a screw which I find very convenient.

LEEDS SCHOOL OF MEDICINE.

MR. EDMUND ROBINSON, Demonstrator of Anatomy, writes.

In this school we always inject the subjects for dissection from the right common carotid. The preparatory or preservative fluid now in use is composed of white arsenic, 2 lb.; nitre, 2 lb.; bay salt, 1 lb.; water, 3 gallons. The arsenic is first boiled in the water until it is completely dissolved, and then the nitre and bay salt are added. The fluid is allowed to cool and is then injected with an ordinary syringe. Twenty-four hours afterwards the colouring agent is injected, which is composed of red lead, 2 lb.; patent dryers, 1 lb.; turpentine varnish, 1 pint ; turpentine and boiled oil, *q.s.*, according to the size of the body to be injected. We find the above preparations to act well, to keep the subjects in admirable condition the necessary length of time ; and the dissectors have never experienced the slightest objection or inconvenience to the use of arsenic in this preservative fluid. Our "wet preparations" are all put up in spirit and water, generally in equal proportions, but varied occasionally according to the nature of the tissues of which they are composed.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

DR. MILLEN COUGHTREY has embodied information derived from Dr. Banks regarding the methods in use here, along with a few notes of his own previous experience in the matter, this being his first year of office in this school.

1. *Arsenic* in any form, especially solutions of its salts, he thinks fit only for preparations which are to be kept a short time. Subjects injected with it are apt to be infested with a kind of mould, which grows very rapidly when once it has set in, and ruins the specimen. The tissues are not hardened by it. It is inexpensive.

2. *Carbolic Acid Solutions.—a.* The watery solutions are good for specimens which are only required for a short time. The effects are very temporary. The tissues are not hardened sufficiently by it, the muscles remaining very soft and easily torn. It is inexpensive. If too strong it discolours the tissues, but this passes off on exposure. *b.* The spirituous solutions are liable to the same objections as watery, except that they give tissues the requisite degree of firmness for dissection. It is evanescent, and requires renewing by external applications. It is consequently expensive.

3. *Glycerine* may be either weakened by water or by spirit: the same objections might be urged against this as against arsenic and carbolic acid. It is good when combined with spirit, in the proportion of one of glycerine to two of spirit, if the fresh appearance of a preparation is required to be kept for three or four days at the outside ; especially in pathological specimens of nervous system. It is inexpensive.

[None of the above are of use in subjects which have become slightly putrescent.]

4. *Chloride of Zinc*, or *Burnett's Disinfecting Fluid*, combined with water or spirit, is excellent for bodies that have become very putrescent: according to Dr. Banks, Strength, Burnet, 1 ; Spirit, 2-3 or 4. I have not used it for the human subject myself, but in animals, and have found it have a very peculiar action on connective tissue, rendering it difficult to dissect out the more delicate structures, as fine filaments of cutaneous nerves.

5. *Corrosive Sublimate, with Spirit.*—I was brought up in a school (Edinburgh University) where this is almost the only thing employed. I regard it as the *ne plus ultra* of injecting fluids for preserving bodies or preparations. I have no doubt Mr. Stirling, the able injector connected with the Anatomical Department of Edinburgh University, will have informed you of the strength of the preparation used there, and also of the various minutiæ to be observed in order to ensure its success. I have used, in some of my private preparations, the strength of one drachm of corrosive sublimate dissolved in thirty ounces of methylated spirit, but that I am beginning to think too strong, especially if the subject is fresh ; if the subject be at all putrescent, use twice the strength of corrosive sublimate. Of course, the above quantity does not indicate the whole amount of solution used. The period most favourable for injecting this solution is either before the rigor mortis has set in, or just as its phenomena are disappearing. The body should be laid in a horizontal position, the limbs extended, and everything placed in such a way that no unnecessary obstructions to flow of fluid exist. Never use a small syringe ; always use a large one, that will contain sufficient to inject to a moderate degree of tension the vessels of the body by one discharge ; this distributes the fluid more perfectly over the whole body (or part intended to be injected), and prevents waste of material. If the body be at all anasarcous, prick it beforehand with a needle down to the subcutaneous fat, and let it drain well before you inject it. If ascites be present, remove the fluid from the peritoneal sac by an incision in the umbilical scar before you inject. It is useful to apply some of the solution externally to the eyes, to the nasal walls, and the interior of the mouth. The advantages of corrosive sublimate solution over others is that—1. It is permanent in effect, if any part of the subject should exhibit any peculiarity which would make it desirable to keep as a specimen ; then we can rely on the preparation, with ordinary care, being in a good state, if the subject had been previously injected with corrosive sublimate solution. 2. The muscles and tissues generally are rendered sufficiently firm for being easily dissected. 3. By preventing putrescence, we escape the odour which usually accompanies that process. 4. The fluid flows easily through all the tissues. And, lastly, it seems to disarm the juices of the body of that virulent character which they otherwise possess, as shown, *e. g.*, in dissection-wounds. During the five years I was in Edinburgh, I was intimately acquainted with all that went on in the Anatomical Department, first as a student, during which period I did a great deal of private work for Professor Turner, and afterwards as Junior Demonstrator of Anatomy in the University ; yet I do not remember a single serious case arising from a dissection-wound. And this absence of the usual noxious results of dissection-wounds was generally attributed to the use of corrosive sublimate solution.—The disadvantages of its use occur simply to the injector, and are caused by carelessness or through excessive amount of work in it. It sometimes causes in the injector slight physiological effects of mercury ; similar, *mutatis mutandis*, to those which arise from using arsenical solutions. On the whole, taking everything into consideration, it is as cheap as the rest in the end.—As to wet preparations of brain and the nervous structures, chromic acid is well known. Glycerine and methylated spirit I have mentioned incidentally in a previous part of these rough notes. Other acids, as the nitric acid solution, must be weak—1 part in 30. It has a tendency to harden outside only. Methylated spirit is by far the best for brain and nervous structures. Of course, remove first the membranes ; let the brain be then drained in a mixture of spirit and water—1 part in 60 overproof, 4 parts water. Afterwards, that solution to be replaced by a stronger one of spirit ; and, lastly, in spirit 60 overproof, with a small quantity of corrosive sublimate solution. I have tried other things, but, unfortunately, my time will not permit me at present to detail them to you. Please accept the same reason as an apology for the disjointed nature of the above remarks. In justice to Mr. Stirling of the Anatomical Museum, the able assistant of the lamented Goodsir, and a man of extraordinary tact and ability in the practical working of anatomy, I think it right to mention that I owe many of the above suggestions to his teaching.

SHEFFIELD MEDICAL SCHOOL.

MR. JOSEPH HURT CLARKE, Demonstrator of Anatomy and Lecturer on Diseases of the Eye at the Sheffield Medical School, writes:

At the Sheffield Medical School, we inject the subject generally from the ascending aorta by dividing the bone longitudinally, leaving the extremities of the bone uncut. The aperture is then dilated by means of an instrument acting as a screw-wedge. The pericardium is then divided, and the nozzle of the syringe is inserted and tied. The injection is then begun. In cold weather, the body is warmed by being placed near the fire, and a solution of arseniate of potash is then injected. After three hours, the syringe is filled with wax, in which is dissolved arsenic, and vermilion is then injected; and the subject is ready as soon as the wax is set. The skin covering the dissected parts is stitched together to exclude the air, and cloths dipped in water or salt and water are applied. Most of the dissecting is done whilst the body is quite fresh, as we have an abundant supply of bodies. The brain is hardened in methylated spirit or naphtha. The intestines are dried, rubbed with alum, and blown out, and then varnished. I have been injecting preparations with wax, in which are dissolved arsenic ℥j, carbolic acid ℥j, aniline red (Judson's simple dyes for the people) ♏xxx, to three ounces of wax. I find that this keeps its colour, and does not decompose. Keeping preparations in a box, the interior of which is soaked in carbolic acid, is the method I use if I wish to keep any specimen either for microscopical work or to show a friend. Pathological specimens may be kept well in this way for three weeks.

[*To be continued.*]

REVIEWS AND NOTICES.

PULMONARY CONSUMPTION: ITS NATURE, VARIETIES, AND TREATMENT. WITH AN ANALYSIS OF ONE THOUSAND CASES TO EXEMPLIFY ITS DURATION. BY C. J. B. WILLIAMS, M.D., F.R.S., and CHAS. THEODORE WILLIAMS, M.A., M.D.Oxon. London: Longmans, Green, and Co. 1871.

THE profession will naturally read with care and great respect the writings of an author of such high distinction as Dr. WILLIAMS, and upon a subject to which he has devoted the best years of a long working life. It is difficult within the brief limits of a review to do justice to a work so abounding in cases and details as that now before us. Dr. Williams, after having carefully kept himself *au courant* with the discoveries and views of all contemporary authors, as the historical part of the work before us abundantly shows, still sees no reason to depart, in any essential particular, from the views he held and expressed forty years ago, upon the pathology of those diseases which are grouped together under the common term Consumption. That they are many, Dr. Williams admits, as will be seen by inspecting the list of them enumerated in his eighteenth chapter; that they are, however, but varieties of one disease, though separable for purposes of clinical expediency, he contends, and this idea lies at the root of his pathological belief. For it must be observed that Dr. Williams is a true *exudationist*, a thorough upholder of the humoral pathology, which regards the blood as the source of all healthy and morbid phenomena; and, in accordance with this view, he regards the *leucocytes* (white blood-corpuscles) with all their wondrous properties of motion, migration, absorption, digestion, and multiplication, as "living rudiments of flesh and blood," and he uses the term *sarcophyte* synonymous with the term *bioplast*, adopted by Dr. Beale, as preferable to that of *leucocyte*, inasmuch as it conveys more clearly to the mind the "condition" and "destination" of these sarcodous elements of the blood. Dr. Williams is in complete accord with Dr. Beale in his views as to the vital nature and destinies of these blood particles, that they possess, as yet undisturbed by differentiation, all the essential attributes of higher life—irritability, assimilation, locomotion, and the nervous power implied by locomotion. It is not difficult, then, to understand the importance assigned to such elements, when modified by evil conditions, in the construction of diseased products. It is their exudation with the "degraded bioplasm" of the blood, under various circumstances, which Dr. Williams considers as productive of the various forms of phthisical lesions, and whilst he admits that there are several processes which may elicit the outpouring of this degraded bioplasm of the blood, he yet maintains that it is the altered bioplasm itself, which he terms *phthinoplasm*, which constitutes essentially the disease Phthisis; while the attendant circumstances under which it is exuded from the vessel—whether of inflammation, hæmorrhage, fever, etc., or special dyscrasia—may give such different characters to this disease as to render some subdivision into groups or varieties necessary.

This "phthinoplasm" determines,* as its name implies, sooner or later the destruction of the tissues into which it may be exuded. But, it will be asked, how is this "phthinoplasm" itself produced? what are the causes which occasion the vital elements of the blood to undergo this retrograde change. Dr. C. T. Williams treats of this question in a very complete chapter on the Ætiology of Phthisis towards the latter part of the volume. Hereditary influence, bad air, bad food, damp soil, chronic disease, all the promoters of malnutrition of the blood, may bring about the particular degree of degradation essential to phthisis. There is one very important point in this connection, touched upon by Dr. Williams, senior, which is at least worthy of close attention and further experiment, since it may have an important bearing upon the treatment of febrile diseases, viz., the question of elevation of temperature as a cause of the subsequent development of phthisis.

After quoting Max Schultze's observation that "the amæboid cells of freshly drawn blood increase in activity when the temperature is raised to between 95 and 104 deg. Fahr., but above that point their movements cease, and the cells harden," Dr. Williams points out the significance of this fact, if it be a fact, in relation to the ætiology of phthisis. "If (he says), the above observation is correct, such a heat injures the vitality of the plastic materials within and without the blood-vessels, and instead of their undergoing changes by which they are properly either organised, or are eliminated from the tissues, they concrete into little solids of low and decaying organisation, and prove a cause of obstruction and irritation to the tissue, both as first formed, and in their subsequent decline into caseation and decay."

Many difficulties cannot fail, we think, to present themselves to the mind of the attentive reader in the way of accepting unreservedly the theory, so ingeniously worked out by Dr. Williams, as best explaining the varied phenomena presented to us by the multiple lesions of phthisis. But we think all must sympathise with him in his anxiety to bring into order the chaos of conflicting opinions at present existing. For the purpose of illustrating the nature and clinical character of the several varieties of phthisis, Dr. Williams divides them into three groups, p. 181, in accordance with his views of their pathology, tabulated at page 60.

The first, or inflammatory group, includes the fibroid, the suppurative, the chronic pneumonic, the scrofulous pneumonic, the catarrhal, the albuminous, and the hæmorrhagic varieties. The second, or constitutional group, comprehends acute tuberculosis, chronic tuberculosis, and scrofulous consumption. The third, or miscellaneous group, includes cases of a mixed character which will not conveniently come under either of the above heads. Under these three headings are some names with which we have difficulty in clearly associating corresponding cases, *e. g.*, the albuminous variety; nor is, we think, the distinction between the suppurative, the scrofulous pneumonic, and scrofulous forms of consumption, a very important one. Dr. Williams, however, relates 140 cases, many of them of great interest, in exemplification of his division into groups, which division he repeats, "is attempted to distinguish *varieties* only of *one common disease*."

The subject of hæmoptysis, including hæmorrhagic phthisis, is treated of by Dr. C. T. Williams in an interesting chapter, in which he strongly contests the validity of Prof. Niemeyer's views, and expresses his conviction that, excluding the hæmorrhagic diathesis, injury, and cancer of the lungs, or uterine disorder, hæmoptysis, "to the extent of more than a drachm," is indicative of a fragile state of the vessels of the lungs, closely connected with, and generally arising out of, consumptive disease of these organs. Dr. C. T. Williams accepts, we think too implicitly, the views of Dr. Radcliffe Hall, that fatty degeneration of the vessels is the most frequent cause of hæmoptysis in the first stage of phthisis. His statistics, too, respecting the fatality of hæmoptysis in this first stage of consumption rather surprise us. We were under the impression that fatal hæmoptysis, in the first stage of phthisis, was one of the rarest of occurrences; yet Dr. Williams's table at page 150 states it to happen in 13.9 per cent. It must be remembered, however, that this per centage is among those cases of *profuse* hæmoptysis occurring in the first stage; the per centage of death among all cases of hæmoptysis occurring in this stage would be very much less. The opinions expressed in this chapter as to the frequency with which aneurism of a branch of the pulmonary artery is the cause of fatal hæmoptysis in advanced phthisis, is abundantly confirmed by the experience of many observers. Dr. C. T. Williams contributes very valuable chapters also on palliative, dietetic, and climatic treatment.

Respecting the general and medicinal treatment of consumption, Dr. Williams adduces nothing new; he speaks of no novel or specific line of treatment, but it is very interesting to read his opinions as to the efficacy of well known remedies, many of them of great repute in their day, and some still of wide reputation, which have been tested by his long and careful experience. Some of these remedies have been found of but little value, others fully bear out their vaunted utility *when employed in appropriate cases*. We strongly recommend a careful perusal of this chapter to our readers, as containing an account of all the important remedies now employed. The general conclusion arrived at by the authors, and fully borne out by their carefully arranged statistics as to the duration of phthisis, is a very encouraging one, and shows that the gradually improving treatment of the last twenty years has done much to prolong the life, as well as to mitigate the sufferings, of those who are afflicted with this terrible disease. We think this work cannot fail to be very widely read.

ON THE TREATMENT OF PULMONARY CONSUMPTION BY HYGIENE, CLIMATE, AND MEDICINE, IN ITS CONNECTION WITH MODERN DOCTRINES. By JAMES HENRY BENNET, M.D. Second Edition. London: J. and A. Churchill. 1871.

THERE are two classes of thinkers on such diseases as consumption and cancer, in which there are definite local lesions and associated constitutional sickness; the one class regards the disease as primarily constitutional, with secondary local lesions; the other as primarily local, with secondary constitutional infection. But few writers take a middle course; and Dr. Bennet is very far from being among them, notwithstanding his excellent motto, *Medio tutissimus ibis*. In the second edition of his well known work, he devotes a chapter to the con-

* φθίνω, I waste or decay, πλάσμα.

sideration, from a clinical point of view, of the nature and causes of phthisis; and he occupies a portion of the fifth chapter with a discussion of the histological theories now prevalent concerning phthisis. Dr. Bennet thinks that most physicians of matured age and large experience will agree with him in accepting Professor Bennett's views as to the pathology of the disease; viz., "that the lung-disease, however severe, chronic or acute, is merely an epiphenomenon, the secondary result of constitutional disease, of a morbid general diathesis which precedes, occasions, and rules the lung malady". He fears, however, that physicians of less experience may be led too much by the influence of more modern pathological doctrines—of which he regards Virchow as the great exponent—to watch and energetically to treat the local disease, called by some newfangled term, whilst disregarding the general dyscrasia which is really killing the patient. This implied reproach is perhaps not very justly distributed, yet the warning is valuable: it is truly as great an error to tell a man who has got catarrhal pneumonia at one apex, that his "lung trouble" is not consumption because it is not made up of tubercles, as it would be to tell him that a recurrent tumour was not cancerous because it was not true scirrhus. We know perfectly well that all the lung affections lumped together by Laennec and Louis as tubercular are the lesions of consumption—all having a remarkable tendency to extension, to recurrence, to ultimate destruction of the lung and of the patient. But we know, too, that they have this destroying tendency in many grades of intensity; and the more exact our knowledge becomes as to the true nature and course of these several lesions which constitute phthisis, and as to the constitutional conditions with which they are associated, the more trustworthy will become our prognosis, upon which depends, after all, the whole future life of the patient—whether he shall throw up every present object of living and seek only to live a little longer, or whether, by timely rest from labour, he may hope to gain years of useful life, or whether he shall die in harness at home or more luxuriously abroad. The prognosis upon which these grave questions rest for answer can be more firmly given now than twenty years ago; and mainly, we think, because of our more discriminating knowledge as to the pathology of the disease.

Dr. Bennet's great experience and clinical sagacity necessitate his dividing the one disease—phthisis—into at least seven varieties, which he would explain by varying diathesis. This explanation is sufficient for Dr. Bennet as a physician, and his remarks on the different types of phthisis and their prognosis are particularly instructive and practical; we regret, however, that he cannot also admit that certain differences of causation,—local irritations, catarrhs, inflammations, congestions, etc.,—may, by varying the *anatomy* of the disease, greatly affect its future course.

As we might have anticipated, the author's remarks on climatic treatment are peculiarly judicious, being suggested by an experience, practical and personal, almost, if not quite, unequalled. He speaks highly of the eastern coast of Spain, as ranking equally with the Riviera as a winter climate, but as not yet possessing equally good sanitary arrangements. While admitting that the mountain climates of Switzerland may be found beneficial to certain phthisical invalids in the summer months, he is of opinion that we may find in our own islands far more suitable summer climates than are available abroad. He strongly condemns the Swiss mountain valleys as winter resorts for consumptive patients.

The chapter on hygiene and food is full of valuable suggestions. The remarks on medicinal treatment are of a more general kind. Among the cases of arrest and cure of pulmonary phthisis, several of which are related, none is of greater interest or can be read with greater pleasure than that of the distinguished author himself, whose continued health may yet, we hope, permit him to bring out many more editions of his very readable and instructive work.

SCIATIC HERNIA.—Dr. Marzolo of Padua has related the case of a woman who first came under notice in 1847, at the age of 30. Ten years previously, she had observed a small swelling in the left buttock; it disappeared when she lay down, but reappeared in the erect position and gradually increased. She had four abortions, and bore one healthy child. When seen, the hernia extended over part of the buttock, as far as the trochanter, and forward to the groin. The abdominal wall was retracted. On lying down or sitting, the greater part of the contents of the swelling could be returned into the abdomen; defecation and coition were difficult. Last year the patient again came under observation. Her condition had changed but little; but the hernia was now irreducible, and at the lower part there were dulness on percussion and fluctuation A puncture was made, and nine litres of fluid removed. Diarrhœa set in and the patient soon died. No *post mortem* examination could be obtained.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 5TH, 1872.

CONCERNING FOOD.

THE recent communications to the British Association concerning extract of meat and preserved food have called forth an indignant reply from Baron Liebig. The manifesto of the veteran chieftain of chemistry has opened up the consideration how the want of economy and waste in matters of food, which is said to exist in this country upon a scale unknown elsewhere, is to be remedied; and how some of the many kinds of food, which we now fail to utilise to the fullest advantage, may be elevated to their proper place in a rational alimentary scale. This is a subject of vast importance, which has forced itself on public attention on many previous occasions, not so much on those occasions from the scarcity and dearness which now characterise some of the chief elements of the national dietary, as from the serious consequences which have, in individuals, been observed to follow a transgression of the physiological laws of nutrition. There is no problem which has been, and we may say still is, the subject of such dispute among physiologists, as the question of food, and the ultimate fate and relation to the vital processes of the organism of the various elements which constitute its materials. Had the selection of food by the people been subject to the same variations as the physiological and chemical theories and speculations of those who have expressed their views on this subject, the results as regards the well-being and health of the community would have been far from satisfactory. On this matter, as Liebig justly remarks, "the instinct and experience of the million are infallible, and a far better guide than the theoretical speculations of men who have remained ignorant of the composition of food, as well as of even the simplest laws of nutrition." It would be a great mistake, however, even though diverse views still prevail regarding the ultimate nature of the processes of assimilation in the organism, to suppose that scientific research has not established many valuable and fundamental laws relating to the process of nutrition, and that the popular instinct never stands in need of examination, assistance, or correction. These laws are perhaps even more valuable in relation to therapeutics, where we have to deal with disease, and where the instincts of self-preservation are abolished, and the life of the individual depends for its support on the hands of the physician. There is, unfortunately, much reason to believe that very great ignorance prevails on this subject, and that many patients succumb, or, as Voit expresses it, are devoted to death, from this cause.

When we ask the popular instinct, What is nutritious? we get an answer in which are enumerated a host of articles of diet. We are told that meat is very nutritious; that milk is nutritious; that bread is nutritious; that, for children, nothing is so

nutritious as arrowroot; and, for sick persons, beef-tea, jellies etc., are in the highest degree nutritious. Every word of this is in one sense true, and at the same time in essential respects false. That only can be called nutritious which supplies the organism with all the materials necessary for maintaining it in an uniform composition, and replacing daily waste corresponding to the amount of work done. Leaving out for the present, but not undervaluing, the inorganic constituents, we find that the waste of organic material in the body daily is represented, on the average, by about three hundred grains of nitrogen and four thousand grains of carbon. In order that the organism may be maintained in a state of efficiency, this waste must be daily covered by an amount of food which shall at least supply the above mentioned amount of carbon and nitrogen. For this, we have to resort to certain organic compounds of high potential energy, derived, in all the last instances, from the vegetable kingdom, and which are classed under the heads of albumen, fats, and amyloids, respectively. Under one or other of these heads come all the substances, animal or vegetable, which form the food-stuffs of man. As to what part in the nutrition of the organism each of these separately plays, is and has been a much disputed question. So long as the daily excretion of nitrogen was looked upon as the measure of the waste of the tissues, the albuminoid elements of the food were regarded as specially destined for building up the tissues. The other elements of the food were regarded merely as heat-producers, and destined to undergo combustion. This great division of food-stuffs into tissue-formers and heat-producers, which we owe to Liebig, and which held its ground for many years, notwithstanding numerous difficulties in its way, has been shown by recent experiments to be erroneous and misleading. The oft-quoted experiments of Fick and Wislicenus, and the still more recent and exact experiments of Dr. Parkes, in regard to the excretion of nitrogen, show in the most conclusive manner that the excretion of nitrogen bears no relation to the amount of tissue-waste, but that, down to a certain point, variations in the amount of nitrogen excreted are dependent entirely on the amount of nitrogenous food ingested. Nitrogenous food, therefore, or albuminoid substances, whether animal or vegetable, are not to be regarded as merely tissue-formers in the sense Liebig attached to them, though they are so in another sense—viz., that without them no tissue can be formed. The whole activity of the organism, heat and mechanical work, are dependent ultimately on the combustion of non-nitrogenous substances, and represented by the amount of carbon excreted. These, however, are capable of being produced not merely from the non-nitrogenous elements of the food alone, but also from the splitting up of the nitrogenous or albuminoid and food stuffs as well. Theoretically, therefore, it would not be correct to say, as we have done, that not one of the materials used as food is of itself nutritious; for we see that the albuminoids of themselves not only contain all that is necessary for supplying the defect of nitrogen, but also by their decomposition give rise to carbonaceous products sufficient to make good the waste in this direction. If a man, however, be confined to a purely flesh-diet, though his three hundred grains of nitrogen might easily be obtained from a comparatively small amount, he must eat at least from four to five pounds in order to obtain his four thousand grains of carbon. This quantity would give him at least four times as much nitrogen as he requires. Hence, supposing that it were possible for a man under ordinary circumstances to consume daily and assimilate such enormous quantities of meat, such a diet would entail on him an enormous amount of useless labour in digesting and getting rid of superfluous material, to say nothing of the extravagant waste which such a diet would imply. The same is true of the other individual elements of food we have mentioned. A man would have to eat daily six pounds of bread, or twenty pounds of potatoes alone, in order to get the necessary supply of nitrogen and carbon. Still worse would it be if he were entirely confined to a fatty or amylaceous diet. Here the nitrogenous element is entirely wanting, and starvation would speedily ensue. In regard to beef-tea and such-like substances, these, as Liebig remarks, cannot be regarded as nutritious in any of the above senses, and require an entirely separate consideration. Even when we come to inquire into the nutritive value of milk, in which so many see all the elements of food in the exact proportions in which they are wanted by the organism, the same statements will hold good. What is sufficient for a newly born infant cannot be taken as a guide for the wants of an adult. What an enormous quantity of milk would require to be taken daily, seeing that 80 to 90 per cent. consists merely of water, and that only a very few ounces of solid matter are contained in a whole pound of this fluid? The universal experience of mankind in relying, not on one element of food alone, but in adopting a mixed diet, where all the three food-stuffs are represented, is amply justified by these physiological considerations. But popular instinct has also gone much beyond this, and has succeeded, in extreme cases at least, in so mixing the food-stuffs as to supply in the proper portion just those elements which physiological and chemical research shows to be just those most necessary, under the altered conditions of temperature, to maintain the vigour and activity of the organism. Whether in more temperate climates, and notably in this country, the proper admixture of the various elements is that best suited, not only on physiological grounds, but on grounds of economy, for maintaining the organism in a full state of health and activity, is a question of very great importance, and not by any means easy of solution. This, however, we must leave for future consideration.

THE INTRODUCTORY ADDRESSES.

THE Introductory addresses at the London Medical Schools, of which we publish an instalment this week, reserving those of our leading provincial schools for next week, are of average quality. St. Bartholomew's adheres to the excellent custom of eschewing this threadbare method of inaugurating the session; and, if we may judge from the expressions of grief which are current on the part of many of those on whom the orator's mantle has fallen, they would fain have been happily exempted. There is an old story of a Scotch minister who borrowed a well-skilled ploughman from one of his parishioners. In lending him, the farmer gave a caution to the minister: "Dinna ye speak aboot ploughing; for he'll ken ye're a fule in sic like matters, and he'll no trust ye for ae thing." A man may be a good surgeon or a good physician, and yet have but little turn for an hour's didactic eloquence; and we are disposed to think the farmer's advice might be more generally remembered when the annual "turn" comes for delivering an introductory address to the new students. The address of this year which has had the honour of attracting particular attention is that of Dr. Pye-Smith of Guy's. Dr. Pye-Smith thought it wise to advise his students not to read the *Daily Telegraph*; and that journal, in its turn, thinks it wise to fall into a great rage thereupon, to quote Latin and hint at Greek, and to occupy a column in expressing the opinion that Guy's Hospital

School is a very poor and sadly degenerated school, and that Dr. Pye-Smith is a very indifferent lecturer. We do not know what may be Dr. Pye-Smith's objection to the *Daily Telegraph*, or why his students should not, if they like, read that, as well as any other daily paper; but he is perhaps fortunate in having succeeded in making his address and his school so widely spoken of this week; and the abuse showered on Guy's is so amusingly ignorant and absurd, that it will advantageously take the place of the most flowery eulogium. It is a characteristic joke, that the writer of the *Daily Telegraph* leader thinks "Mr. Gant's recent address at the Medical Society" is a fine type of the highest order of medical oratory.

DEATHS FROM CHLOROFORM.

DURING last week, a lady aged over 70, residing at Brighton, fell down stairs and fractured her leg into the knee-joint; some dislocation of the latter also complicating the injury. Two of the surgeons of the hospital were called in, and employed chloroform to aid in the reduction. The patient quickly succumbed to its influence, death ensuing, when very little chloroform had been used. We are not aware that any necropsy was made, or an inquest held.

Mr. Mackenzie, of the London Hospital, also favours us with a careful account of another case, which has occurred recently in London. He writes:

I regret to have to report to you a "death from chloroform" at this hospital. Believing that publicity of these sad but unavoidable accidents is the best means of proving the impossibility of always preventing them, I forward you the brief facts of the case, etc.

E. B., aged 34, a publican, who stated that he had been "a hard drinker", was admitted into this hospital on September 3rd, 1872. This patient had suffered for some time from inflammation of the foot and leg, probably connected with disease of bone. A sinus passed from the outer side of the foot, near the malleolus, under the sole of the foot; but, having no dependent opening, pus was collecting in it continually. It was proposed to examine further into the condition of the parts, and make a free escape for the pus. The patient begged that chloroform might be given him: this was accordingly done by the house-surgeon, another gentleman taking charge of the pulse and the surgeon proceeding with the examination. The man exhibited no peculiar symptoms at all at first. He passed through a very feeble "excitement stage", and he was never fully under the influence of the anæsthetic, for, on touching the ocular conjunctivæ, he always displayed the usual reflex contractions of the eyelids. About three drachms of chloroform having been administered, the patient was considered sufficiently, though not entirely, under its influence to commence the examination, and no more of the anæsthetic was given, as the patient exhibited no signs of pain. No severe hæmorrhage occurred, but the granulating wounds bled freely when enlarged. The administration had been discontinued for a minute or two longer, when the patient seemed to flinch; at the same moment the gentleman who had charge of the pulse said, "He has lost his pulse". No pallor of the lips nor peculiarity of respiration were at this moment at all visible: the chloroformist could hardly believe such was the case; but in a few seconds the patient began to sigh, and pallor, yet with some lividity, was observed. Artificial respiration (Silvester's method), galvanism to the heart, frictions, and brandy enemata, were in immediate use; but, after about three quarters of an hour, the air entering the chest became practically nothing, and all hopes were abandoned. It should be mentioned that the viscera of the chest had been previously examined, but there were no physical signs to enable one to discover any disease whatever in the heart or lungs. The patient had not taken any solid food for three hours and a half, but had some beer about a quarter of an hour before the operation.

The autopsy was conducted by Dr. Sutton, whose report in the Post Mortem Records of the Hospital is as follows.

E. B., aged 34, was admitted September 3rd, 1872, and died on September 9th. He was a tall but somewhat slender made man, very fairly developed, and body fairly nourished. Rigor mortis was well marked in both upper and lower extremities. There was no evidence of bruises or other injuries. On the outer part of the left ankle was a wound about three inches by two, and sinuses leading from it above and below. The scalp, skull, and brain were healthy; the pleuræ and lungs were healthy. On section, they had a dark red colour: on pressure, dark and somewhat thick blood escaped from the larger vessels; the bluish dark-red appearance gave a highly congested look to the lungs, but on pressure a large quantity of blood could not be squeezed out of the lungs; apparently they did not contain more blood than natural, nor were they very healthy lungs. The bronchial tubes contained no pus nor mucus, but they were blood-stained; and some reddish mucus, in minute quantities, was found in the larger bronchi. The lungs were in no parts collapsed nor unduly inflated. The pericardium was healthy; the heart weighed 11¾ ounces; the cavities were natural. The muscle of the left ventricle was somewhat paler and softer than natural; but this change was no more than what is commonly seen after death from many causes: it was of natural thickness; there were no transverse yellow markings to indicate fatty degeneration. Under the microscope, the muscular fibres were seen to be somewhat degenerated; they were granular, and the transverse striæ were more feebly marked than in healthy muscle of the heart. The valves and orifices were healthy. The left ventricle was not firmly contracted, though slightly so, and it contained some fluid blood. The ventricle was distended; the aorta and œsophagus were healthy; the larynx was healthy; the mucous surface was pale; and a little frothy mucus only was lying about the vocal cords. The liver weighed 5¼ lbs., larger than natural, but there was no nutmeg appearance; it was somewhat soft, but not particularly pale; in that respect, very unlike fatty liver produced by lying in bed and large feeding. The gall-bladder was natural. The kidneys were healthy, large, and venously congested. The stomach contained a little reddish opaque fluid; the mucous membrane over the greater part of the surface was pink, showing that digestion was going on shortly before death. At the œsophageal end of the stomach the mucous membrane was of a port wine colour, due to blood extravasated into it; in other respects the organ was natural. The spleen was soft and the intestines natural. Under the skin of the abdomen, and about the kidneys and mesentery, there was a good deal of fat; over the abdomen it was half an inch thick. Observing this in a man aged 34, and at the same time his large palish red liver, it was suspected that he had probably indulged in an excess of alcohol.

In this case, the heart and lungs were in the condition usually seen after death from chloroform. The left ventricle was neither firmly contracted nor perfectly flaccid, in the same condition as is often seen in death by coma; but, unlike death by brain-disease, the lungs were not heavy, nor did they contain an excess of blood, and there were no dark red hæmorrhagic-looking patches; the lungs were paler in their anterior part, and venously congested in their posterior. The stomach presented the appearance not uncommon after sudden death; this hæmorrhage at the œsophageal end being dependent, probably, on sudden undue distension of the gastric veins, owing to failure of respiration and heart; and it is the rule to find the hæmorrhage at this end of the stomach when death is due to heart-disease or great pulmonary obstruction.

Dr. Sutton remarked that the difficulty which arose in these cases was, "How are we to know beforehand that a patient cannot, without danger, take chloroform? We have no physical signs that will guide us, as it was in this case; and we know that many persons with marked disease of heart (either valvular mischief or dilatation, etc.) will bear the administration of chloroform well; but", he added, "we may be quite sure of one thing, that men who have drank to excess, especially for any length of time, are always patients of whom we should be more than ever careful."

During the same week, a similar case in a boy occurred at this hospital, in which the cessation of the pulse was the first symptom of alarm. Artificial respiration and brandy enemata, however, restored animation after about five minutes. I need hardly add that the chloroform is undergoing an examination for purity.

We hold it to be the serious duty of every practitioner in whose practice a case of death occurs under the influence of chloroform to place on record all the details; and we should be glad to receive a fuller authorised account of the case at Brighton to which we refer. We have for some time directed particular attention to this subject, and have collected, as far as possible, the details of these cases, not only with the view expressed by Mr. Mackenzie, but because it may reasonably be hoped that out of the accumulation of knowledge light will come; and that the publication of the full details of the clinical and vital features of each case, the mode of administration and character of the anæsthetic, and the *post mortem* appearances, may finally afford a clue to safer methods of procedure, or more available means of combating danger and saving life when suspended animation supervenes. It will be something if all are agreed, with Dr. Sutton, that chloroform is peculiarly dangerous to inveterate drinkers; for then the rule might be considered advisable to prefer the administration of ether in such cases. Even

if we arrive at the ultimate conclusion that a certain proportion of deaths are inevitable, with all the knowledge which we may yet acquire, it will be something to have struggled against the conviction, to have secured the widest range possible of bases of data, and to have brought all available means of investigation to bear upon the inquiry. It would be sad, and indeed not possible, that we should come to regard chloroform deaths with apathy or indifference, as events of course. To give death with the hand which is conseerated to life-giving efforts, to destroy the sacred cdifice of life in the very effort to rebuild it, is too grievous a disappointment to the surgeon ever to be borne calmly or with indifference. It is possible that we shall never be able to eliminate the disturbing causes which sometimes carry unconsciousness and insensibility into the sleep of death, and that we must look always for a certain proportion of such grievous mishaps; but they will never cease to inspire us with the desire to penetrate further into the secrets of Nature, to learn to regulate more aceurately the vital machine with which we tamper, and to find a key which, in unlocking the chambers of sleep, shall so govern the springs that it shall hold them firmly, and not suffer them to slip back and open the portals of death.

Chloroform is, we suppose, administered on the whole far more frequently to facilitate delivery and relieve the pangs of childbirth than in the whole range of surgical proeedures. It is encouraging to observe that it has hitherto been employed for this purpose with an immunity which is, we believe, without exception; and this cireumstanee, above any other, may encourage us to hope that the means of disarming anæsthetics of lethal terrors may not be beyond our reach. It will be remembered that Professor Lister, a man who speaks neither hastily nor without weighty reasons, grounded on practieal and theoretical inquiry, is thoroughly optimist as to the safety of chloroform inhalation, if the method and rules whieh he has laid down be strictly observed.

THE Session of the Clinical Society begins on Friday, Oetober 11th, at half-past eight in the evening.

THE Pathological Society commences its Session on Tuesday, October 15th, at 8 P.M.

VARIOUS oily substances have been recommended as antidotes to carbolic acid poisoning. Dr. Husemann (*Pharmaceutische Zeitschrift für Russlande*) finds saccharate of lime the most effectual.

PROFESSOR VULPIAN, in Paris, has passed from the Chair of Pathological Anatomy to that of Comparative and Experimental Pathology, vacated by the resignation of Dr. Brown-Séquard.

THREE hundred young Russian women have, it is stated, claimed admission as students in mcdicine and surgery at the newly opened Medical School of St. Petersburg. The number of admissions being fixed, however, at seventy, there will be a great many disappointed.

MR. AYRTON, whose official views on the sphere of duty of scientifie men and their value as public officers, have already achieved some notoriety, this week politely informs Dr. Tripe, the medical officer of health of Hackney, that he considers that the foul impurity of the water of the old bathing lake of Victoria Park is a matter beyond the province of the sanitary authorities. Judging from antecedent events at Kew, he would probably prefer to leave the matter in the hands of the park beadles. Information on any subject with which his department deals is evidently an incapacitating incident in the character of his favoured officers.

MEDICAL OFFICER OF HEALTH FOR ST. GEORGE'S, HANOVER SQUARE.

DR. A. DUPRÉ and Dr. Robert James Lee have conjointly come forward as candidates for the duties of Medical Officer of Health. They with much truth assert that the duties of a medical officer of health nowadays are so comprehensive as to render it difficult that they can be efficiently performed by one person.

MEDICAL LEGISLATORS.

THE medical profession will be represented in the next House of Commons of the Dominion by not less than sixteen members: viz., Drs. Bergin, Brouse and Grant, of Ontario; Drs. Paquet, Robitaille, Fortin, St. George, Fiset and Lacerte, of Quebec; Drs. Tupper, Forbes and Almon, of Nova Scotia; Drs. Schultz and Lynch, from Manitoba.

PRESENTATION OF TESTIMONIAL TO DR. BASHAM AT THE WESTMINSTER HOSPITAL.

A TESTIMONIAL, consisting of a silver candelabrum and stand, with an address engrossed on vellum, was presented to Dr. Basham, the senior physician of the Westminster Hospital, on Tuesday last, by the past and present pupils of the mcdical school in connection with the hospital, as well as by his colleagues, on the occasion of his retirement from the Chair of Medicine, which he had filled for more than twenty-two years.

A NATION'S CHARITY.

THE Central Committee of the German Society for the Care of the Siek and Wounded in War has just published a report of its services during the late campaign. The volume, which extends to four hundred pages, is a most careful and exhaustive compilation, and forms an interesting contribution to the history of the war. The subscriptions in money amounted to 12,798,688 thalers (nearly two million pounds); the contributions in kind were of the estimated value of 5,258,492 thalers; and the transit by railway, which was gratuitous, is set down at 449,092 thalers. The net expenditure was 11,650,995 thalers. Germany contributed in money upwards of ten million thalers, other European countries about half a million, and the extra-European countries upwards of a million and a half.

THE FATE OF THE LEPORIDES.

MOST biologists, and especially the readers of Darwin, will remember that, in 1868, M. Eugene Gayot of Bretigny-sur-Orge obtained, by crossing a hare with a rabbit, a mongrel to which he gave the name of *leporide*. This animal became fertile, and the hope was entertained that a new species of animal would arise for domestic use; but this hope was deceived, and quite recently M. A. Sanson has made an interesting communication to the Academy of Sciences on the subject. Mated together, these hybrids of M. Gayot became fertile, and their fertility did not seem to be weakened; but they were simply hybrids, which, as others have done, oscillated for a time between the two types from which they descended, before returning definitely to one or other of these types. From the experiments of M. Gayot, he found that the greater number of his leporides returned deeidedly and rapidly to the rabbit type, whilst only a few, and with diffieulty, tended towards the hare type. As to the fertility of these hybrids, it explains itself, according to M. Sanson, by the vicinity of the two species in the common race. The species are disposed in regular series. Those whieh are vicine in their series produce, by interbreeding, offspring which are fertile. It is still the same when they are not too far removed. If there be between them more than a certain number of series, the offspring of their breeding is sterile.

ADULTERATION UNDER THE NEW ACT.

UNSUSPICIOUS persons were disposed to hope that the Act for the Prevention of Adulteration, passed last session, might bring some seeurity to the digestive functions of the people, and that, notwithstanding the many loopholes left for merely fraudulent adulteration, noxious admixtures could no longer be sold with impunity. The silence of the adulterators, and the absence of opposition during the parliamentary stages of the Bill, assured the more experienced, however, that the trade suffered from no such frightful antieipations of enforced purity, and considered the bill too harmless a demonstration to require any opposition except from the most feeble and unskilful adulterators. The Act forbidding adulteration, under penalty of £50 for the first offence,

and of imprisonment for six months for the second, is calculated to excite pleasing anticipations in the minds of the sanguine and uninitiated public. But, as has often been said, a coach and six may be driven through an Act of Parliament. Through some Acts, indeed, the coach has already passed before they have received the Royal assent, and the new Adulteration Act is one of the number. Adulteration is to be visited with the above-named penalties, in districts where an official analyst has been appointed, and upon the report of the official analyst. The exquisite beauty of this arrangement may be conceived when it is explained that the appointment of the official analyst is to rest with the adulterators themselves, who will naturally be in no hurry to appoint him, and when they do appoint him will doubtless make a judicious selection. There is, indeed, a little vagueness in certain portions of the new Act, the construction of which depends to some extent upon previous Acts. There is just a chance that, in virtue of the previous Acts, the services of official chemists may be capable of being dispensed with, and the Anti-Adulteration Society is, we understand, about to try the question. But, this is emphatically an Act of Parliament demanding the exercise of legal ingenuity, not for the passing of a coach and six through it, but for the repair of a rent in its structure, which dates back to the period of its incubation.

THE ENTRY AT THE LONDON MEDICAL SCHOOLS.

IT is impossible at this very early period of the session to say more than that the entry at the Metropolital Medical Schools promises to be a good one.

QUADRUPLE AMPUTATION.

OUR readers may remember that, in the autumn of 1869, Dr. Begg of Dundee amputated the whole of the extremities in the case of a young woman named Robertson, whose hands and feet had assumed a gangrenous condition, the proximate cause of which was attributed to embolism. After the operation, a subscription was raised, and the poor woman sent to London, where, at the request of some influential friends of hers, Mr. Heather Bigg had constructed for her some especially devised prothetic appliances, in which the distinguishing features were, that the artificial hands were automatic in action, opening and shutting their fingers at the will of the patient. This peculiar prehensility gave her the power of grasping even so small a substance as a crochet-needle, and enabled her to gain a comparatively lucrative livelihood by making shawls, etc. So admirably did she do this, that one was sent by her to the Queen, who, struck by the excellence of the workmanship and the remarkable means by which it was accomplished, generously gave the poor woman £5. The artificial legs were also so arranged as to enable her to stand and walk with the aid of crutches. Three years have passed since she first began the use of extraneous appliances, and she now writes an admirable hand, besides knitting, feeding, and dressing herself, etc. In a communication made by her a few days since, which is now before us, she writes that she can walk alone quite easily with the aid of crutches, and that no one could observe the cause of her lameness. The case is one of no common interest, owing to its being the only one on record in which the whole of the four extremities have been removed. Apart from its pathological value, as indicating how life may be saved by judicious interference in cases of embolic gangrene, there remains the gratifying result that, by the use of ingenious mechanism, the patient is enabled to gain her living, whilst presenting nearly the same external appearance as if she still retained possession of her natural limbs. It is an unique case, and a triumphant instance of mechanical ingenuity.

THE UNDERGROUND RAILWAY.

WE are very glad to see that an influential daily contemporary denounces with vigour the abominable practice prevailing on the underground railways, of so hurrying the departure of the trains that the guards perforce slam the carriage doors at each start with a hasty violence which is alarming and dangerous. The frequent accidents to officials and passengers, the grievous annoyance and suffering entailed upon aged people and delicate women with children, in being hurried and goaded along like cattle, are dangerous and serious drawbacks to the advantages which this mode of travelling offers. The incessant little earthquakes and succession of loud noises which the shock of a long line of slamming doors occasions, and the still impure and sulphurous atmosphere of some parts of the line, are permanent and constant additions to the sufferings of the underground passenger. All this must certainly affect very seriously the receipts of these not very lucrative undertakings. Thousands are deterred from using them who would otherwise do so by their experiences of peril and suffering ; and a little more regard to the nervous systems of their passengers would, we feel sure, not tell unfavourably upon the pockets of the directors. We do not presume to refer to any other considerations.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

AT the annual meeting of this Society, held September 30th, 1872, the following gentlemen were elected the office-bearers for the session 1872-73. *President*—Dr. Philipson. *Vice-Presidents*—Dr. Burnup ; S. W. Broadbent, Esq.; Luke Armstrong, Esq.; and Dr. Peart. *Honorary Secretary*—H. E. Armstrong, Esq. *Committee*—Dr. Page ; Dr. Arnison ; Charles Carn, Esq.; John Hawthorn, Esq.; Dr. B. Bramwell ; Dr. Humble ; John Russell, Esq.; Dr. Denham ; and C. S. Jeaffreson, Esq.

THE GEOGRAPHICAL DISTRIBUTION OF DISEASE.

MR. HAVILAND will deliver his course of lectures on the above subject, at St. Thomas's Hospital, during the approaching winter session. Due notice of which will be given. The subjects of the new lectures will be the Geographical Distribution of Deaths by Lightning in England and France ; and of Asiatic Cholera throughout the World.

BRITISH WATERING-PLACES.

DR. WEBB of Wirksworth writes to us :—You were good enough to insert, a few weeks since, a comparative statement of the death-rate in the watering-places in this country, in which Matlock was mentioned as having, for the second quarter of 1872, a death-rate of 24.4 per 1,000 persons. I have already shown in the *Times* that, however true this may be of the entire registration district of which Matlock Bath is one of the parishes, it cannot possibly be true of the watering-place itself ; for, from an application which has been made to the local registrar, I find that, in a population of over one thousand six hundred, there were only five deaths in the half-year from January to July, 1872. In the report which appeared in the daily papers, it was stated that small-pox and scarlet fever had prevailed at Matlock. Not a single case of small-pox took place at Matlock Bath, but several at Scarthen and Starkholmes, which are in the registration district. One of the five deaths was from scarlet fever contracted in Kent. I rely upon your usual sense of justice to insert this note, which proves that Matlock Bath, instead of having a black mark placed against it as a place to be avoided by health-seekers, was, for the period in question, about the healthiest watering-place in the country, and had the lowest death-rate.

RESEARCHES ON SEPTICÆMIA.

Dr. SANDERSON in England, and Chauveau, Coze, Feltz, and Colin in France, have, by their experiments, established the important fact that, by inoculating an animal with putrefied blood, it communicates to the blood of that animal, rendering it septicæmic, with higher poisonous properties than those of primitive septical substances. M. Davaine experimenting, in his turn, on rabbits and guinea-pigs, has found that septicæmic blood transmitted from animal to animal acquired a virulent power by some indefinite means ; so that if a drop of this blood of the trillionth—nay, even of the quadrillionth dilution—inoculated an animal of the same species as that which furnished it, it possessed sufficient poisonous power to cause death. According to these experiments, which M. Davaine detailed at the meeting of the Academy of the 24th September, it was found by him that putrefied blood, injected into the

guinea-pig and the rabbit in the dose of one or more drops, was mortal even in a half of the cases; that less than one-tenth of a drop rarely killed the guinea-pig, and less than a hundredth the rabbit, the extreme limit appearing to be a fortieth of a drop for the first, and a two-thousandth for the second; on the other hand, septicæmic blood, that is, blood proceeding from an animal inoculated with the blood of another which had succumbed to the inoculation of putrefied blood, acquired a quite marvellous activity. In fact, it resulted from a series of inoculations carried to the twenty-fifth generation, the inoculated blood being diluted each time with an increasing quantity of water, so as to furnish fractions more or less minute, that the septicæmic blood acts still, as we have said, upon the rabbit in the dose of the millionth part of a drop. This astonishing statement took away the breath of the academicians to whom he communicated it; but M. Bouley presently arose and observed that M. Chauveau of Lyons, in his experiments on the effects of the diluted virus, had, on the contrary, shown that the effects became weaker in proportion as the virus was more diluted. However it may be, and without questioning in the least the exactness of the facts stated by M. Davaine, M. Bouley has cast doubt on the possibility of obtaining similar results on large animals, such as the horse or ox, etc. This doubt is supported on the observation and experiment of thirty years. During the whole course of his long practice and clinical teaching in the School of Alfort, M. Bouley declares himself never to have known a serious accident happen either to himself or the pupils who assisted him in operations involving loss of blood, which were practised on horses and cows evidently septicæmic, notwithstanding that neither he or his pupils ever took the least precaution against probable chances of inoculation. If the blood of septicæmic horses and cows possessed virulent power to the degree which M. Davaine has found in the blood of guinea-pigs, it would not be long, as M. Bouley observed, before there would not be a single veterinary surgeon on the earth. M. Bouley, in finishing his discourse, which was, as usual, full of illustration and vivacity, proposed to M. Davaine to repeat his experiments on horses, which he undertook to place at his disposal. M. Davaine readily accepted this proposal, taking care, however, to observe that he had never pretended that the results of his experiments were applicable to other kinds of animals than those which he had taken for the object of his researches. Besides, he added, it was not a question of the quantity of poison, but of the race of the animal affected. We are promised further communications on this subject.

SMALL-POX STATISTICS.

A REPORT of Dr. Mackinder on the recent outbreak of small-pox in Gainsborough gives some valuable details regarding vaccination. Of the seventy-seven small-pox patients which were treated by him nine died. Seven of these nine were unvaccinated. Fifty-seven of the patients had been vaccinated in infancy, but there was but one case of re-vaccination. Two cases were vaccinated in the incubative stage, and the pustules of the minor were concurrent, but not attenuative of the major disease. Neither good nor harm resulted from the experiment. Of the nine deaths seven were children, and but one of them had been vaccinated, and that imperfectly, one bad cicatrix alone being visible.

INOCULATION IN CHINA.

IN a recent discussion upon small-pox before the Central Kentucky Medical Association, the *Richmond and Louisville Medical Journal* for July 1872, reports Dr. Taylor as stating that during a five years' residence in China he had seen a good deal of the disease. It had doubtless prevailed there as an epidemic centuries ago. The method of dealing with the disease in that country was interesting and peculiar. It is the custom with families for the mother, when the child is about two years old, and during a certain season, to visit a neighbour and obtain some of the virus, with which she saturates a piece of cotton. This is inserted into the nostrils of the child and permitted to remain there for a time. The child is put on a light diet, into a cold room, and enveloped to the chin in a bag. Soon the disease developes itself and runs a favourable course, leaving no marks. It is a rare thing to see an adult pitted. Out of millions he had seen only two or three bearing marks of the disease.

THE GUARDIANS' LEXICON.

RECENTLY, a long suffering clerk of guardians published for the use of his masters what is now described by a well known authority on happy thoughts as a Nixon's Johnsonary, intended to protect them against the conspiracy of the Local Government Board and of their own officers to annoy and get the best of them by the use of long words of all sorts, which no guardian could be expected to understand. The specimen page which came under our notice was not a little amusing by the *naïveté* and good faith with which it gave the most blundering explanations of all sorts of words which might have been supposed to be clearer without explanation. The following example of the wisdom and intelligence of one of the new rural sanitary authorities will however suggest the advisability of enlarging the lexicon to meet the many exigencies of their new duties. A correspondent writes:

"I was conversing with a guardian by no means below the average of his class in intelligence, whom I met on his way to the first meeting under the Act (a copy of which had been previously sent to him by the clerk), and said, 'I believe you are going to discuss the new Sanitary Act.' He said, 'Yes; and don't you think there are a great many more of them than there used to be?' 'More what?' I asked. 'More people sent to the lunatic asylum,' he replied. And then it dawned upon me that the word *sanitary* had been too much for his comprehension. I was glad to hear afterwards that he wisely delegated his authority to a committee."

SCOTLAND.

UNIVERRSITY OF GLASGOW.

MR. DISRAELI is expected to deliver his address to the students, as Lord Rector of the University of Glasgow, on November 4th.

ISSUING FALSE CERTIFICATES OF VACCINATION.

WE regret to observe that Dr. Thomas Black Webster, Isle of Skye, has been indicted at the Inverness Circuit Court of fabricating false certificates of vaccination. There were twenty charges proved against the defendant, and he was sentenced to four months' imprisonment.

INTERVIEWING IN EDINBURGH.

INTERVIEWING evidently gains popularity with some of our daily contemporaries; and two American lady-doctors from Chicago, paying a visit to Edinburgh, appear to have fallen victims to the custom and to the enterprise of the *Edinburgh Courant*. A long account, more amusing than edifying, of the interview appears in the pages of that paper.

IRELAND.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

A SPECIALLY summoned meeting of the Irish members of the above Association is to take place on Wednesday, the 9th inst., in Dublin, at the King and Queen's College of Physicians (which has been kindly granted for the purpose by the President), to make arrangements for the holding of stated provincial meetings in Ireland, as is done in England and Scotland, together with considering matters of importance which more particularly affect the interests, etc., of the Associates residing in Ireland who are officially connected with the public institutions for the insane in the sister kingdom.

THE COMING WINTER.

THE Irish Local Government Board have issued a circular to the various Boards of Guardians, urging upon them the necessity of making timely preparations for the coming winter, which they fear will be one of considerable hardship to the labouring class, owing to the scarcity of fuel, and rise in price of all the necessaries of life. The Board also impresses upon them the necessity for increased energy in all matters connected with sanitation; pointing out the necessity for preparation for, and the prevention of, where possible, the sickness that ever follows in the wake of distress.

ABSTRACTS OF

INTRODUCTORY ADDRESSES

DELIVERED AT

THE METROPOLITAN AND PROVINCIAL SCHOOLS,

On OCTOBER 1st and 2nd, 1872.

UNIVERSITY COLLEGE HOSPITAL.

THE Introductory Lecture was delivered by Mr. CHRISTOPHER HEATH, Surgeon to the Hospital.

The lecturer began by quoting a report of a First of October Lecture by Sir Astley Cooper. In this the reporter noticed that the students present were "of the most respectable description; in fact, we never before witnessed so genteel a surgical class. The sight was most pleasing, for they all appeared gentlemen of cultivated manners and of good education". Mr. Heath ventured to think the reporter would have been equally gratified had he been alive and present in University College on that day. After welcoming those students who were returning to their studies after the vacation, the lecturer proceeded to address himself specially to the first year's men, congratulating them on having already given proofs of a sound preliminary education, and remarking that they must now build for themselves upon the good foundation thus laid. Turning to the curriculum of medical study, Mr. Heath thought the alterations of recent years had been on the whole beneficial, the student being spared a tedious apprenticeship, and having the several subjects brought before him in distinct courses of lectures, the number of which had now been reduced from what it was a few years back. The introduction of courses of practical chemistry, practical physiology, and practical surgery, were especially dwelt on as filling up the gaps in medical education which are inseparable from the professorial teaching of large classes. The improvement in the methods of examination for medical diplomas was also remarked upon; and Mr. Heath contrasted the present system of practical tests with that in force only a few years back, when the fitness of a youth to practise surgery was decided off-hand in an hour's time. Whilst approving of the present division of medical examinations into "little" and "great-go", the lecturer feared that this tended to confine the students' practical study of anatomy to the first two years, which he regarded as wholly inadequate for the future operating surgeon. He then proceeded to urge the importance of seeing as much hospital practice as possible while a student; and showed that all the time which could be spared during the first and second years should be devoted to seeing surgical practice, medical practice requiring the devotion of the last two years to its study. The students were congratulated on the existence in University College Hospital of a special chair of clinical medicine, now ably filled by Dr. Wilson Fox, of whose instruction in the art of physical diagnosis they were exhorted to avail themselves.

Speaking of the work before the student, Mr. Heath exhorted him to be careful of his own health and strength, by keeping regular hours, and by avoiding excesses of all kinds, even of study. He deprecated economy on one point only—that of food, which is but fuel for the brains; and, as regarded exercise, ventured to doubt whether the very violent exertions, now commonly known as "athletic sports", were an essential part of medical training. The lecturer begged the student not to be over-anxious for the possession of prizes and degrees. To sacrifice a session for the attainment of a single prize was shortsighted and wrong. As regarded degrees, the student would be a good deal influenced by the time for study at his disposal, for to attain the M.D. of London required several years and a high degree of merit. Mr. Heath then proceeded to animadvert very strongly upon the authorities of the University of London for overlaying medical degrees with non-medical science, so that a great part of the time spent in reading for these examinations was thrown away. He quoted one of the twenty questions in mechanical and natural philosophy set before medical students during the past summer, in illustration of the absurdity of the present system of examination; and also quoted, from an address of Professor Huxley, delivered in University College two years ago, the following remarks. "I entertain a very strong conviction that any one who adds to medical education one iota or tittle beyond what is absolutely necessary is guilty of a very grave offence."

The lecturer was glad to know that he did not stand alone in protesting against this overlaying of medicine with mechanical science, for four years ago a Subcommittee of Convocation of the University of London reported very strongly against the recently established preliminary and scientific examination, but without effect. The practical application to those entering on medical study was, that things being as they are, a student must at least matriculate, and, if possible, pass the preliminary and scientific examination before beginning the study of medicine. Mr. Heath deprecated any intention of disheartening the future candidates for medical degrees; but he thought that a failure to pass any one of the four examinations set by the University of London warranted a withdrawal from the contest, and it was much better to devote one's energies to thoroughly learning a profession than to strive after unattainable honours.

Lastly, addressing himself to those who would shortly cease to be students and embark in practice, Mr. Heath begged them not to imagine that they could ever venture to cease to study.

Medicine was a progressive science; and, moreover, in order to become sound practitioners they required practice in the application of medical principles. The lecturer recommended those who had not as yet seen private practice, to learn its routine by assisting some established practitioner for a time; and pointed out that, for those who recoiled from the unintermitting labour of general practice, the public medical services offered good opportunities. Upon any one who aspired to become consulting-physician or surgeons, Mr. Heath impressed the necessity of patience, and, above all, work.

ST. THOMAS'S HOSPITAL.

THE Introductory Address was delivered by Mr. JOHN CROFT, F.R.C.S., Assistant-Surgeon to the Hospital:—

Mr. CROFT, after welcoming those to whom the inaugural lectures were specially addressed, young men just entering on the student's career, said in the first place they were to make themselves acquainted with the known facts of medical science and the inferences or inductions from them, and in the second place, by observation and experiment or experience, to endeavour to understand the application of those facts and the theories built upon them. With respect to facts, he advised them to seek for them, to make them their own, and to stick to them. They would have to become the slaves of these facts—to obey them; in time they might hope to conquer them. It was one thing to learn the facts as facts, to make a collection of them in the memory; it was quite another to interpret them. Observation and experiment, carried on with patience and accuracy, were necessary for the interpretation of facts. They would discover what their predecessors had experienced—that they had to learn how to learn, how to collect facts, how to observe, how to experimentalise. Passing to the special course of study incumbent upon them, he pointed out that the art of curing or mitigating the diseases and deformities of the body must be preceded by the study of pathological science, and that an inquiry of that nature could only be founded on a complete and accurate knowledge of the science of life in health and the physiology and anatomy of the body. These latter must form the foundation on which the superstructure was to be erected. He urged the necessity for an early devotion to those sciences. They would be entitled to no higher position than the "ignorant and despicable quack" if they were "content to be only superficial anatomists and physiologists." After enumerating the various methods by which they might learn, he dwelt on the special value of dissection in cultivating a habit of personal research, delicacy of touch, confidence, and dexterity in the use of the knife, quoting Sir Astley Cooper, formerly a lecturer at the hospital—"That, sir, is the way to learn your profession; look for yourself; never mind what other people may say; no opinion or theories can interfere with information acquired from dissection." After paying a high tribute to Mr. S. Rainey, the senior demonstrator, whose singlemindedness, sense of duty, and unsurpassed skill were themes on which his old pupils delighted to dwell, he urged the students to endeavour to learn all that the lecturers and demonstrators could teach them. He then referred to the various branches of medical study, and pointed out the respective values of the lectures, the wards, the bedside, the out-patient rooms, the operating theatres, the *post mortem* rooms, containing specimens which were the substantial records of the labours and fame of such men among their predecesssors as Clive, Tyrrell, Travers, and Sir Astley Cooper, etc., as fields for research. Mr. Croft then adverted to the good which may result from the study of comparative pathology, and directed attention to the Brown Institute for the Treatment of Diseased Animals, established in 1871 in the Wandsworth Road, under the auspices of Dr. Burdon Sanderson and Dr. Klein. The principles of medicine, surgery, and obstetrics might be learnt from the various lectures and books, of which there was no lack, but the practical knowledge could only be obtained by most diligent personal observation and care. The grand fields for this kind of self-education

were the wards and out-patient rooms of that splendid hospital. He felt bound to say that though appreciated by some of the students, yet by too many of them those departments were sadly neglected. He impressed upon those who in due course would receive the practical appointments of dressers and clinical clerks, that, in taking upon themselves the incumbent duties, they became not mere functionaries as regard clerkship and dressing, but, at the same time, tenants of rare posts of observation and reflection ; and if they omitted to exercise and improve those faculties they would not be fulfilling the just expectations of the profession to which they aspired. He also reminded them of their obligations to the institution and to their patients. Referring to the wards and out-patient rooms as grand fields for observation and experience, Mr. Croft said—It is true that, in consequence of the monstrous rates now exacted from the funds of the Charity, the number of in-patients has been (temporarily it may be hoped) reduced to about 400, but it is also true that the clinical character of a hospital does not depend on the number of in-patients it can accommodate, but upon the classes of cases which are collected in its wards and out-patient rooms, and upon the industry and talents of its medical and surgical staff. In conclusion, he appealed to those who, with hopes and fears, were launched that day amid the temptations and charms of a student's life, ever to remember that they had a wide-spread duty to fulfil—a duty to their friends and relatives, by whose love and care they had been fostered, a duty to the philosophical and beneficent profession to which they belonged, a duty to the "Alma mater"—which bade them maintain the heritage of fame inaugurated by the great Cheselden—a duty to their neighbour, whether in the form of the sufferer who claimed the assistance it was in their power to give, or in the form of a fellow-labourer in prosperity or difficulties ; and, lastly, and above all, a duty to the great Creator who formed the noble work called man, and endowed him with talents to be used in his Maker's service, and who, in placing him in the midst of disease and suffering, willed that he should be moved by the sight of them to the active exercise of that loving beneficence which was the creature's best approach to divine perfection.

KING'S COLLEGE HOSPITAL.

PROFESSOR W. PLAYFAIR, M.D., F.R.C.P., commenced his address by some introductory observations on the importance of the step the students had that day taken. He said it would require no long experience of medicine in the nineteenth century to convince them that they had clearly laid down before them two types of medical men constantly to be met with in every-day life. On the one hand, they had the scientific and conscientious physician acquainted with the most recent advances of his profession, who, humble in his wisdom—as all wise men were—gleaned information from every source, sought to be the guide and interpreter of nature, but made no pretence of a knowledge he did not possess, who was not afraid to admit that the resources of his art were unable to accomplish more than they had done, and who never assumed that kind of medical infallibility which so often said to the patient in fact, if not in words, "What a fortunate thing it is for you that you have placed yourself under my care ; for, thank God, I am not as other medical men are." On the other hand, they had a practitioner whose claims to the confidence of his patient were based more on his own self-assertion than on any real knowledge of his subject, who, heedless of the progress of science, was satisfied to go on from year to year with the small modicum of information which long ago enabled him with so much difficulty to scrape through his examination and obtain a qualification ; content if only he could persuade others to believe in his skill, whether he possessed that skill or not, and who, careless of the terrible responsibilities of his calling, imperilled, and, it was to be feared, too often sacrificed to his own small and petty interests the precious lives which had been intrusted to his care. Many and many a man there was of this stamp holding, it might be, even a high place in the estimation of the public, whose reputation was founded on such a rotten basis as a smooth and unctuous manner, an imposing equipage, or a specious use of pseudo-scientific terms calculated to impose on the ignorance and credulity of his clients, and who, in deed and in truth, was as blatant a quack as if he stood on a cart at the corner of the streets and proclaimed the value of his wares with the blast of a trumpet as did the travelling empiric of yore. The lecturer then showed how the necessary uncertainty of medicine, its wants of tangible results, which could be judged of by those ignorant of its technicalities, favoured the success of men of this kind, and insisted strongly on the necessity of the student depending, not on any false or adventitious aid, but on a sound and thorough knowledge of his profession. He proceeded to defend medicine from the charge sometimes brought against it, of not advancing as other professions did. He illustrated what medicine had done, and what it was capable of doing, by the subject of public health, which he discussed in relation to zymotic disease, drainage, etc. He then showed that similar proofs of the reality of medical progress could be adduced in the more practical part of the profession, of which he gave various illustrations. Talking of the objections frequently made to the time and labour devoted to the more scientific branches of medicine, he insisted that it was only by a due attention to these that a proper foundation of knowledge could be laid, and showed, by various examples, how many of the advances of practical medicine could be more or less directly traced to a knowledge of these subjects. He, however, strongly deprecated any intention of depreciating practical work, but insisted that the one must be the necessary supplement of the other, and that to attempt to practise without a scientific foundation would be to land us in sheer empiricism.

MIDDLESEX HOSPITAL.

THE Introductory Address was given by Dr. THOROWGOOD, Lecturer on Materia Medica and Therapeutics.

The lecturer said :—A distinguished living physician, when on some of his extensive travels, was once asked by a great Potentate of the East if he knew of any poison which, put into the mouthpiece of a pipe, or given in coffee, would kill and leave no note behind. To this distasteful question the prompt answer of the doctor was, "As a physician I have studied to save life, not to destroy it." Like this physician, it behoves us to bear always high in our minds the recollection that the great aim of medical and surgical art is the saving of human life. Under whatever title one may practise, this is the end before us, and to its accomplishment we make subservient that knowledge of anatomy, physiology, chemistry, and other kindred subjects which you seek to gain during your course as students at this hospital. The lecturer then proceeded to review the position in which the medical profession stood with regard to the public as conservators of their health and healers of wounds and sicknesses. He first spoke of preventions, medicines, and sanitary science. Of late years sanitary medicine had done great things in this country, and much praise was due to those who had given themselves up to the most useful work of investigating the mode of origin and dissemination of epidemic diseases. Sanitary science had shown how malarial fever was generated in marshy lands under certain conditions of temperature. Action is taken, the land is drained, and mortality from malarial fever and ague is, after a few years, reduced from 44 in 1,000 to 27, and from 30 to 20, and even as low as 15. Take, again, an outbreak of typhoid fever in a country village ; one after another sickens, people get the impression that the fever is very contagious, and a reign of panic and terror is established. Presently the Privy Council sends an inspector, and he and the local doctor soon prove that the people are poisoned by drinking water polluted by soakage into it of matter from drains and cesspools. The local doctor probably has often warned the inhabitants of the district against certain polluted wells, but they pay no heed till they are struck down by sickness, and then their device is only to have plenty of physic. When more attention is paid to what the doctors say about typhoid fever being a disease due to bad drainage and polluted water, it is not too much to think that this malady, which Dr. Budd tells us destroys in this country 20,000 persons annually, and lays prostrate 140,000 more, may be well-nigh abolished and caused to die out like the sweating sickness and other epidemics of the Middle Ages. Further to illustrate the success of preventive medicine, it is only necessary to look at the way in which the authorities dealt with the recent outbreak of small-pox in London, and to see what excellent measures are in force to prevent a recurrence of this disease by means of the Vaccination Act. After speaking of the great progress and success of surgery in the present day, and complimenting the students on the very creditable examination that had been passed in the class of obstetrics last summer, the lecturer drew attention to the administration of drugs and various other therapeutic processes. There seems now to be little doubt that in the past centuries more harm than good was done to sick people by the tremendously active treatment then carried out by physicians ; hence the giving of drugs as a part of medicine has been derided by some as being mere guesswork and very uncertain. The reason of harm being done in past years by physic was that in those days physicians knew next to nothing of the natural history and tendency of acute diseases. Their treatment was violent in the extreme, and they never got a chance of seeing how nature would deal with the sick man if she were let alone. Dr. Thorowgood said that while the history, properties, and mode of preparation of medicines were to be learnt from lectures, that the true way to use medicines in disease was only to be learnt by bedside experience. There the physician observed and noted at what juncture his art would come to the re-

lief and aid of struggling nature. After speaking of the fallacy of trying to learn the action of drugs on sick human beings from experiments on healthy animals, and alluding to the material aid given to therapeutic progress in the publication and adoption of the *British Pharmacopœia*, the lecturer congratulated the school on the establishment by the Governors of two scholarships of the value of £30 and £20 respectively in memory of the late Mr. Francis Broderip. These scholarships were open to competition to those students who had completed their third winter session. Two entrance scholarships had also been founded, of the annual value of £25 and £20. These were now being competed for, fo the first time, by several students.

ST. GEORGE'S HOSPITAL.

MR. ROUSE commenced his address by paying a tribute to the wise liberality with which the Governors of the hospital had at all times sought to promote the welfare of the school and to increase the facilities for medical education. He then took as his chief subject the need of a well grounded self-confidence in all those who undertook the heavy responsibilities of medical and more especially of surgical practice, showing how often the well-being, and even the life, of a patient might depend upon the preparedness of the surgeon to act, not only rightly, but also with a promptitude that should lose no precious moments, and with a decision that should win the confidence of the sick man and of his friends. In order to act thus it was necessary for the practitioner to possess a firm assurance in the adequacy of his own knowledge, and this assurance could only be gained by the diligent employment of all the opportunities of the student-days—opportunities to which those who had neglected them never failed to look back with bitter and unavailing regret. The lecturer then pointed out in detail the relation borne by every department of medical study to the general end in view, and enlarged upon the methods of working by which his hearers might hope to obtain the greatest advantage from each of those arbitrary divisions of the healing art which had, indeed, no place in science, but which had been, to a greater or less extent, sanctioned by custom and justified by convenience. He showed that every surgeon should be fully conversant with the principles and practice of medicine, and every physician with the principles and practice of surgery, in order that each might recognise the occasions on which the sister art might beneficially assist or even replace his own. In conclusion, he urged upon the students the necessity for earnest and diligent work, and promised them that those who conscientiously sought to fit themselves for their future career should in no wise lose their reward.

WESTMINSTER HOSPITAL.

THE Address was delivered by Mr. G. E. LEGGE PEARSE.

After referring to the old students of the hospital who were present, and expressing the gratification he felt at their presence, he addressed the younger portion of his audience. He impressed upon them the great importance of studying their profession with diligence while there was yet time, of storing up knowledge, of making hay while the sun shone, that in future years they might be able to look back with pleasure on their student-days. While mentioning some of the chief diseases and their causes, the lecturer said: "Now let us look upon one of the most distressing cases we have to contemplate. Behold a man whose energies are destroyed, whose body is diseased, whose mind is debased, by indulgence in alcohol—that fluid which, sent us as a blessing, only too often becomes a curse, and for the curtailment of the abuse of which some means have just happily been taken by the legislature. Lastly, we turn our attention to certain poor creatures, the victims of that malady—perhaps the saddest of all—engendered by their own vice and debauchery, and for the diminution of which that most useful provision, the Contagious Diseases Act, was originated." They should—and in saying so he addressed the older part of his audience—leave no stone unturned to support to the utmost of their power, when the time arrived, that useful measure, which the bigotry, narrow-mindedness, and ignorance of many seemed now likely to overthrow. After describing the chief subjects embraced in the medical curriculum, and pointing out their relative importance, Mr. Pearse noticed the great necessity for clinical observation. He spoke of the inestimable value of dresserships and clinical clerkships, and more particularly the appointments of house-physician and house-surgeon, which the Westminster Hospital bestows as prizes on its most diligent students. Having touched at some length upon the advantages, the pleasures, and trials of the medical profession, the lecturer concluded by saying: "We cannot all hope to become Coopers, Brodies, Pagets, or Fergussons; but 'England expects every man will do his duty;' and, if we do ours soberly and earnestly, in however modest a sphere, such an one will leave behind him a perennial monument in the hearts of all those he has served in his earthly ministry."

THE LONDON HOSPITAL.

THE Introductory Lecture was delivered by Mr. JONATHAN HUTCHINSON, surgeon to the hospital.

The lecturer, after making some general remarks upon the greatly enlarged scope which modern medicine was taking, and upon the probability that its sphere would be still larger in the future, congratulated those commencing their career on their choice of a profession. He assured them that, as far as his observation had extended, there was none on which a man could more confidently rely for the certainty of earning a good livelihood; and he thought there was none which, on on the whole, would more favour their mental and moral development. The pursuit of medicine, considered in its wide sense as a branch of natural study, tended to create in the mind an enthusiasm for truth and a courage in its pursuit which could not but be most beneficial to character. Besides, medical men, from their peculiar opportunities of becoming intimately conversant with others, from the frequency with which they became acquainted with noble acts of self-devotion, as well as from their insight into the physical basis of moral peculiarities, had an advantage over most as regards the growth of their sympathies. The lecturer next proceeded to assert, in opposition to the rather widespread opinion that the study of physical laws is inimical to the growth of the higher moral faculties, such as reverence and faith, that it had in reality the opposite effect. He thought that much misapprehension on these subjects had accrued from mistakes as to the real basis and nature of the faculties in question, and denied emphatically that true insight into things as they are could by any possibility be prejudicial to our trust and confidence in things as they will be. He next proceeded to illustrate the way in which the teachings of nature supplement and reinforce the lessons derived from revelation, by demonstrating the true relations of the past to the present, and the present to the future. Arguing from the indestructibility of matter and of the natural forces, heat, electricity, and the like, he urged that the mind trained to scientific pursuits had but little difficulty in believing that the same law was obtained in the moral world. In conclusion, he congratulated all present who were engaged in the cultivation of natural science. It was the study of facts and of truth. He hoped he had asserted there was no sort of danger in it; and that, on the contrary, it would strengthen all their nobler faculties, both mental and moral. The genius of knowledge was no sceptic; she, indeed, "delightedly believes divinities, being herself divine." To students he would say, "Be diligent, be scrupulous, be courageous in the investigation of facts. Take first those which concern the practice of the profession which you have chosen," for these were absolutely essential in order that they might do justice to those who employed them; and he was much mistaken if they would not find the study of disease, considered merely as a branch of natural history, as full of interest as any of those which are often ranked as more attractive.

GUY'S HOSPITAL.

THE Inaugural Address was delivered by Dr. PYE-SMITH.

He commenced by paying a tribute to the memory of Mr. Alfred Poland, after which he welcomed those who had chosen the profession of medicine, and had come to Guy's to learn it. To those he would say, that if their aim was to be rich, they had made a mistake. If the money to be spent on their professional education were invested in trade, it would increase much sooner, and with less trouble. They would have in medicine to do a great deal for nothing, while they might leave very little behind for others to enjoy. Let them not work solely for reputation or influence, but rather for the sake of the profession itself; for even in science the very worst way to progress was by seeking to make brilliant discoveries. They would derive happiness from the fact that they were exerting the best faculties of the body in trying to alleviate misery, while exempt from the trials and losses incurred in the pursuit of riches which those in trade had to endure. He congratulated his hearers that they had chosen Guy's as their place of study, for, although he would not say Guy's was best in everything, there were a few characteristics which every hospital did not possess. The chief quality was that in Guy's it was the fashion to work. They did not aim so much at academic finish as at practical common-sense knowledge; and, as proof of his assertion, he would but point to the long list of illustrious names whose owners had received their training

at Guy's. Another quality was that all the members always stuck to one another. There was a most cordial feeling existing between the authorities, staff, and students, and he looked to the first year's men of the present term to keep up that spirit, and transmit it to their successors. Dr. Pye-Smith then went on to refer to the future studies of the students. Medicine was the art of preventing and curing disease. He would not attempt to define disease, but would simply say that it included all which caused bodily pain, or was so dangerous that people would try to get rid of it, and the doctor's duty it was to assist them in so doing. Prevention was better than cure, and a large class of diseases was of the preventable kind. Some, such as scurvy, plague, and leprosy, had almost disappeared, but a great number still remained. It was the duty of statesmen to recognise this fact. Hitherto they had not done so, and it had been left for the medical profession to effect single-handed the improvements which had taken place with regard to preventable diseases. It was, therefore, the student's duty to make himself acquainted with all the requirements of a healthy body in respect to air, water, food, etc.; so that, wherever he might be, he would be able to make himself a centre, from whence a knowledge of healthy conditions would be disseminated. After speaking of disease, and giving instances of its operation, Dr. Pye-Smith went on to show that there could be no system of therapeutics; that homœopathy, allopathy, and other so-called systems, were fallacies; and that, instead of being a science, therapeutics was an art, and an art which depended upon a knowledge of many sciences. Speaking of the more practical part of the student's life, the lecturer urged them during the first eighteen months to devote themselves to anatomy; for, if they did not learn it then, they would never learn it at all. Then, when they had passed their first examination, let them turn their studies to account, and for this purpose nothing was better than to be the surgical reporter. The second year was to embrace physiology, the third clinical work, and the fourth and last the study of those branches such as applied to the eye and ear diseases—branches which were often neglected, and which he urged them never to neglect. After dwelling on the subject of study in its various forms, Dr. Pye-Smith spoke of recreation. They would not, of course, devote all the hours they spent in London to their profession. They would find some time for general reading—and rightly; only let them make a resolution to give up newspapers—they would then know how much better one was without them. Let them study Goldsmith rather than the *Daily Telegraph*. There were other modes of recreation. They might join the musical society of the hospital; but above all let them practise outdoor sports. In conclusion, Dr. Pye-Smith referred to a difficulty which the student might meet with in the course of his studies, and that was—he might at times be unable to reconcile his observation of facts with the traditional records of religion. About that difficulty, he urged them not to trouble themselves, but rather let them rest in knowing that the greatest names in science, as Newton, Leibnitz, and Faraday, were men who never interested themselves in trying to solve the multitude of questions which probably were not to be solved.

THE MEDICAL COLLEGE DINNERS.

THE various social meetings held after the Introductory Lectures were this year well attended. The custom of bringing together the past and present students of the hospital, in October, in a more palatable manner than by offering commonplace remarks for their digestion, appears to be becoming general. It keeps a school well together, and gives to the old students an agreeable opportunity of showing their interest and affectionate indebtedness to their Alma Mater, for

> "Man, like the generous vine, supported lives;
> The strength he gains is from th' embrace he gives."

ST. GEORGE'S HOSPITAL.

THE St. George's Hospital dinner took place on Tuesday evening, at Willis's Rooms, under the Presidency of Mr. J. A. Shaw Stewart, the Treasurer of the hospital. Upwards of a hundred sat down. After the usual loyal toasts the Chairman proposed "Prosperity to the Medical School," which was responded to by Dr. Barclay. Dr. Fuller, in proposing "The Governors," drew a favourable picture of the English system of hospital relief as compared with that seen abroad. This toast was responded to by Mr. Mould. "The Students of St. George's Hospital" was given by Dr. Woodham, and responded to by Mr. Rea, the senior house surgeon, who concluded by proposing, very happily, the "Health of Mrs. William Brown," the generous lady who has so munificently given an exhibition of £100 a year for two years, to be competed for by the senior students on alternate years. This toast, coupled with that of the ladies, was responded to by Dr. Clarke. "The Health of the Chairman" was proposed by Dr. Pitman, in his usual eloquent style. The Chairman, having returned thanks, this most successful meeting—a success mostly due, however, to the fact of old friends meeting after prolonged absence than to the excellence of the dinner—came to a conclusion.

THE MIDDLESEX HOSPITAL.

A MORE successful or largely attended Middlesex Hospital Dinner has not taken place for many years. The large dining room in St. James's Hall was crowded. Mr. Nunn most acceptably fulfilled the duties of Chairman. The usual loyal toasts were proposed from the Chair, after which was given that of "Success to the Middlesex Hospital and Medical College", coupled with the name of Mr. De Morgan. The toast was received with great enthusiasm, especially coupled as it was with the name of Mr. De Morgan, who received quite an ovation. The great popularity of the Chairman was evinced in a most unmistakeable manner when the toast of his health was proposed by Dr. Greenhow. For the old students, Dr. Cooper Rose responded; and for the present, Mr. Davies fulfilled a similar duty. The toast of "The Lecturer of the day", Dr. Thorowgood, followed. The unusually great success of the meeting was in large measure due to the rich and varied musical programme of "The Middlesex Minstrels", several of whom were previously members of the well known Cambridge University Gillespie Band. The songs of Mr. G. Anderson Critchett, Mr. R. Semple, Mr. Gillespie, and Mr. Hardman, were admirably given. Mr. Hailstone's performances on the violoncello, and the pianoforte pieces of Mr. Ganz, were much appreciated.

WESTMINSTER HOSPITAL.

THE Triennial Dinner of the Westminster Hospital Medical School was held at the Pall-Mall Restaurant, on October 1st, 1872, at 7 P.M., W. R. Basham, M.D., in the Chair. About forty past and present students of the hospital attended. The silver candelabrum which had been presented to the Chairman in the morning, occupied a prominent position on the table. The usual loyal toasts having been proposed, "Success to the Westminster Hospital Medical School" was received with musical honours. Next followed the "Health of the old students," coupled with the name of Mr. Pearse. The various members of the staff were proposed, and responded to by Mr. Holt and Drs. Fincham and Anstie. Dr. Basham alluded very feelingly to the presentation of plate that had been made to him; and, in reference to his own connection with the hospital, compared it to the lengthening of a golden chain, each link of which bound him more affectionately. The dinner was under the superintendence of Dr. Potter and Mr. Davy; and thanks must be given to Mr. Draper, the manager, for the able manner in which he carried out the detail of a very successful meeting.

ST. BARTHOLOMEW'S HOSPITAL.

THE annual dinner took place in the hall of the hospital on the 1st of October. Mr. Luther Holden presided, and was supported by Sir James Paget, Sir Trevor Lawrence, the President of the British Association, the President of the Medical Council, Dr. Stenhouse, Professor Abel, and other friends. About one hundred old pupils of St. Bartholomew's Hospital were present. The President in the course of the evening referred to the absence of the Treasurer, who by recent illness has been prevented from taking an active part in the affairs of the hospital.

ST. MARY'S HOSPITAL.

THE biennial dinner of St. Mary's Medical School was held at Willis's Rooms on Wednesday, October 2nd; H. Spencer Smith, Esq., the senior surgeon of the hospital, in the Chair. Many old students came from afar to join the gathering of St. Mary's men, and to support the popular chairman. Amongst those present, in addition to the actual staff of the hospital, were Dr. King Chambers, Dr. Sibson, Mr. White Cooper, Mr. Turner, Mr. Woodman, Mr. Myers, Mr. Belemore, Dr. Staples, and numerous other active friends of the school, who still preserve a warm interest in its welfare.

CHARING-CROSS HOSPITAL.

THE Medical Officers and Lecturers of the Charing-Cross Hospital gave a *conversazione* in the Board Room, after the Introductory Address by Dr. Black. There was a large attendance of past and present pupils and others. The evening passed successfully.

THE LONDON HOSPITAL.

THE London Hospital Students' Meeting is biennial, and did not take place this year. The London Hospital Club Dinner, however, was held on Tuesday, and passed off successfully.

THE SHEFFIELD SCHOOL OF MEDICINE.

THE annual dinner of the lecturers of the Sheffield School of Medicine was held on October 1st, at the Victoria Station Hotel—Dr. Bartolomé, the President, in the Chair; Mr. Favell in the Vice-Chair. Mr. Arthur Jackson, in responding to the toast of "The Sheffield School of Medicine", said that the Council contemplated the sale of the present premises in Surrey Street, which are no doubt incommodious, and situated at too great a distance from the Infirmary. The proceeds of the sale should realise a sufficient sum to enable the authorities to build a handsome school in the neighbourhood of the Infirmary. It was then to be reasonably expected that a greater share of students than falls to their lot at present would be attracted to the school. An important reason why so few pupils come to the school, he said, is the fact that it is to so great an extent dependent upon the town itself. The sister schools of Manchester and Leeds have, so to speak, important feeding-grounds in the large towns which surround them. Having made due allowance for the size and importance of Manchester in the medical world, there could be no doubt, he said, that her school derives a large number of students from Stockport, Oldham, Bury, Ashton, Rochdale, and other populous towns. Leeds, again, is within easy distance from Bradford, Halifax, Wakefield, etc.; whereas the only towns upon which the Sheffield School has a claim on the score of neighbourhood are Rotherham and Barnsley. The funds of this institution are at present entirely devoted to the purchase of apparatus, microscopes, etc., for the use of the students, so that the school may be said to be carried on entirely by love of science.

MIDDLESEX HOSPITAL MEDICAL COLLEGE.

THE prizes awarded at the end of the winter session, 1871-2, were distributed by Mr. De Morgan after the Introductory Lecture. The report of the Dean, Dr. Cayley, on the prosperity of the school was gratifying.

Governors' Prize for the best examination at the bed-side and in the *post mortem* room—Mr. John Hopkyn Davies. Second Clinical Prize—Mr. Robert Z. Pitts. Third Clinical Prize—Mr. Henry Charlesworth. Medicine—Mr. Robert Z. Pitts. Surgery—Mr. S. J. J. Kirby, Mr. F. M. Williams, equal. Practical Surgery—Mr. John Hopkyn Davies, Mr. Robert Z. Pitts, equal. Physiology—Mr. Arthur Tomes, Anatomy—Mr. Arthur Tomes. Pathology—Mr. Robert Z. Pitts. Chemistry—Mr. David Hepburn. Dissections—Mr. John Alexander Fothergill, Mr. Arthur Tomes, equal.

Gentlemen to whom Prizes were awarded at the end of the summer session of 1872. Materia Medica—Mr. Jones Midwifery—Mr. A. Tomes. Medical Jurisprudence—Mr. A. Tomes. Practical Chemistry—Mr. A. T. Scott. Practical Physiology—Mr. Karop. Botany—Mr. Karop, Mr. A. T. Scott, equal.

Medical Society's Prizes—Mr. Balding, Mr. Karop.

The following gentlemen, having distinguished themselves in the Periodical Examinations, were awarded Certificates of Honour. Mr. S. J. J. Kirby, in anatomy; Mr. Arthur Tomes, in surgery; Mr. H. Davies, in materia medica; Mr. H. B. Ellis, in midwifery; Mr. H. B. Ellis, in medical jurisprudence; Mr. H. Jackson, in medical jurisprudence; Mr. A. T. Scott, in practical physiology; Mr. A. Tomes, in comparative anatomy.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.

THE following is the list of prizemen :—Examinations, 1872—Jeaffreson Exhibition, £20 annually, for two years, F. H. Carter; Senior Scholarship in Medicine, Surgery, and Midwifery, £50, H. J. Ilott and E. Milner, equal; Senior Scholarship in Anatomy, Physiology, and Botany—1, J. C. Verco, £50; 2, A. F. Stevens, £25; Junior Scholarship—1, £80, G. H. Hames and F. H. Spooner; 2, £20, F. H. Carter; Kirkes Medal, R. M. Boodle; Wix Prize, Vincent D. Harris; honourable mention, E. J. Burgess; Hichens Prize, C. S. W. Cobbold. Practical Anatomy: Foster Prize—J. C. Verco; 2, G. Andrew and A. F. Stevens; 4, J. Macready; 5, J. Mills; 6, C. S. W. Cobbold; 7, J. W. Groves; 8, R. T. Thomas; 9, D. W. D. Comins; 10, J. J. W. Weakley; 11, H. Bott; 12, T. W. Reid; 13, R. Wharry. Treasurer's Prize—J. Rankin; Examiner's Prize, H. G. Cumming; 3, G. H. Hames; 4, W. Kebbell; 5, F. H. Spooner; 6, F. H. Carter and A. Boswell; 8, W. H. Briggs; 9, C. C. Turnour; 10, C. A. Daubeney; 11, A. Pearce.

ST. MARY'S MEDICAL SCHOOL.

THE scholarship in Natural Science, of the value of £40 for three years, has been awarded to Mr. Alfred Tilley; and the exhibition of £20 to Mr. W. H. Weddell.

THE LYONS MEDICAL CONGRESS.

A FRENCH correspondent writes to us under date 27th September :—You have announced the programme of the Medical Congress of Lyons, and we have realised it. I know not how to figure to you the events of this Congress, so as to give you a lively image of what has passed. After taking part in your English meeting of the British Medical Association, I see here something so different that it afflicts me to describe it to you. Want of order, want of brevity, want of arrangement, want of practical common sense—an egotism which sacrifices one's multitudinous surroundings to one's personality—the desire to appear wise, the love of long-sounding phrases, want of conscience and of severe introspection—that is how the work of my own compatriots now shows itself to me when I come to it fresh from the emotions awakened by your grand, quiet, well ordered, sincere, unostentatious British Medical Association. We have no sections, no limit of speech, no sifting committees: the whole Congress must assist at the apotheosis of each man's vanity; and hours pass themselves in diffuse, wordy, and I-would-be-eloquent orations, which have commonly been only the warmed-up dishes that have graced more than once the banquets of our French societies, and for which now a provincial celebrity is sought. This is considered improving the occasion. Each orator as he descends from the tribune which he has occupied for half an hour or an hour, asks his friends and himself not What have I taught? How have I advanced the objects of the Association? but "Have I made a brilliant improvisation?" "Was my speech full of *entrain*, or erudition?" Twelve mortal sittings did we endure, with gradually thinning audiences. The result has been, I fear, a death-blow to French congresses—platitudes, verbosity, egotism, dulness, but not one addition to our knowledge. Looking through the notes of all the sittings, I cannot find one paper really worth transcription; but, with the help of the official *procès-verbal*, I may be able to pick out enough of abstracts to fill a page or two, which will not be wholly useless, if not wholly novel, and will preserve in your pages some sort of record of the fourth annual congress in the first year of the revenge of our beloved France. Alas! it is not thus that we shall rise above the level of our too pressing neighbours, or teach them to keep their place.

THE PUBLIC HEALTH ACT.

A MEETING of the Poor Law Medical Officers' Association was held, on Tuesday evening last, at the Medical Club, 9, Spring Gardens, to express regret at the abandonment by the Government of the dispensary clauses of the Public Health Act, 1872, and at the recent action of the Local Government Board in reference to appointing only lay or legal inspectors to control the medical service and to carry out the provisions of the Act. Dr. JOSEPH ROGERS, President of the Poor-law Medical Officers' Association, took the chair. The meeting was not very fully attended, owing to the opening addresses and the prandial celebrations of the various medical schools detaining most of the members of the Association. Letters approving of the objects of the meeting were read from Sir Dominic Corrigan, M.P., Mr. Corrance, M.P., Dr. Dalrymple, M.P., Mr. Ceely (of Aylesbury), and others. A long and irregular conversation took place, during which Dr. Lush, M.P., protested strongly against the appointment of non-medical inspectors. Dr. VINAL (of Hackney) moved, and Mr. GRIMLEY (Banbury) seconded, the first resolution, as follows: "That, in the opinion of this meeting, the salaries of the Poor-law medical officers have been arbitrarily fixed by the Guardians, and sanctioned by the Central Department, without regard to any uniform standard or rate of remuneration; that they have not been raised in proportion to the increase of population, the ratio of pauperism, or the diminished value of money; and that, in the large majority of instances, they are a very inadequate payment for the onerous and responsible duties which the medical officers are called upon to perform. That this Association regrets that the Public Health Act, 1872, constituting the new local sanitary authorities and districts, should contain no provision for the establishment of public dispensaries on the model of those at present existing in the metropolis and in Ireland, and which have worked so efficiently in that country." The resolution was carried.

Dr. JOYCE (of Rolvenden, Kent) moved, and Mr. FROST seconded, the next resolution, which was also carried without dissent: "That this Association protests against the imposition of new duties under the Public Health Act in addition to those which they are called on to perform under the Diseases Prevention Act, and especially the part which they may have to take in connexion with the registration of diseases, and which this Association believes will not only be exceedingly onerous, but absolutely impracticable, if such dispensaries are not

generally established, so as to relieve the district medical officers from the expense and labour of supplying medicines, and enable them by such means to check more promptly the first outbreaks of disease, and thereby diminish the principal cause of our enormous expenditure on pauperism."

Mr. YOUNG (of Aldershot) moved, and Mr. JOHN VANCE seconded, the next resolution: "That, for the moral support and protection of district medical officers in the discharge of the difficult and often invidious duties which they will be required to perform under the Public Health Act, it is considered by the Association to be highly desirable that chief medical officers of health, debarred from private practice, should be appointed by county authorities, and by the authorities in towns containing a population of more than 200,000, to whom the district officers might make their returns and reports, and on whom would devolve the responsibility (so damaging to gentlemen in private practice) of initiating proceedings under the new Act."

To this Mr. BARNES, the Secretary of the Association, moved as an amendment that this clause of the Act should not be opposed until it was seen how it worked. Dr. WALTER SMITH seconded the amendment, both gentlemen expressing their opinion that Mr. Stansfeld was in earnest in what he was doing for improving the position of Poor-law medical officers. The amendment, however, was lost, and the original motion was carried.

Dr. LUSH, M.P., moved the next resolution, which, he thought, expressed the feeling of country medical officers, and Dr. JOYCE seconded it, as follows: "That such appointments appear to this Association to be the more urgently needed to give the medical officers' reports weight with the local authorities, seeing that the most recent appointments of inspectors by Mr. Stansfeld for carrying into effect the provisions of the public health have been such as to give the public no confidence whatever in the administration of the Act, those appointments having been filled by gentlemen wanting even the rudimentary qualifications for such an office; and that this Association views with dismay that which appears to be a return to the old system of a lay and unskilled inspectorate, in spite of the promises of those under whose auspices the present Act has become law."

A vote of thanks was passed to Dr. Lush for his presence and aid to the Association, and the proceedings then terminated with the usual compliment to the Chairman.

PUBLIC HEALTH: PROCEEDINGS UNDER THE NEW ACT.

THE Commissioners of Improvement of the parish of Chiswick, who have the election in their hands, have decided that the salary for the medical officer shall "be for the present £80 *per annum*, and that he be required to reside in the district."

"That such salary be paid by the Commissioners, as it does not appear to the Commissioners desirable that the medical officer should be under the control of the Local Government Board."

"The Commissioners deem it expedient to defer the consideration of the duties of the Sanitary Inspector until after the appointment of the Medical Officer of Health."

"The appointment of Medical Officer takes place in about a fortnight, and at present there are in the field—Mr. F. C. Dodsworth, Jun., Turnham Green; Mr. William Leigh, Chiswick; Dr. D. A. Moxey, Turnham Green."

THE NEW ADULTERATION ACT.

AT the usual weekly meeting of the Liverpool Health Committee, held on Thursday last, the Chairman, referring to the question of appointing a public analyst, explained that under the recent Act he would be an executive officer, and the initiative would be taken by him, and proceedings instituted, independent of the Health Committee. Dr. Taylor moved the following resolution:—"That, subject to the approval of the Local Government Board, it be recommended to the Council that James Campbell Brown, doctor of science, be appointed analyst to the borough of Liverpool, pursuant to the statute entitled an Act to Amend the Law for the Prevention and Adulteration of Food, and Drink, and Drugs; and that he also make an analysis of water every quarter, and such other analyses as may be required by the Council—the engagement to be determinable by three months' notice, which may be given at any time, and may expire on the first day of any month, and that a salary of £200 a year be paid to him. That the fee to be paid by any purchaser requiring an analysis under Section 9 shall not be less than 2s. 6d., and not more than 10s. 6d." The resolution was carried unanimously.

*** We shall be glad to receive notice of any further instances in which this excellent example is followed.

ASSOCIATION INTELLIGENCE.

SHROPSHIRE ETHICAL BRANCH.

THE annual general meeting of the above Branch will be held at the Lion Hotel, Shrewsbury, on Monday, October 7th, at 1 P.M.; J. W. PROCTER, Esq., in the Chair.

Dinner will be served punctually at 3.30 P.M., for the convenience of the country members.

Members have the privilege of introducing friends, on transmitting their names to the President.

Chamber concert music by a select band of musicians, under the leadership of Mr. T. Hulley, will be provided as usual.

Papers have been promised by the President, J. R. Humphreys, Esq., A. Mathias, Esq., Dr. Styrap, and R. Wilding, Esq.

Gentlemen intending to read cases, etc., or to be present at the dinner, will oblige by notifying their intention, at their earliest convenience, to JUKES STYRAP.

Shrewsbury, September 16th, 1872.

SOUTH MIDLAND BRANCH.

THE sixteenth autumnal meeting of this Branch will be held at the Cottage Hospital, Stony Stratford, Bucks, at 2.30 P.M., on Tuesday, October 15th. Luncheon at 1 P.M. previously, kindly provided by Dr. Mackay at his house. A. D. Mackay, M.B., President.

Gentlemen who intend to read papers are requested to forward their titles forthwith to Dr. Bryan, Northampton.

J. M. BRYAN, M.D.
WM. MOXON. } *Honorary Secretaries.*

Northampton, September 11th, 1872.

WEST SOMERSET BRANCH.

THE autumnal meeting of the above Branch will be held at Yeovil, on Thursday, October 17th. The following question has been settled by the Council as the one on which each member should be asked his opinion at the said meeting:—"What is your opinion as to the desirability of establishing the Provident System in connection with our Hospitals and Dispensaries, and as to the part which the profession should take in reference to this question."

The meeting, under the presidency of Dr. GARLAND, will open at the Hospital at Four o'clock, when papers and cases will be heard.

The dinner will take place at The Choughs Hotel at Six o'clock; after which, the question above-stated will be taken and discussed.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, September 14th, 1872.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEDICAL MEETINGS.

THE next meeting of the above Branch will be held at the White Hart Inn, Reigate, on Thursday, October 17th. The Chair will be taken at 4 P.M. by Mr. HALLOWES, of Redhill.

Papers, etc., are promised by Mr. Hallowes, Dr. Phillips, etc.

All members of the South Eastern Branch are entitled to attend.

The dinner will take place at 6 P.M.

HENRY T. LANCHESTER, M.D., *Honorary Secretary.*

Croydon, October 1st, 1872.

YORKSHIRE BRANCH.

THE autumnal meeting of this Branch will be held at Scarborough, on Tuesday, October 22nd.

Gentlemen who purpose attending the meeting, or bringing forward communications, are requested at once to communicate with the Local Secretary.

W. PROCTER, M.D., *Honorary Secretary.*

York, October 2nd, 1872.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE autumn meeting of this Branch will be held at Pontypool, on Friday, October 25th; T. J. DYKE, Esq., F.R.C.S., President, in the Chair.

Members who are desirous of reading papers, etc., are requested to communicate their intention to one of the Secretaries, without delay.

ANDREW DAVIES,
ALFRED SHEEN, M.D., } *Honorary Secretaries.*

September 25th, 1872.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT MEETINGS.

THE first meeting of the sixteenth session 1872-73, was held at Rochester, on September 17th, ARTHUR W. NANKIVELL, Esq., F.R.C.S., in the chair.

New Member.—Walter Buchanan, Esq., of Chatham, was elected a member of the Association.

Next Meeting.—George Sankey, Esq., was chosen Chairman for the next meeting, to be held at the General Hospital at Maidstone, on Tuesday, November 12th.

Communications.—The following communications were made.

1. Case of Foreign Body in the Ear, causing Brain-symptoms: Recovery. By J. H. Hutchins, Esq., F.R.C.S.—C. H., aged 9 years, passed a lotos bean into his right ear on May 23rd, 1872. That day and next attempts were made to remove the bean; chloroform was administered. Suppuration of the meatus took place, and serious brain-symptoms supervened—such as vomiting, double vision, sluggish pupils, and convulsions; and there was progressive emaciation. A third attempt at removal was made on July 3rd, and the exterior of the bean was broken. Chicken-pox attacked the boy a few days afterwards, and the brain-symptoms abated in severity. The bean was extracted easily on July 23rd, having become softened. There is a small piece of necrosed bone at present in the wall of the meatus, but no brain-symptoms. This case would probably have ended fatally if the cortex of the bean had not been broken, thus allowing softening to occur.

2. Case of Calculus Vesicæ in a Woman, causing Vesico-Vaginal Fistula. By J. H. Lyddon, Esq.—A woman, aged 53 yenrs, was admitted into hospital on July 24th, having suffered for one year from symptoms of calculus. The stone was removed *per vaginam*, through an ulcerated cruciform aperture of long standing. The stone was phosphatic, and weighed 172 grains. The patient was discharged on August 7th, without any attempt at the cure of the fistula, which appeared to be of a hopeless nature.—This case, and a similar one in a girl, show the necessity of *early removal* of stone from the female bladder, seeing that, in so short a period as twelve months, an incurable fistula may be produced.

3. A paper was read and demonstrations given by A. W. Nankivell, Esq., F.R.C.S., entitled, Illustrations of the Use of Antiseptic Gauze: also Remarks on the Security and Advantages of the Carbolised Catgut Ligature.—The success of antiseptic gauze dressings is greater than that of the former method by copal plaster. Antiseptic treatment is pre-eminently successful in the removal of the mammæ and of tumours, whilst it is least so in amputations. It is decidedly valuable in compound fractures, although it appears to retard the consolidation of bone. Under its use, stimulants are less needed, and the stay of the patients in hospital is shorter than under ordinary dressings. No patient undergoing antiseptic treatment in this hospital has ever been attacked by erysipelas. Large abscesses are also successfully managed by the gauze. In respect of the carbolised catgut ligature, perfect security is claimed for it—a case being narrated of highly degenerated arteries and sloughing of the flap recovering without secondary hæmorrhage. In the course of three years, only one case of secondary hæmorrhage occurred; but it is doubtful whether the bleeding took place from the deligated vessels, for Chopart's operation had been performed for intractable ulceration of a stump, the result of frost-bite and amputation of the toes several years since; and it is likely that there was a recurrence of ulcerative action affecting the smaller vessels. No operative procedure was needed. The advantages of this ligature are, briefly: security from secondary hæmorrhage, owing to the non-sloughing of the external coat of the artery; immediate closure of the wound, leading to adhesion of the deep structures; absence of sinuous tracts; diminished risk of pyæmia; and safety from accidental tearing away of the ligature during subsequent dressings of the stump. No other ligature is now used in St. Bartholomew's Hospital; and the author of this paper is enthusiastic in his recommendation of the carbolised catgut.

After a vote of thanks for the use of the board-room, the members and visitors adjourned to dinner at the Bull Hotel.

SOUTH EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE forty-fifth meeting of the above Branch was held at Ashford, on Thursday, September 19th. The following papers were read.

1. Mr. Nason: Strangulated Scrotal Hernia, with Complications. [*Vide* p. 381.]

2. Dr. Parsons: Case of Strangulated Femoral Hernia, which healed without forming pus the third day after operation. The only dressing was a pad of dry lint and three silver sutures.

3. Dr. Wilks, of Ashford, related the particulars of several cases of Varicose Veins in which he had employed Skey's method of treatment by means of Vienna paste, with very marked success.

The members afterwards dined together.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

A MEETING of the above district was held at the Royal Sussex Hotel, Tunbridge Wells, on Friday, September 20th, 1872, B. MARSACK, Esq., in the Chair. Sixteen members and two visitors were present. The loss this district has sustained in the recent death of Mr. Trustram was feelingly alluded to by the Chairman, and a vote of condolence was passed with Dr. Wardell on his recent sad bereavements, which prevented him taking the chair on the present occasion.

Dr. J. MILNER BARRY, of Tunbridge Wells, read a paper on three Cases of Sudden Death which had recently occurred in his practice. (See page 379.)

Mr. WALLIS, of Hartfield, related an interesting case of Imperforate Rectum in an infant in which he operated successfully after the supervention of serious symptoms of obstruction.—The CHAIRMAN mentioned that he had lately a case of twins, both the children presenting this abnormity, and in one of which he operated with success.

Mr. HODGSON, of Brighton, exhibited several new instruments, including Dr. Aveling's apparatus for Transfusion, with the simple effectiveness of which the members were much struck; also a new Rectum Speculum by Ferris, Townsend, and Co., Bristol, and some new Clinical Thermometers by Casella.

Mr. Stamford and Mr. B. Rix, both of Tunbridge Wells, were nominated as members of the Association and of the Branch.

Dinner took place subsequently at the Sussex, seventeen members and visitors sitting down under the presidency of Mr. Marsack.

The next meeting will be held at Brighton in November, Dr. W. WITHERS MOORE in the Chair. An early notice of intended communications is requested by the Secretary.

CORRESPONDENCE.

DR. WILKS'S ADDRESS IN MEDICINE.

SIR,—I observe in your JOURNAL for August 31st a letter signed "Laudator Temporis Acti". Any writer who considered it necessary to assume such a title, after reading my address, would feel himself at the same time bound to put himself in antagonism with every doctrine and opinion which had fallen from my lips. Having put on this captious spirit, he would snap at everything I had said, feeling, as he candidly states, inimical to the whole tone of the lecture. Your readers, of course, can judge for themselves, without being prompted either by me or by him. I should, therefore, have made no reply, had not your correspondent referred to a statement of mine which facts can verify or not. I had said that it was a rare thing to find disease in those who had died of fever and other specific affections, and that it was the healthy who were attacked by epidemic disorders. He expresses astonishment how any intelligent physician could make such a statement, and asks whether those exposed to bad air, food, etc., do not suffer most. This is an example of the writer's method of reply. My proposition was a clear and distinct one: that persons suffering from tangible and known diseases did not suffer, whereas those who in common parlance are called healthy were attacked. In every community there is a certain proportion of persons suffering from well known diseases; and there are a number of others who, although occupied with the ordinary affairs of life, yet are the subjects of incipient phthisis, liver or kidney disease. Are such persons selected for the attacks of epidemic disease, or the healthy? I have asserted the latter; and, as this has greatly astonished your correspondent, I presume he holds the contrary opinion. I beg leave to maintain my proposition, and shall hold it until I have reason to discard it, from the evidence of those who have had charge of fever and cholera hospitals, or had much practice during epidemics of scarlet fever or small-pox.

I am, etc., SAMUEL WILKS.

Grosvenor Street, September 23rd, 1872.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, September 26th, 1872.

Clark, Frederick Cheesman, Croydon
Shaw, Josephus, Lees, near Manchester
Martin, John, West Bromwich
Whitaker, James Sealy, Hampstead Road

The following gentlemen also on the same day passed their primary professional examination.

Barnard, Charles Edward, Guy's Hospital
Churchward, Albert, Guy's Hospital
Medcalf, Ernest Sexton, Guy's Hospital
Robinson, Richard Edward, Leeds Hospital

At the Preliminary Examination in Arts, held at the Hall of the Society, on the 27th and 28th of September, 1872, 88 candidates presented themselves; of whom 34 were rejected, and the following 54 passed, and received certificates of proficiency in general education. In the First Class, in the order of merit.

1. Alfred Chawner. 2. Thomas Arthur Richardson and C. L. M. Taylor. 4. George Thornton Cape, William J. Cobbin, William Wood Cuthbert, and F. M. Sandwith. 8. W. S. Andrews, W. T. Jackman, Lawrence Mahony, Herbert J. K. Moberly, Frank Newcombe, and Sidney Skerman. 14. Owen Bowen, Richard Lyddon, Philip Stocks, and Frank John Wells.

In the Second Class, in alphabetical order.

Robert Aldous, John Battams, Robert C. Benington, Louis F. H. Birt, Sholto S. Bowles, James Brett, Robert Clapp, George Walker Collier, Thomas Archer Colt, Charles Percy Dean, Arthur Baird Douglas, Alexander W. W. Dowding, James Hay Dunlop, Samuel Henry Edgelow, Frederick Alexander Fletcher, John Chubb Ford, Frank Samuel Goulder, Edward M. Greensill, John Grimwood, William C. Haisne, Frederic Mortimer Hawkins, John Hollingworth, Robert Charles Hope, Samuel V. Instone, James James, Vincent Alexander Jones, Charles William Lacey, Walter Pye, Jesse W. Robey, Eugenius A. Roche, Charles Schön, Walter Sheppard, Joseph W. Sugden, John E. G. Sykes, William Henry Webb, John Cooper Wilkinson, and Benjamin F. Zimmerman.

MEDICAL VACANCIES.

THE following vacancies are announced:—

BATH UNION—Medical Officer for the Batheaston District: £40 per annum.
BEDWELLY, Monmouthshire—Medical Officer of Health: £125 for six months.
BELFORD HOSPITAL, Fort William, Inverness-shire—Resident Surgeon: £150 per annum, board and lodging.
BETHLEM HOSPITAL—Two Resident Medical Students.
BIRMINGHAM GENERAL DISPENSARY—Resident Surgeon: salary £130 increasing to £150 per annum, residence, coals, gas, and attendance.
BLACKBURN UNION, Lancashire—Medical Officer for the Billington District:
BOURNEMOUTH—Medical Officer to the Loyal Bourne Lodge of Odd Fellows. £15 per annum.
BRIDGWATER INFIRMARY—Dispenser: £40 per annum, board, lodging, and washing.
CLITHEROE UNION, Lancashire—Medical Officer for the Whalley District: £16 per annum.
DEVON AND EXETER HOSPITAL—Dispenser: £100 per annum.
DOWNPATRICK DISTRICT LUNATIC ASYLUM—Assistant Medical Officer.
GLANFORD BRIGG UNION, Lincolnshire—Medical Officer for the Burton Stather District: £38 per annum.
GLASGOW ROYAL INFIRMARY—Extra Physician to the Dispensary.
GLENTIES UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Doochary Dispensary District: £100 per annum and fees.
HENDON UNION, Middlesex—Medical Officer for the Harrow District: £90 per annum.
HENLEY UNION—Medical Officer and Public Vaccinator for the Nettlebed District: £80 per annum, and extra fees.
HOSPITAL FOR DISEASES OF THE THROAT—Assistant-Surgeon.
HOSPITAL FOR WOMEN, Soho Square—House-Physician.
HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square—Consulting-Physician.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Hon. Surgeon.
ST. AUSTELL UNION, Cornwall—Medical Officer and Public Vaccinator for District No. 2: £25 per annum and fees.—Medical Officer and Public Vaccinator for District No. 7: £30 per annum and fees.
ST. GEORGE, Hanover Square—Medical Officer of Health: £350 per annum.
TENTERDEN UNION, Kent—Medical Officer for the Biddenden District: £40 per annum.—Medical Officer for the Halden District: £15: 15 per annum.
TIVERTON INFIRMARY AND DISPENSARY—Four Medical Officers
TRINITY COLLEGE, Dublin—Professor of Anatomy and Chirurgery: £200 per annum, and fees.
TULLAMORE UNION, King's County—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Clara Dispensary District: £100 per annum, and fees.
UNIVERSITY COLLEGE HOSPITAL—Assistant-Physician.—Assistant Surgeon.—Assistant Medical Officer in the Skin Department.
WESTON-SUPER-MARE HOSPITAL and DISPENSARY—House-Surgeon.
WHALLEY, Lancashire—Certifying Factory Surgeon.

PENNY BATHS.—A good movement has been, says the *London Mirror*, begun by the Westminster Commissioners of Baths and Washhouses. It has been decided to issue penny tickets, in quantities of not less than fifty, to charitable persons for distribution to such poor persons who may be disposed to avail themselves of these tickets.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY .....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. W. B. Dalby, "On Non-purulent Catarrh of the Middle Ear;" Dr. Tracy (of Melbourne), "On Ovarian Dropsy, operated on during an Attack of Acute Peritonitis."

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Southey, "A Case of Acute Rheumatism with moderately high Temperature and Cerebral Symptoms, treated successfully by Cold Affusions;" and other papers.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

THE abstracts of Charing Cross Hospital, St. Mary's Hospital, and several provincial school addresses, arrived too late for insertion this week.

DR. LITTLETON'S letter shall appear next week.

DR. MACLEAN (Applecross).—Thanks. Duly received; and shall be used, if possible.

DR. RANSOME (Bowden), Dr. Bryan (Northampton), Mr. Whitehead (Manchester), and Dr. Wiltshire (London).—Very early.

AT the close of the course of Three Lectures on the Connection between the Chemical Properties and the Physiological Action of Active Substances, by Dr. Thomas R. Fraser, of Edinburgh, the publication of which we commence this week, will be published the Lumleian Lectures on Diseases of the Walls of the Heart, by Dr. Quain, F.R.S.

GROANS FROM A PUBLIC VACCINATOR.

SIR,—Can you inform the public vaccinators of this country how it is that the intentions and enactments of Parliament are not carried out towards those hardly used public servants, as regards the distribution of the gratuity for successful vaccination? Is it due to the Liberal Government? or has red tapeism fast bound Mr. Simon and Dr. Seaton? The whole matter appears to be in a most unsettled condition. Whatever as yet appears to have been done, is very unsatisfactory, fitful and irregular in character, without system or any regard to results. I think I am not going beyond the mark, when I say that I do not believe a single public vaccinator in England has had his just due. Either the Minute in Council and the Parliamentary Statute meant the public vaccinator to be paid for all good successful cases, or it meant nothing. I am, etc.

September 1872. A PUBLIC VACCINATOR.

*** We doubt the advantage of this exaggerated form of complaint; but it appears very desirable that the codified rules under which vaccinators can earn gratuities, should be printed and published.

DEGREES BY EXAMINATION WITHOUT RESIDENCE.

SIR,—Now that the Editors of the *Medical Directory* have consented to allow foreign degrees, obtained honourably, to appear in their next issue, I feel sure that many very deserving medical practitioners in England would wish to avail themselves of the privilege. They would be conferring a great favour on me and others if they would kindly inform us where such degrees can be obtained after good examinations, but without residence. I am, etc.,

Twyning, September 30th, 1872. NEMO.

LIFE ASSURANCE.—Would any of your numerous correspondents inform me whether it is usual for Life Assurance Companies to charge an extra rate for medical students generally? LEX.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

MR. WORTH'S letter arrived too late for this week; but shall appear next week.

MEDICAL ETIQUETTE.

SIR,—As one of the "individuals" mentioned by Mr. Parker in his letter, which appeared in the JOURNAL of September 28th, I beg to contradict the statement made by him, that Mr. Fothergill, in putting up the fracture, did not make extension, or offer to adjust the fractured pieces. Mr. Fothergill made "extension" while I made "counter-extension". I have further to say that Mrs Dodds and Mrs. Shanks both deny having asked Mr. Parker to take the case, as stated by him in his letter.

I beg to corroborate the statement made by Mr. E. E. Campbell in his letter, which appeared in the JOURNAL of September 21st.

I am, etc.,, SAMUEL F. McLACHLAN.

South Hetton, September 30th, 1872.

SIR,—When I read Mr. A. J. E. Parker's letter in answer to Dr. Edward E. Campbell's of the preceding week, entitled "Medical Etiquette in the County of Durham", I can say that I was truly appalled by the flagrant perversion of facts and gross misstatements by which Mr. Parker, of Easington Lane, has therein endeavoured to vindicate his professional character. As I am the person mostly aggrieved by the unprofessional conduct of Mr. Parker, and as correctly set forth by Dr. Edward E. Campbell in his letter in your JOURNAL of the 21st September, allow me to add my quota of information in the case.

When I arrived at the patient's house, I already found Mr. Campbell and Mr. McLachlan (both the latter gentlemen assistants to Mr. Broadbent, of South Hetton) doing all I considered skilful and proper in attending to the lacerated wounds of the face. I then advanced to the bedside, and made myself known to Mr. Campbell; and he, knowing that I was sent for as Mr. Broadbent's representative, courteously made way for me to conduct an examination of the nature of the injuries sustained by the poor fellow. At this juncture, a person whom I had rapidly noticed as having been rather fussy in his demeanour at the bottom of the bed on which the patient lay, stepped forward, and ushered himself to our notice by the observation that he was the "family doctor" (and it was explained to me that he was "Dr. Parker" of Easington Lane), and at the same time offered some remarks about the degree of fracture of the nasal, maxillary, and other bones of the face. I then took a full-sized silver probe, and not a "fine steel-wire probe", as misstated by Mr. Parker, to examine the nasal cavities for the extent of injury to the osseous portions. I simply deny that I said, as again *misstated* by Mr. Parker, that it was "impossible to say what bones were injured"—as I presume a mere tyro in anatomy would be acquainted with this part of the osseous system, and a very slight knowledge of surgery indeed would suffice to diagnose fracture. I certainly did observe it was impossible as yet to tell whether the fractures would implicate the ethmoid. These injuries were caused by an explosion of steam driving a piston-rod, with considerable force, directly on the man; and you may imagine that the injured bones were of a comminuted character. And again, with regard to another misstatement of the author of this untruthful defence of himself, he would impress the readers of your estimable JOURNAL that he rectified the position of the nasal bones, by means of a director, with remarkable celerity and dexterity, and that he alone of the four medical men present accomplished this feat of surgery. Now, Mr. Editor, allow me to remark that the nasal bones were so much comminuted, and there was such a degree of tumefaction of the soft parts, that it was a *physical impossibility* to place even a few of the many fragments in juxtaposition with the back of a director, that he only introduced for the purpose of exploration; and I emphatically deny that he used sufficient manipulation to rectify the position of the broken nasal bones, and, as he would imply, "elevating the nasal bones so as to keep the symmetry of the face." And keep this in remembrance: the whole face was a mass of lacerated wounds and contusions, with comminuted fracture of the nasal bones, vomer, and upper maxilla. Before concluding the explanation of this part of the subject, I may mention that, in the exploration of the nasal cavities that I made, that I, as far as practical, with the assistance of Dr. Campbell, endeavoured to restore the symmetry of the nasal organ, but, of course, without a very satisfactory result, as the bones entering into its formation were little better than *pulp*. So much for Mr. Parker's version of the easy reduction by himself of comminuted nasal bones.

After ascertaining that Mr. Parker was a surgeon, I asked Dr. Campbell and he to meet me in consultation outside the house, that appearing to me to be the only convenient place for this purpose—at this time, Mr. McLachlan had gone to Mr. Broadbent's surgery for splints. After holding this consultation, I fully expected that Mr. Parker would now conduct himself with propriety. But, anon, after discussing the case in an apparently amicable manner, we all returned to the patient's house, and I commenced operations for the reduction of the fractured humerus. Mr. Parker, in his epistle, says that "he got this *young man* Campbell"—who, by the way, is a very tall, manly, and gentlemanly looking member of the profession, and also qualified—(to save time) to bandage the arm, whilst I was preparing the necessary splints; and he further proceeds to misstate that, in the reduction of the fractured arm, I never used the "least extension, or offered to adjust the fractured bones." This, sir, is simply *libellous;* and a greater untruth told by one surgeon to the detriment of another it was never my previous misfortune to hear of. For Dr. Campbell held the scapula, clavicle, and upper fragment in a skilful and surgical manner; he also assisted myself, with Mr. McLachlan, in using the necessary counterextension, whilst I manipulated the fragments into proper position. And, again, Mr. Parker states a most palpable falsehood when he would like the readers of the BRITISH MEDICAL JOURNAL to believe that the distortion was so great as to resemble half of the "letter S"; whereas there was little distortion, and the fracture was reduced with the greatest ease, much to the comfort of the patient, although, no doubt, the latter's feelings would not be soothed by the conduct and observations of Mr. Parker, the "family doctor".

And now with reference to the bandaging. Whilst adjusting well padded splints to the arm, I was much astonished by Mr. Parker, in the presence of a roomful of people, persisting in exclaiming that I was acting like a "bone-setter", and that I should carry the bandage from the bend of the elbow *under* the splints to the shoulder. I was so much horror-stricken with the unbecoming behaviour of Mr. Parker, that I was to a great extent dumbfounded, and could only answer him that I had treated numerous fractures with great success in that manner only; and that, as a M.R.C.S. of England. I ought to be able to understand the simple operation of reducing a fracture of the arm. At this, he became more declamatory furious than before; and I did really at that moment think that Mr. Parker had lost command of his reason. He still persisted in having the bandage underneath the splints, and gesticulating and shouting to the numerous spectators around the bed that I knew nothing of putting up bones, and that I was acting no better than a bone-setter. These are the true facts of the case; and they can be verified by Mr. Campbell, Mr. McLachlan, myself, and others worthy of credence that were present at this extraordinary scene. I was so thoroughly disgusted with Dr. Parker, that I intended to treat this unexampled conduct with the silent contempt it deserves; but Dr. Campbell was determined to make the matter public, and therefore indited his letter which appeared in your JOURNAL of the 21st September, and which is perfectly correct and truthful in all its details.

I forgot to mention that both Messrs. Campbell and McLachlan remonstrated with Mr. Parker whilst acting in this unprofessional and ungentlemanly manner; but this did not have the effect of calming the excitement that Mr. Parker was displaying, but, on the contrary, appeared to me to produce the very opposite effect.

After seeing to the safety and comfort of the patient, I left, leaving the case for Mr. Broadbent, who shortly after (in the course of an hour) arrived home, and undertook the care of the patient. I need not say that Mr. Broadbent was as much astonished as myself, although he intimated that Mr. Parker's ideas of medical ethics were unsound. And in this vindication of my surgical treatment of the case, I beg to suggest that the mode I adopted appeared to be the moft suitable and the most adapted to the circumstanres. In the first place, I expected that a good deal of swelling would take place in the contused and broken limb; and, in the next place, I deemed it expedient to get the swelling down by cooling lotions, before permanently putting up the fracture in tighter bandages and splints. I hinted to Mr. Parker that osseous union would not begin to take place for ten or twelve days, and really I thought he required this hint; for, from his declamatory observations addressed to the patient's friends, he led me to suppose that they might expect to see the fractured bone knit and become consolidated there and then by magic. This is the explanation respecting putting the fracture up temporarily, etc., as untruthfully stated in Mr. Parker's wonderful epistolary defence of his extraordinary behaviour. If Mr. Parker had apologised to me, instead of answering Dr. Campbell's letter in the manner he has thought fit to adopt, I would have remained quiescent in the matter; but after the offensive manner in which he wishes to defame my character as a surgeon, and the wilful and flagrant abuse of his pen in perverting the facts of the case as truthfully depicted in the first instance by Dr. Campbell in his letter of the 21st September, and by myself now, I hope and trust you will give publicity to this letter.

In conclusion, I have only to assert that the whole of Mr. Parker's letter in your JOURNAL of last week is a tissue of fabrications and falsehoods from beginning to end, and a perversion of the whole facts of the case. I understand from Mr. Broadbent the patient has done well, and is convalescent; and that the arm that was fractured is a credit to surgical skill.

I must apologise for this lengthened letter; but I think, sir, you will agree with me that Mr. Parker's communication to the JOURNAL of last week required some explanation on my part. I am, etc.,

SMART A. FOTHERGILL, M.R.C.S.Eng., L.R.C.P.Edin., Surgeon to the Haswell, Shotton, and Easington Coal and Coke Company.

Haswell, September 30th, 1872.

STUDENS desires to suggest the following as subjects for the next Hastings Prize Essay, on the ground that their further elucidation is much to be desired. 1. Medical Ophthalmoscopy; 2. Injuries and Surgical Diseases of the Spine and Cord; 3. Scrofula.

WE are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Liverpool Weekly Albion, S 8th; The Manchester Guardian, Oct. 2nd; The Bath Express, Sept. 28th; The North British Advertiser, Sept. 28th; Saunders's News-Letter and Daily Advertiser, Oct. 1st; The Jersey Express, Sept. 26th: The Homeward Mail, Sept. 25th; The Tewkesbury Record, Sept. 28th; The Aberdeen Daily Free Press, Sept. 27th; The Cambridge Express, Sept. 28th; The Elgin Courier, Sept. 26th; The Yorkshire Post, Oct. 2nd; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Fraser, Edinburgh; Mr. A. Haviland, London; Dr. C. Maclean, Applecross; Dr. Wilks, London; Dr. F. J. Brown, Rochester; Mr. Lydell, London; Dr. Wiltshire, London; Mr. Smith, Coxwold; Mr. F. Greenwood, Leeds; Mr. Robinson, Leeds; Dr. Handyside, Edinburgh; Dr. Arthur Sansom, London; Dr. Coughtrey, Liverpool; Mr. Jessop, Leeds; Mr. Curnow, London; Mr. Walter Rivington, London; Dr. H. Thompson, London; Dr. Parsons, Dover; Mr. J. H. Clarke, Sheffield; Dr. Morris, Spalding; Mr. Clark, Glasgow; Mr. W. H. Bennett, London; Dr. Bryan, Northampton; Messrs. Evans and Son; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. R. H. Wickham, Newcastle upon-Tyne; Our Dublin Correspondent; Mr. Edmund Owen, London; Dr. Joubert; M.R.C.S,; Dr. Ransome, Manchester; Mr. G. C. Searle, Tewkesbury; Mr. McLachlan, South Hetton; Dr. Webb, Wirksworth; Dr, Shrimpton, London; Mr. Fothergill, Haswell; Mr. R. W. Edginton, Birmingham; Mr. Stevens, Plymouth; Mr. Whitwell, Shrewsbury; Mr. Kenyon, Billingborough; Studens; Dr. J. Crichton Browne, Wakefield; Sir John Rose Cormack, Paris; Dr. Littleton, Plymouth; Dr. Griffiths, Dublin; Mr. Metcalfe Johnson, Lancaster; Dr. G. M. Humphry, Cambridge; Mr. Edwin Force, Exeter; Mr. J. W. Langmore, London; An Associate; Mr. Jonathan Hutchinson, London; Dr. Robert Lee, London: Our Edinburgh Correspondent; Mr. Richard Davy, London; Mr. S. Messenger Bradley, Manchester; Mr. E. Lund, Manchester; Dr. J. W. Black, London; Mr. Lawson Tait, Birmingham; Dr. G. H. Philipson, Newcastle-upon-Tyne; Mr. Evan Williams, Llangefni'; Dr. Lanchester, Croydon; Mr. J. Bassett, Birmingham; Dr. Thomas Jones, London; Mr. J. S. Turner, London; Mr. H. R. Reeves, London; Dr. Stewart, Belfast; Mr. Croft, London; Dr. Heaton, Leeds; Mr. Morton, Sheffield; Mr. Groves, London; Mr. Bracey, Birmingham; Mr. Worth, Nottingham; Dr. Young, Malton; etc.

LECTURES

ON

THE CONNECTION BETWEEN THE CHEMICAL PROPERTIES AND THE PHYSIOLOGICAL ACTION OF ACTIVE SUBSTANCES.

Delivered before the Royal College of Physicians, Edinburgh.

BY

THOMAS R. FRASER, M.D., F.R.S.E., F.R.C.P.E.

LECTURE I.—(*Concluded.*)

Chemical Constitution and Physiological Action.—The chemical properties of substances, however, depend not only on their *composition*, but also on their *constitution*. I have already said that the chemical constitution of a substance is the mode in which its constituents are arranged or united together. The difference between composition and constitution may be explained by a reference to such substances as the compound ethers. They are formed by the action of an acid on an alcohol, and may be so decomposed as to yield again the alcohol and acid from which they were produced. Now, common alcohol ($C^2 H^6 O$) and valerianic acid ($C^5 H^{10} O^2$) have together the same composition as amylic alcohol ($C^5 H^{12} O$) and acetic acid ($C^2 H^4 O^2$) together. The combination of each of these two pairs of substances gives rise to a compound ether of identically the same composition, but differing in properties; and each of these compound ethers can be decomposed so as to yield the pair of substances from which it was produced. Thus,

$$\underset{\text{Common alcohol.}}{C^2 H^6 O} + \underset{\text{Valerianic acid.}}{C^5 H^{10} O^2} = H^2 O + C^7 H^{14} O^2$$

$$\underset{\text{Amylic alcohol.}}{C^5 H^{12} O} + \underset{\text{Acetic acid.}}{C^2 H^4 O^2} = H^2 O + C^7 H^{14} O^2$$

The one ether obviously differs from the other in the manner in which the constituents are united together; that is to say, in its constitution.

It appears, therefore, that substances may possess physical, chemical, and physiological properties that do not depend on their special composition. This independence of composition and property is also met with among inorganic substances. Some elements form only one series of compounds—as zinc with its single oxide, chloride, and sulphate. Other elements form more than one series—as iron with its proto- and per-salts, arsenic with its arsenites and arsenates, and sulphur with its sulphides, sulphites, and sulphates; and distinct physical and chemical properties are possessed by each individual series. In the examples which I have last mentioned, the investigation of the physiological action of the compounds belonging to any special series is a matter of considerable difficulty. Where varieties of constitution exist, the compounds of the less stable varieties readily undergo decomposition, and assume that constitution which possesses the greatest stability. Thus the proto-salts of iron easily change their constitution, and become converted into per-salts; and arsenates become reduced to arsenites. That changes of constitution also occur in the body, has been rendered certain by numerous observations, and more especially by those of Rabuteau, who has shown that, when introduced into the system, bromates become changed to bromides, iodates to iodides, and sulphites and hyposulphites to sulphates: in fact, that towards these substances the organism acts as a reducing agent. Hence, there is an absence of definite knowledge regarding the action of more than one series of the compounds of the elementary bodies.

Among the organic compounds, however, a large class of substances may have their constitution modified in such a manner that a change to the original or any other form is effected only with the greatest difficulty. The substances to which I refer are the natural alkaloids. Their constitution is not fully known; but it is sufficiently known to prove it to be of the same type as that of ammonia, and to show that they resemble that substance in containing triatomic nitrogen. Thus, ammonia = $N\left\{\begin{matrix}H\\H\\H\end{matrix}\right.$; strychnia = $N \Subset (C^{21} H^{22} NO^2)'''$. Like ammonia, also, they are converted by union with acids into salts having a different constitution—a constitution in which the nitrogen, in place of being triatomic, becomes pentatomic. For instance, in the formation of hydrochlorate of strychnia, the originally triatomic nitrogen takes up chlorine and hydrogen, and becomes pentatomic $N\left\{\begin{matrix}(C^{21} H^{22} NO^2)'''\\H\\Cl\end{matrix}\right.$, united by three bonds to carbon, by one to hydrogen, and by one to chlorine; just as the triatomic nitrogen of ammonia unites itself by two additional bonds to chlorine and hydrogen, and so becomes pentatomic in hydrochlorate of ammonia $N\left\{\begin{matrix}H\\H\\H\\H\\Cl\end{matrix}\right.$. But, by this change, hydrochlorate of strychnia is not rendered permanently or stably pentatomic; it easily loses the chlorine and hydrogen which it has acquired, and returns to the triatomic state. The action of alkalies, or, in many cases, even of alkaline carbonates, is sufficient to effect this, and to set free the alkaloid. It is obvious, therefore, that the change of constitution effected by the addition of an acid does not permit us to discover the corresponding change in physiological action. But if, instead of an acid, we make use of such a substance as iodide of methyl, we find that, while the triatomic nitrogen takes up methyl ($C H^3$) and iodine, and becomes pentatomic (just as in the former case it took up hydrogen and chlorine), it does not lose these newly acquired atoms when treated with alkalies, but remains pentatomic even when subjected to attacks more violent than any to which it could be exposed in the system.

I have alluded to the type of the natural alkaloids being that of ammonia, but certain varieties of constitution are met with, to which I would now draw your attention. In ammonia, the nitrogen is united to three equivalents of hydrogen. Now, one or two or three of these equivalents may be replaced by one or more radicals, and in this way we have amine, imine, and nitrile bases. Thus, one equivalent of hydrogen is replaced by $C H^3$ in the amine base, methylamia, $N\left\{\begin{matrix}(CH^3)'\\H\\H\end{matrix}\right.$; two equivalents by the diatomic radical $(C^8 H^{14})''$, in the imine base, normal conia, $N\left\{\begin{matrix}(C^8 H^{14})''\\H\end{matrix}\right.$; and three equivalents, by the same diatomic radical, and by $C H^3$, in the nitrile base, methyl-conia, $N\left\{\begin{matrix}(C^8 H^{14})''\\C H^3\end{matrix}\right.$, or, to take another example of a nitrile base, by one equivalent of the triatomic radical $(C^{21} H^{22} N O^2)'''$, in strychnia, $N \Subset (C^{21} H^{22} N O^2)'''$. These various bases are distinguished from the bases derived from them in which nitrogen is stably pentatomic (called ammonium bases) by certain chemical characters common to them all. Their salts, for instance, are decomposed by caustic potash, so that the base is set free, and water and a salt of potassium formed; and a similar effect is produced by moist oxide of silver. The salts of the ammonium bases, however, are not acted upon by caustic potash, and, when treated with moist oxide of silver, a hydrated oxide of the ammonium base (in which nitrogen remains pentatomic) is formed, and the acid unites with the silver.

The powerful decomposition action which caustic potash is able to exert does not, therefore, change the chemical constitution of these ammonium bases. It, indeed, has no effect upon their salts; and even when these salts are treated with moist oxide of silver the characteristic pentatomicity of their nitrogen is retained. In the living body, they cannot possibly be subjected to the influence of such powerfully decomposing agents; and hence, by studying their action, and comparing it with that of the nitrile or other base from which they are derived, the relationship between physiological action and a certain form of chemical constitution may be discovered.

It was owing to this consideration that Dr. Crum Brown and I resolved to examine the action of a number of the ammonium bases derived from the vegetable alkaloids. Our experiments were made with the methyl, and, in a few instances, the ethyl, derivatives of strychnia, brucia, thebaia, codeia, morphia, nicotia, atropia, and conia, and more especially with their iodides and sulphates.

The results that we obtained may, perhaps, be best illustrated by describing, with a little detail, several of our experiments with iodide and sulphate of methyl-strychnium.

It is well known that strychnia acts on the living economy in a distinctly defined and characteristic manner, and that it is one of the most active of poisons. When administered subcutaneously, doses varying from one-twentieth to one-fiftieth of a grain produced in rabbits the most violent tetanic convulsions, and in a few minutes killed the animal. Few poisons have been more carefully studied, and it is now almost undoubtedly established that the phenomena produced by strychnia are due to a localisation of its action on the spinal cord.

The effects of iodide of methyl-strychnium were first examined by subcutaneous injection. It was administered as a fine powder suspended in warm distilled water, in which menstruum it is but sparingly soluble, though more so than in water at the ordinary temperature. In this way, by a series of progressively increasing doses, it was found

that as much as twelve grains could be given to a rabbit, weighing three pounds, without any effect whatever. Fifteen grains, however, produced serious symptoms, though followed by recovery; and death was caused by the administration of twenty grains. In none of our experiments, not even in the fatal cases, were the symptoms those of strychnia-poisoning; no starts nor spasms occurred, nor did stimulation give evidence of the slightest increase of reflex activity. In fact, a condition exactly the reverse of that produced by strychnia was caused by iodide of methyl-strychnium. In place of violent spasmodic convulsions and muscular rigidity, the appearances were those of paralysis with a perfectly flaccid condition of all the muscles. The limbs of the animal first yielded; its head gradually sank until it rested on the floor; by-and-by, it lay in a perfectly relaxed condition; and when death occurred, it was due to stoppage of the respiratory movements. In the necropsies, further evidence was obtained to distinguish the effects of iodide of methyl-strychnium from those of strychnia. The heart was found acting with nearly its normal rapidity; the spinal motor nerves were either paralysed, or nearly so; and, in place of the early or almost immediate occurrence of rigor mortis that follows the action of strychnia, the muscles continued flaccid, contractile, and alkaline for many hours.

The effects of internal administration were examined by passing a gum-elastic catheter down the œsophagus of a rabbit, and so injecting iodide of methyl-strychnium, suspended and dissolved in warm distilled water. It is unnecessary to give any description of these experiments, as no effect was produced by this method of administration, although as much as thirty grains was given at one time; and it was inconvenient, as well as unnecessary, to give larger doses. It is well known that to produce symptoms with a poison in a rabbit, a much larger quantity is required when the poison is administered by the stomach than when it is injected subcutaneously. The contrast between the activity of iodide of methyl-strychnium and strychnia itself was, however, well shown in the rabbit to which thirty grains of the former had been given without any effect; for one-tenth of a grain of strychnia, also administered by the stomach, quickly produced violent tetanic convulsions, and in a few minutes killed the animal.

As the sulphate of methyl-strychnium is a very soluble salt, we anticipated that it would act with much greater activity than the iodide, and our experiments confirmed this anticipation. One grain dissolved in water and injected under the skin of a rabbit caused its death in eighteen minutes. Half a grain, however, produced no marked effect. When eight-tenths of a grain were similarly administered, symptoms of a most serious character were produced, but death did not result. Some days afterwards, one-twentieth of a grain of strychnia, dissolved in very dilute sulphuric acid, was administered to this rabbit by subcutaneous injection; and it produced symptoms of strychnia action, followed by death fifteen minutes after the injection. Eight-tenths of a grain of sulphate of methyl-strychnium contain about six-tenths of a grain of strychnia: the effect of converting this nitrile base into an ammonium base by adding to it sulphate of methyl had been, therefore, to reduce its poisonous activity at least twelve times.

The symptoms that are produced by sulphate of methyl-strychnium are the same as those produced by the corresponding iodide. The very short account I have given of the symptoms and *post mortem* appearances that occur after the administration of iodide of methyl-strychnium is sufficient to suggest a close resemblance between its action and that of curara (wourali)—a resemblance, indeed, which had previously been pointed out by Professor Schroff, of Vienna. Both substances undoubtedly produce a condition of general paralysis, but the special characteristic of curara-poisoning is that this paralysis results from an impairment or destruction of the function of the peripheral terminations of the motor nerves. It is impossible to demonstrate such an action without undertaking experiments of a special character. Dr. Brown and I accordingly extended our research for the purpose of studying the exact causation of this paralysis. Among other experiments, we made the following. The sciatic artery and veins were tied above the knee of a frog, and a small dose of sulphate of methyl-strychnium, dissolved in water, was injected under the skin at the back. Eight minutes afterwards, the frog was lying in a perfectly flaccid state; and, in ten minutes, irritation of any portion of the skin produced energetic movements of the tied limb below the point of ligature, but nowhere else. The sciatic nerve of the untied limb was now exposed, and on stimulating it with a weak, interrupted, galvanic current, movement occurred in the tied limb only; not the slightest movement occurred in any part to which the poison had access. At the same time, the muscles were everywhere active, and freely contracted when directly stimulated. The sciatic nerve was then exposed in the tied limb, above the points of ligature, and on stimulating it energetic movements occurred below the knee of that limb, and there only. The heart at this time was acting at the rate of 50 per minute.

This experiment was frequently repeated—on several occasions the iodide having been substituted for the sulphate—and the same general results were obtained. The evidence that was thus acquired in favour of an action on the peripheral terminations of the motor nerves, was strengthened by a modification of the experiment.

The right gastrocnemius muscle of a frog was carefully dissected from its connections; excepting that its origin and insertion, and the nerves entering it, were uninjured, and that all its blood-vessels were ligatured. A small dose of sulphate of methyl-strychnium, in solution, was then injected under the skin of the back; twenty minutes afterwards, the animal being in a perfectly motionless and flaccid condition, the two sciatic nerves were exposed. Galvanism of the left produced no movement of the left limb, while galvanism of the right produced energetic movements of the right limb, which were seen to be due solely to contractions of the right gastrocnemius muscle, the other muscles remaining motionless. At the same time, direct stimulation caused contractions as freely in the poisoned muscles as in the non-poisoned right gastrocnemius.

In experiments where iodide of methyl-strychnium was substituted for sulphate, the results were the same. The methyl derivatives of strychnia, therefore, produce paralysis and death, by destroying the function of the peripheral terminations of the spinal motor nerves. Accordingly, their mode of action is identical with that of curara. This result is an extremely curious and interesting one. It is difficult to imagine a more decided modification in the action of any substance than is produced by the change of chemical constitution resulting from the addition of iodide or sulphate of methyl to strychnia. The striking characteristic of the action of strychnia is the great and uncontrollable activity of the muscular system; that of curara, of iodide and sulphate of methyl-strychnium, and, as we also found, of other similarly modified alkaloids, is the flaccid and motionless condition caused by the impossibility of exciting muscular action through the nervous system. So opposite are their effects, that many physiologists look upon curara as a powerful counter-agent to strychnia, while physicians have employed it in the treatment of strychnia-poisoning and of tetanus. It is certainly remarkable that so thorough a change of physiological action should be produced by this simple change of chemical condition.

The other vegetable alkaloids examined, all possess, though in varying degrees, the same peculiar spinal-stimulant action as strychnia. Brucia and thebaia exert this action with great energy; codeia and morphia with somewhat less power; and nicotia, atropia, and methyl-conia, in a still slighter degree, though quite obviously. The result of the combination of each of them with a salt of methyl is, as in the case of strychnia, to change their chemical constitution from that of nitrile bases with triatomic nitrogen, to stable ammonium bases with pentatomic nitrogen; and the change of physiological action following this change of chemical constitution having been found to consist of a removal of spinal-stimulant action, and addition of paralysing action restricted to the terminations of the motor nerves, it is unnecessary to give any further details of the results of our experiments. The important general fact which they indicate is, that a change of chemical constitution, even when it is of a simple kind, may produce a very essential change in physiological action; and, although they are perhaps as yet insufficient to warrant any positive assertion, they render it extremely probable that all the stable ammonium bases have a curara-like action. Every such compound that has as yet been examined has been found to possess this action. To the list of those which I have mentioned may be added chloride of oxethyl-strychnium—recently studied by Dr. Vaillant—and iodide of tetra-ethyl-phosphonium—which has formed the subject of a careful investigation by Dr. Vulpian—both salts of ammonium bases, and both found to possess a powerful action on the terminations of the motor nerves.

I am anxious, however, to guard against conveying the impression that the compounds of pentad nitrogen act simply as nerve-paralysers: their action is not necessarily restricted to these structures. In several cases it is, no doubt, so restricted; and notable examples of this are found in the salts of methyl-strychnium, methyl-brucium, and methyl-thebaium, whose nitrile bases have probably no other decided action than a spinal-stimulant one. In those cases, however, in which the salts of ammonium bases are derived from alkaloids that produce complicated effects, a restriction of action to the terminations of the motor nerves does not occur. The original actions of the alkaloid, excepting the spinal-stimulant one, are retained by the salts of its ammonium base; and thus the salts of methyl-atropium not only act like curara, but they likewise paralyse the cardiac inhibitory fibres of the vagi and dilate the pupils, while the salts of dimethyl-conium retain the paralysing action on the vagi that is possessed by conia itself.

In considering how these various facts bear upon the connection between chemical constitution and physiological action, it is no doubt essential to remember that a change of composition as well as of constitution has been produced by the conversion of the nitrile into the ammonium bases. In the substances examined by Dr. Brown and myself, the composition of the original alkaloids was changed by adding to them a salt of methyl. Are, then, the subsequent changes of physiological effects produced by the action of the added salt of methyl? This hypothesis is so improbable as scarcely to deserve consideration. It is opposed by the experiments made with iodide of tetra-ethyl-phosphonium, to which I have already alluded; for this, also, is the salt of an ammonium base, which, however, differs greatly in composition from any of the substances examined by Dr. Brown and myself, although it exerts the same physiological action. It is opposed, also, by the results of experiments with conia and its derivatives; for the hydrochlorate of the nitrile base (methyl-conia), formed by the addition of hydrochlorate of methyl to the imine base (normal conia), exerts, notwithstanding this addition of methyl, a more marked spinal-stimulant action than normal conia, into whose composition methyl does not enter; while the salts of the ammonium base di-methyl-conium have a prominent curara action, and no spinal-stimulant action whatever. Besides, the action of iodide of methyl itself does not give the least support to this idea—for its effects are those of a powerfully irritating substance, and its action, even when induced by subcutaneous injection, results in inflammation of the bronchial mucous membrane and conia, and not in paralysis of motor nerves.

It might also be asked, if the processes by which these ammonium bases are prepared do not so profoundly modify the chemical nature of the alkaloids from which they are derived, that no actual relationship exists between the new substances and their original sources; that, for example, sulphate of methyl-strychnium, though derived from strychnia, is in no special manner related to sulphate of strychnia—the elements of the latter substance having been so disarranged in its conversion into the former, that the strychnia has been altogether destroyed. It is, I think, a sufficient answer to this conjecture to point out that the ordinary colour reactions of the alkaloids are retained by their methyl derivatives.

Gentlemen, the various facts which, in a somewhat discursive manner, I have now brought before you, confirm the opinion that chemical composition bears some relation to the physiological action of active substances, and they also prove that this relationship is to an important extent due to the arrangement of the atoms in the substance. They appear, likewise, to point to the conclusion that physiological action is often, if not always, the result of a chemical reaction between the foreign body and certain of the constituents of the vital structures whose action is modified by it. The results of investigation with such substances as carbonic oxide, show, indeed, that physiological action may be chiefly the result of chemical reactions. The effects of other substances have not been connected with chemical action in so direct a manner, but this is to a great extent explainable by the difficulties attending the demonstration of a connection of this kind. Although experimental research, in many cases, has discovered the exact histological elements which are acted upon, the chemical characters of these elements have not yet been sufficiently ascertained. We have no means of determining their normal conditions with the delicacy that is required, and we are, therefore, unable to investigate the chemical reactions that almost certainly accompany modifications of their normal physiological condition during the operation of active substances. Thus, although we know that the normal physiological condition of the terminations of motor nerves are modified by the salts of the ammonium bases derived from strychnia, brucia, thebaia, etc., and that this modification is produced by substances that have definite chemical properties, we cannot discover what chemical change is produced so long as we are ignorant of the special chemical properties possessed by these structures. The trustworthy observations of Kühne have shown that a recognisable change occurs in the physical characters of the nerve terminations—a change which renders their outlines more distinct; but we are unable to connect this change with any definite chemical reaction. In the course of time, reactions of a more delicate kind than any we yet possess will, no doubt, be discovered, not only for these structures, but likewise for each of the special structures on which the physiological action of active substances is localised. Physiological investigation has shown that one substance may chiefly exert its influence upon the cardiac inhibitory ganglia, another on the nerve-fibres intermediate between these ganglia and the ends of the vagi nerves, and another on these endings themselves. How are these localisations of action to be explained? There must undoubtedly be a difference between the chemical properties of each of the structures influenced. The discovery of the spectroscopic characters of hæmoglobin has greatly extended our knowledge of the action of such substances as carbonic oxide, by placing at our disposal a means of defining the chemical reactions that take place between it and the blood. In giving expression to the anticipation that similarly delicate tests of chemical reaction will yet be discovered for each of the special histological elements of the body, I do not think that we err by being too sanguine. Were such means of investigation at our disposal, it may safely be predicted that knowledge would be acquired of as perfect a kind as is indicated in the following quaint sentence, written by Locke: "Did we know the mechanical affections of the particles of rhubarb, hemlock, opium, and a man, as a watchmaker does those of a watch, whereby it performs its operations; and of a file, which, by rubbing on them, will alter the figure of any of the wheels, we should be able to tell beforehand that rhubarb will purge, hemlock kill, and opium make a man sleep." It is encouraging to find that even now we know of certain "affections of the particles" of active substances which enable us to tell beforehand that, wherever these affections occur, well defined and characteristic physiological effects will be produced.

CLINICAL LECTURES
ON
MENTAL AND CEREBRAL DISEASES.

By J. CRICHTON BROWNE, M.D., F.R.S.E.,
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III.—Simple Melancholia.

Gentlemen,—You will recollect that, at your last visit to the wards, I called your special attention to the case of Jane S., as being, in many respects, a typical example of a form of mental derangement about which I should have to speak to you to-day. You will remember that this woman was an inmate of Ward 25, to which she was admitted on the 31st of May last, just a fortnight ago, being returned as twenty-eight years of age, single, and a domestic servant, from Bradford. The history of the case, which I read to you, was as follows. Jane S. is a native of Scotland, but has been resident in Yorkshire for five years. Her mother's brother was once insane and an inmate of an asylum; but, with that exception, no member of her family has ever suffered from mental or nervous disease. The patient herself has had no serious illness nor cranial injury, and has always been of sober habits. On the 1st of May last, she gave birth to an illegitimate child. Her fall from virtue had preyed much upon her mind during her pregnancy; and the depression of spirits thus occasioned deepened considerably at the time of her confinement, when she was in poor lodgings and could not command liberal nourishment or careful nursing, and passed into morbid despondency three days after delivery, when the unexpected announcement of her father's death reached her. She at once formed the idea that her father (who was a very aged man, and really died in the course of nature) had been killed by the shame of her misfortune. She sank into a state of inconsolable grief, wept incessantly, was sleepless, and twice attempted to put an end to her existence and sorrow by jumping through the window. After this she refused all food, complained of insupportable misery and weakness, and repeatedly threatened suicide; so that, for her own protection, she was sent to this asylum. After reading this history, as you will recollect, I introduced you to the patient—a thin, pale, careworn-looking woman, whom you found seated in the day-room, with her head bowed down, and her hands crossed upon her lap, in an attitude of listless dejection. Her features were fixed in an expression of mental suffering, the angles of the mouth being drawn down, and the corrugators of the upper eyebrows being firmly contracted. When I spoke to her, she answered slowly and with evident reluctance, turning away from me, as if shrinking from observation and seeking solitude. In reply to my repeated questions, however, she told me that she was quite wretched, and tired of life, and that she had nothing to look forward to but death. She added that she had killed her father by her conduct, and had no affection for her child, so that she did not care if she never saw it again. Her answers must have satisfied you that she was perfectly intelligent—she at once apprehended the meaning of all that was said to her; that her memory was good—she accurately recalled all the facts of her past history which had been communicated to you; and that no delusion existed in her mind—she repudiated several delusive beliefs which I suggested to her. The nearest approach to a delusional state of mind which she

exhibited was in the tendency to exaggerate all the transgressions and peccadillos of her past life, and their consequences, which she from time to time displayed. Not only had she killed her father, but she had perhaps shortened her mother's days by her levity as a girl, and brought on the fever which carried off her youngest sister by a beating which she had once given her. She was so miserable, she said, that she had no anxiety about her soul; but she dreamt sometimes that she was in flames of fire, and then started up alarmed. The nurse who was in attendance upon Jane S. added to her statement, for your information, that she could not be induced to employ herself; that she sometimes refused her food; that she was "lowest" in the morning, and brightened up as the day advanced; that she had sometimes "attacks of crying"; and that she slept badly. A physical examination of the patient, which, as you will remember, was then made, showed that she was greatly emaciated and anæmic. Her pupils were widely dilated; the mucous membrane of her mouth was pale and exsanguine; her muscles were soft and flaccid. The lungs were healthy, but there was a soft systolic murmur at the base of the heart. There were a slight white fur on the tongue, and a leucorrhœal discharge from the vagina. I closed our bedside consideration of this case by describing to you the treatment adopted, upon which I shall not at present enter again, by predicting that complete restoration to mental and bodily health would take place within three months, and by telling you that it was a well marked example of simple melancholia, which we should more fully discuss to-day.

Now, I am very anxious that you should become practically familiar with simple melancholia in all its relations, and should be able to deal with it successfuly. Most of you are destined to engage in general practice, and it is in general practice that this disorder most frequently presents itself. It does not, as a rule, come under the cognisance of the alienist physician, unless it be peculiarly intense in character, or until it is on the point of developing into a more pronounced variety of mental aberration. If you wish to utilise to the greatest extent your studies in this asylum, you will give the closest attention the simplest and most elementary forms and initial stages of insanity, and to the earliest deviations from mental health. A knowledge of these will avail you more hereafter, than the most intimate acquaintance with the pathological anatomy of general paralysis. You will discover in your after-life that your observations upon those great cases—those ovarian tumours and thoracic aneurisms which now, perhaps, chiefly interest you—are of comparatively little practical use to you, and that your professional reputation depends far more upon your management of indigestion and chronic bronchitis than upon your skill in diagnosing an obturator hernia. And so it is with reference to mental ailments. For one case of acute mania that you will be called upon to treat, you will encounter ten of slight anomalous conditions of mental excitement and agitation. For one case of acute melancholia, you will have ten of simple melancholia, or mental dyspepsia, as I sometimes call it. I hope you will not misunderstand me, and suppose me to advocate a partial education, or to underestimate the value of a striking and impressive case. I am far from desiring to do so. I only wish to caution you against an exclusive or excessive attention to rare diseases, to the neglect of common maladies; and to secure your heedful consideration of that unfortunately very common mental malady which I am to describe to you to-day.

Of the extent of simple melancholia in its milder forms no estimate can be formed, because very often it runs its course, even to a disastrous end, without being recognised as morbid. Some circumstances, however, indicate that it is of very common occurrence. Cases of developed melancholia are being constantly admitted into our asylums, and of these a large proportion have originated in simple melancholia, and have grown out of it just as pneumonia may grow out of a neglected cold. There are above 1500 suicides in England and Wales annually, and for a very large number of these simple melancholia is undoubtedly responsible. The "fatal act", as it is termed, is but the last and crowning symptom of a mental disorder which most generally stops short of such an issue. And thus the "rashly importunate" victims of simple melancholia, who "take arms against a sea of troubles," are but a meagre representation of the multitudes who suffer from it in silence and patience. Even the hundreds of cases of self-destruction in which it is revealed, at inquests, that depression or lowness of spirits had been noticed for some time previously, give but a faint and inadequate idea of the wretchedness, bitterness, and anguish due to this disorder, and constantly prevailing around us. The confessions of the consulting-room perhaps afford the best criterion for measuring the extent of simple melancholia; and these indicate that it is broadly diffused, and that it often affects those who are little suspected of mental infirmity.

In what, then, does this frequent and distressing disorder consist? Essentially, in a state of mental pain; in a vague feeling of anxiety, gloom, and depression; in indifference to the ordinary interests of life; and in the lack of all hope in the future; or in positive fear and trepidation. Those who suffer from it labour under an indefinite despondency, which they can neither shake off nor explain: with Antonio, they may say, "In sooth, I know not why I am so sad." They are rational and intelligent; they labour under no delusions; and yet they are aware of a change in their moral nature, of a tormenting self-accusation and poignant grief, and of a difference in their mode of contemplating the objects of existence and of external nature. How, then, does this state, called simple melancholia, differ from that depression to which healthy men are subject when bereft of an object of affection or overtaken by any calamity? The distinction is important, and is not always easily drawn, as simple melancholia not rarely originates in the normal emotion of sorrow or in reasonable apprehension of coming evil. When fortune has been sacrificed, when honour has been lost, when the support of some main-stay of existence has been taken away, a bitter sense of helpless, cheerless privation and misery takes possession of the mind. But, in the ordinary course of events, this misery becomes abated, the pangs of grief are mitigated, consolation is felt, and new interests and aspirations are awakened. Sometimes, however, this is not so. The grief is protracted and deepened, and will not be comforted. A state of unyielding moody misery becomes habitual; in fact, simple melancholia is established, and medical treatment is requisite. The same transition from healthy to morbid feeling may be noticed in other directions. The natural regret which an evil action or a wicked and lawless career entails in a sensitive mind may be prolonged into diseased compunction and remorse. Wordsworth tells us that Peter Bell

> "Forsook his crimes, renounced his folly,
> And after ten months' melancholy,
> Became a good and honest man."

He suffered an attack, and a well merited attack, of simple melancholia. Now, where is the line to be drawn between healthy grief and its morbid continuation? How is simple melancholia to be distinguished from natural depression? In a variety of ways. In the first place, simple melancholia is disproportionate in its degree and duration to the grief or calamity with which it is connected. A man who is cast down in spirits because he has committed a great fraud is suffering a healthy reaction of feeling; but another man, who is equally dejected because he has appropriated two pins which he found on the floor of a neighbour's house, is obviously deranged. A mother who is in passionate affliction because she has just lost a child, is only displaying natural feeling; but another mother, who is equally distressed because she lost a child three years ago, is giving way to morbid melancholy. In the second place, simple melancholia may be distinguished by its intractability and independence of external influences. In ordinary grief, the mind may be diverted for a time from the contemplation of its misery, and is not incapable of amusement nor of social pleasure. But in simple melancholia, the attention is riveted to painful impressions and can scarcely be attracted by outward allurements. At our entertainments here, you will see melancholics sitting forlorn and self-absorbed in the midst of mirth and merriment. In the third place, simple melancholia is in many cases distinguished from healthy grief by its periodic exacerbations and remissions. Of course, all feeling is subject to fluctuation, and grief is more intense at one time than at another. When, however, persistent grief is acutely aggravated, at a fixed hour two or three times a day, without anything at these hours specially to recall its original source—or when mental disquietude regularly alternates with mental tranquillity—then there are good grounds for believing that it has assumed a morbid type. You may see now, in Ward 25, Mary F., aged 27, who is usually in a state of quiet sadness, but who springs up suddenly about mid-day, and six in the evening, and once during the night, wrings her hands, sobs and cries piteously for a half-an-hour, and then subsides again into silent suffering. This woman has good cause for grief. Refined and educated above her station, she was ill-treated by her husband and his relatives immediately after her marriage, and was subjected to a horrible outrage in the Liverpool Docks, where she was taken one night and left, it is believed with the foulest intentions. She may well feel wretched and forsaken; but the diseased nature of her despondency is clearly indicated by its paroxysmal character, to which I have adverted, as well as by other signs. In the same ward, you may observe Jane C., who has what might be called quotidian attacks of depression. She has a good day and a bad day alternately. On the latter, she is in the depths of despair about nothing, and generally tries to hang herself; and on the former, she is moderately composed and quiescent. In the fourth place, simple melancholia may be distinguished from ordinary grief by the impairment of voluntary power,

which almost invariably accompanies it. He who is distressed by any mournful or vexatious occurrence is not deprived of resolution and the power of decision; but he who is distressed by cerebral disorder is so deprived, and is reduced to a state in which he hesitates and doubts about every trifling action, or in which he is indisposed for any exertion, and is dull and torpid. This paralysis of will is very remarkable and pathognomonic in simple melancholia. The sufferer is unable to make up his mind on any subject. He stammers for ten minutes over the opening and closing of a door; or he is so inactive that he will not move about unless obliged to do so. Determination and firmness are shown only in one direction, and that is in the way of efforts at "shuffling off this mortal coil." In the fifth place, simple melancholia is distinguished from ordinary grief by certain accessory symptoms; which, although not constant, are present with sufficient frequency to constitute them valuable aids to diagnosis. These accessory symptoms, which are both mental and bodily, and which are necessary to a complete picture of simple melancholia, we shall next consider.

Of the accessory mental symptoms of simple melancholia, irritability of temper is perhaps the most general. The isolation in which his misery places him; the scant sympathy which his fictitious but to him terribly real sufferings, obtain, render him who labours under this disorder, either irascible or morose according to his inherent disposition, if indeed, his misery is not so vast as to overwhelm all other feelings. Particularly where the cankering care is concealed—where the sorrow is hidden in the sufferer's own breast, as it sometimes is at its commencement, does this tendency to irritability display itself. I have known cases in which unaccountable outbursts of passion, with singular capriciousness and perversion of affection, have been remarked before it was discovered that a consuming melancholy was preying on the mind. It is important you should understand that when irascibility and extreme fretfulness are present in simple melancholia, the tendency of the disorder, if it be further developed, is to pass into acute melancholia.

At any part of the progress of simple melancholia, morbid impulses may start into existence. Commonly, however, the disorder has existed for some time before these come to the surface, and I cannot recall any case in my own experience in which such impulses were the first symptoms observable. They have always been preceded by depression, so severe and peculiar, as to be recognised as morbid. But at whatever time they occur, they are hostile and destructive in character. They may be directed against the individual himself, for it is unquestionable that suicide, although much more frequently the deliberate consequence of disgust with life, or a convulsive throe of insupportable agony, may also result from an impulsive and almost reflex spasm. More frequently, however, they are directed against others or against inanimate objects, leading to homicidal attempts, or to the smashing of glass, or rending of clothing. Suddenly, without provocation, an act of violence is perpetrated upon some one, who is, perhaps, loved and cherished, or property which can be ill-spared is reduced to ruin. Several cases in which such impulses have arisen during simple melancholia are now accommodated in this hospital. Let me quote to you as an apt illustration that of Charles F., Ward 2, who is fifty-eight years of age, and a coal-miner from Tadcaster. This man was admitted, for the first time, on the 1st of April of the present year. A strong hereditary tendency to insanity must have resided in him, as his father and sister have both been inmates of an asylum. Another sister died of phthisis; he himself, however, was always sound-minded and robust until nine months prior to his admission here, when he was severely burnt on one arm. The burn healed satisfactorily, but he was confined to the house by it for eleven weeks, and seems to have been greatly annoyed by his enforced idleness. Whenever he resumed his work he began to be low-spirited, and has been so at intervals ever since. The depression has increased upon him, but he has never had a delusion of any kind, always saying that he did not know why he was so low-spirited. The morning before his admission here, without any warning, he suddenly stabbed his wife with a knife which was lying on the table, and then struck her with a poker as she lay wounded on the floor. When brought here he was filled with regret for his rash act, which he alleged he "never meant." He said he had no cause to feel offended with his wife, whom he loved with all his heart, but that "a dark cloud came over him so that he couldn't help doing it." He allowed that, because of sheer wretchedness, he had often thought of hanging himself, but had never actually attempted to do so. He felt fearful that something terrible was going to happen, and that worse was in store for him. He was intelligent; his conservative faculty was vigorous and correct in its operation. Sleeplessness, pallor of complexion, dilatation of the pupils, tremulousness of the tongue, failure of appetite, and indistinctness of the cardiac sounds were reported. Under good food, regular exercise and occupation, iron and the bromide of potassium, Charles F. has improved marvellously, and is now convalescent. Vestiges of depression are sometimes perceptible, but on the whole he is cheerful and contented, and looks forward hopefully to his return home to his wife, who has now recovered from her injuries.

In this case of simple melancholia, as in that previously mentioned, it is distinctly stated that intelligence was unimpaired. The same might be said of most cases of simple melancholia, and yet the statement, though correct for all practical purposes, would not be strictly accurate. Tested by all the ordinary means, perception, memory and judgment are acute and vivacious, and yet gauged by some more delicate experiments, they would be found defective. In some slight degree they fall short of their average standard of activity, and it is not singular that they should do so. The concentration of consciousness on one centre of thought and feeling, implies that other fields of mental and emotional enterprise are left fallow, or rather are deprived of that light which is essential to their fruitfulness. The lavish expenditure of the wealth of being on one class of ideas and sentiments, implies the impoverishment of others, and hence, in simple melancholia, a keen scrutiny will reveal traces of weakness in the intellect and affections. Former pursuits and studies become distasteful or are altogether abandoned. The process of thinking is slower than it used to be. Insight is not so clear. Judgment has lost its cunning. As the disorder advances this becomes more apparent, especially in the failure to appreciate the real significance of acts and circumstances. Little omissions or faults are magnified into heinous offences; trivial incidents are believed to produce momentous consequences; and commonplace events are regarded as portents of evil. A just and rational view of life is no longer taken. The predominant feelings have partially crippled the intellect. Of course, it is of the nature of all strong feeling to do this. Grief shades and modifies our reminiscences of the past; and fear and anxiety exaggerate danger and distort reality. Thus, even those who are healthy, are not trustworthy witnesses as to what took place when they were very much alarmed. False estimates of peril, erroneous conceptions and judgments, are the every-day offspring of dread and doubt. The ideas become less truthful as the emotions become urgent; and hence we need not be surprised to find some slight intellectual enfeeblement in simple melancholia. The enfeeblement, when present, is, however, trifling and difficult to detect, and never reaches into perversion. When the intellect becomes so weakened or altered as to entertain morbid beliefs or delusions, then it is no longer with simple melancholia that we have to deal. The essential condition of that disorder is that the depression which characterises it should be vague and indefinite, or should be connected with a *real* occurrence, misfortune, or source of apprehension. True, the real occurrences or misfortunes round which the depression of simple melancholia seems to circulate may be exaggerated in themselves and in their consequences, but the belief in them is never converted into actual delusion. The presence of these in the mind betokens that simple melancholia has advanced into another phase of pathological existence, which must be known by a new name, as it involves new elements and new dangers. Such an advance on the part of simple melancholia is by no means uncommon. I have already told you that most of the species of melancholia begin with and end in the simple species, which has just four terminations, viz., recovery, death, other forms of melancholia, and a variety of dementia. Of these, recovery is happily the most frequent, and death (if suicide be excluded from consideration, as an abrupt interruption, and not a termination, of the disorder) is the least frequent. Many cases, however, of simple melancholia pass into other forms of melancholia, and the transition is instructive. The vague depression or fear which has been held as it were in solution in the mind gradually crystallises into certain delusional forms or beliefs. And these delusional forms or beliefs can be classified into certain systems, just as crystals can. Minds have their special delusional tendencies, just as chemical substances have their special crystalline forms; and of some it might be predicated that, on being attacked by melancholia, they will pass into the hypochondriacal or religious variety as certainly as it may be foretold of borax that, on crystallising, it will assume the form of an oblique rhombic prism. Now, numerous illustrations of the condensation of simple melancholia into other more permanent forms are always to be met with in our asylums. In No. 2 Ward, at the present time, you will find John G., admitted on the 1st of March last, who became insane five years ago, who has ever since then been depressed, and who has passed through the following stages. 1. He was dejected in spirits without knowing why or how. 2. He became excessively anxious about his health, because he suffered from constipation of the bowels. 3. He exaggerated the degree of this constipation, and alleged that he went sometimes ten days or a fortnight without passage. 4. He developed the delusion that his bowels had been stitched together, and that passage

was impossible. 5. He evolved several other false ideas, such as that his blood was dried up, and that his body was decayed and offensive in smell. These latter delusions he still entertains. A short time ago you might have seen in Ward 35 David D., who at the close of an industrious and frugal life, in which he had amassed a competency, lost his wife, who had been the companion of his toil and thrift, and was profoundly affected by his bereavement. This grief, instead of being tempered as time went on, became intensified, and led him to attempt suicide. It then changed its front, and fixed itself upon the inroads on his savings which had actually taken place during his illness. He deplored the loss, he exaggerated the loss, he thought that he was ruined, and must die in the workhouse. Until an attack of pneumonia cut him off, he used to wander about the ward mourning because he had not wherewithal to pay for his night's lodgings ; he also refused his food because he could not afford it.

When simple melancholia does not advance into any other form of melancholia, it sometimes results in dementia ; and, indeed, it sometimes passes into a stage of dementia when recovery is about to take place after a protracted attack. The long continued state of mental pain is followed by exhaustion ; the faculties are sluggish in their action ; the abused feelings are blunted ; a condition of mental inertia or stupidity is established—a condition which has been described by one who has experienced it, as "a total deadness and distaste ; an indisposition to do anything or to be anything ; a suspension of vitality ; an indifference to locality ; a numb soporifical good-for-nothingness ; an ossification all over ; an oyster-like insensibility to passing events."

[*To be continued.*]

ABSTRACT OF A LECTURE ON EXCISION OF THE KNEE-JOINT.

By T. HOLMES, F.R.C.S.,
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ALTHOUGH, gentlemen, the short time allowed for the course of lectures on Systematic Surgery obliges us to be very dogmatic, there are, in truth, two sides to almost every surgical question ; and it seems to me that the chief value of these clinical lectures is, that they allow us to explain, separately, these debatable points at greater length, and with the aid of illustrative cases. Excision of the knee is just such a point. It is not many years since it was first performed by Sir William Fergusson, and the number of cases operated on is even now not sufficiently large to enable us to judge of the results with perfect satisfaction. It is only lately, too, that the conditions under which the operation can be favourably performed have been at all clearly defined. In the early days of excision of the knee, the operation was performed on patients advanced in phthisis, or for malignant tumour. No English surgeon would now consider this justifiable. Yet, though the operation has, even now, scarcely passed beyond the experimental stage, its employment has been advocated and condemned with a partisanship which is, I think, quite out of place in such a controversy.

The operation has, indeed, its advantages and its disadvantages. In considering these, it has been the fashion to compare it with amputation ; but we must also compare it with an expectant treatment and conservation of the limb.

Disadvantages.—The *shock* of the operation is very severe, and it is followed by severe surgical fever. After amputation for disease in the child, there is usually but little shock or fever ; the child often sleeps soundly a few hours after the operation, and mends steadily from that time. The shock and suppurative fever after excision are, however, not often fatal.

Arrest of growth in the limb after the operation.—This is rather common ; it is due to the removal of the whole of the epiphysis and part of the shaft of the bones. In the femur, the epiphysal line comes very close to the edge of the cartilage, and, consequently, the risk of removing the epiphysis is great. In some cases this can be avoided by merely slicing off the cartilage, and leaving a rounded or truncated end to the bone ; but often, owing to the extent of the disease, a horizontal cut is absolutely necessary. In the tibia, the space between the articular surface and the line of junction of the epiphysis is greater, and, consequently, there is a better chance of being able to save part of the latter. Of course, the younger the patient the greater would be the relative shortening from this cause.

The risk of soft union between the bones and of bad apposition.—The tibia has always a great tendency to fall back, so that only the anterior part of the cut surface is in apposition with the femur, and the partial union thus formed is not strong enough to support the weight of the body ; or, if the cicatrix be stronger, it may yield gradually to the weight of the trunk, and the limb may bow outwards, giving it a shortened and awkward appearance. These deformities may be corrected by splints if treated at once, and, unless the shortening and bending be excessive, the limb is still better than a wooden one. A shortening of six inches, compared with the sound limb, is no great hindrance to walking ; the pelvis drops on that side, and this obliquity, with a high boot, readily compensates for the shortening.

These, then, are minor disadvantages ; the real obstacles to the operation are its severity, the tedious convalescence which follows, and the liability to recurrence of the disease.

It is very difficult to judge of the comparative mortality after excision of the knee ; statistics especially are very fallacious. It is not sufficient to compare the total mortality after excision with the total mortality after amputation. Even the most enthusiastic surgeons limit their practice of excision to young patients and to favourable cases, while amputation is performed at all ages, and often under desperate circumstances. Excision, again, is never done for cases of acute injury ; in military surgery it has been exceedingly fatal. To arrive at any satisfactory result, we must compare *similar cases* in considerable number ; and this is not an easy matter. I believe myself that the mortality after excision is about double that of amputation. I should say, too, that the period of convalescence is about four times as long after excision as it is amputation. This estimate is, if anything, rather below the mark.

The risk of recurrence of the disease is not great when the wound heals rapidly ; but, if convalescence be prolonged, a renewal of the caries often results. And when this does happen, do not be in too great a hurry to amputate ; treat it as you would caries in the continuity of a bone ; there is now no joint to complicate the treatment. Scrape out the diseased bone or apply caustics ; if this do not answer, you can excise again ; though this, of course, increases the shortening.

The *couleur de rose* doctrines which have been advanced by some surgeons have certainly produced very mischievous results. Excision is not an operation which can be applied indiscriminately ; it must be reserved for cases of favourable age, and in which the disease is not too acute or too extensive. When it is thus reserved for suitable cases, the result is infinitely superior to that of amputation. The advantages, indeed, are more marked the earlier the age of the patient.

Amongst the lower orders, amputation of a leg almost ruins a child's prospects for life ; few will have anything to say to him, and the greater part of his life is passed at the cripples' home and the workhouse. But after excision he is fit for a sedentary or even for a moderately active life. I have known patients who could easily walk ten and fifteen miles a day after excision ; and a German surgeon has recorded the case of a man who was able to follow successfully the arduous profession of a chamois-hunter after this operation. After middle life, the advantages are doubtful. The result of the operation is not generally so good, and an adult can seldom afford the long period necessary for convalescence. The complete use of the limb, after excision of the knee, is not fully acquired for some years.

On the other hand, the number of cases which are available for excision, even in the child, are limited by the fact that many of them are curable without any operation, if you can only give them time. In private practice, amongst well-to-do people, where the parents will readily nurse a child for three or four years, you may cure cases of abscess in the knee-joint, or even of chronic disease of the bones, by means of simple expectant treatment, and may even get a tolerably useful joint. In hospital practice this plan of treatment is impracticable, and then it is that, by excision, you can hasten and facilitate the process of cure without materially altering the nature of the result.

On the whole, then, whilst I fully recognise the advantages of excision, I am strongly in favour of the close restriction of the operation to a limited class of cases.

So far, we have been dealing with the operation in the abstract. We have now to consider, more particularly, the principles which should guide us in the selection of cases, the best mode of performing the operation, and the necessary after-treatment.

Age.—The patient must be under forty or forty-five. The elbow or shoulder may be successfully excised at a much greater age ; but, after middle life, excisions in the lower extremity are exceedingly fatal. In the case of very young children, free incisions into the joint and expectant treatment are so successful, that formal excision is seldom necessary ; the risk of getting an excessively shortened limb is also very great. This is not absolute contra-indication, since excision may be, and has been, practised successfully in early infancy ; but the most

favourable age for the excision of the knee may be said to be between five or six and twenty. The operation may, however, be performed, with fair hope of success when the other circumstances are favourable, as late as thirty or even beyond.

Constitutional State.—There must be no visceral disease. The lungs must be examined for signs of phthisis, and the urine for evidence of the albuminoid kidney, which often accompanies chronic disease of the bones; nor should examination of the liver be neglected. There must be no acute surgical fever, and no marked depression of the general health; no great wasting or confirmed hectic.

Local State.—a. The bones must not be too extensively softened. Unless you can remove all the softened bone, you will be almost sure to get soft union or no union at all. In excision of the elbow, and even of the hip, this objection does not hold good—you do not want to get firm osseous union, as you do in the knee. In many cases, it is quite impossible to diagnose the actual state of the bones before the operation; you must, therefore, always be prepared to change your excision into an amputation, and must always previously obtain the consent of the patient or of his friends to this course, if necessary.

One of the most favourable classes of cases for excision are those of so-called "strumous" disease of the synovial membrane, though the patient often shows no sign whatever of the strumous diathesis. It is characterised by pulpy degeneration and thickening of the synovial membrane, and by the frequent presence of small abscesses in the thickness of this pulpy mass, which may, or may not, have burst into the joint; the bones are scarcely affected at all. The operation also is exceedingly simple in these cases; you need not be particular about removing all the thickened synovial membrane, and have only to remove a thin slice of bone and cartilage from the articular surfaces.

Then there are the cases where a superficial necrosis of some part of the articular surface has taken place, and a sequestrum has formed. In some of the other joints you may just remove this sequestrum, and trust to rest, etc., but in the knee this procedure is followed by such severe shock and profuse suppuration that it is better to excise at once.

b. The disease must not be of too long standing, and the limb must not be too much atrophied. In children especially, if the disease have lasted for any considerable time, there is great risk that it may have extended beyond the epiphyses, and that the operation would, consequently be followed by arrest of growth in the limb.

c. The soft parts must not be too extensively undermined.

d. The disease must not be in an acute stage. I have seen excision successfully performed for acute abscess in the knee-joint, but, as a rule, the operation under these circumstances should be discountenanced. This rule also does not hold good in the case of other joints, especially of the elbow, where excision may be safely recommended in the acute stage of abscess.

It will thus be seen that the most favourable cases of disease of the knee-joint are those which are selected for excision, whilst the more unfavourable are left for amputation, and that this, therefore, tends to increase the mortality after amputation. Some have argued that the tendency is to some extent neutralised by the fact that, since the introduction of chloroform, amputation has been performed in many favourable cases of old deformity, etc., which would formerly have declined the operation. This may be true, but, on the other hand, a far larger number of favourable cases are saved by the conservative surgery of the present day, which would formerly have undergone the operation; so that I do not doubt that, on the whole, amputation for disease is now practised in a class of cases less favourable for recovery than was formerly the case.

The *Operation* itself is tolerably simple. Some surgeons, as Mr. Butcher, still adhere to the H-shaped incision; this, however, is rarely required—only when a joint is ankylosed in an awkward position, or when you wish to expose the bones very freely. Others make a large anterior flap, enclosing the patella; the only advantage of this is that you can at once amputate, if necessary, without removing much of the femur; the objections are, that there is a large hollow left after the removal of the patella, and that the wound is larger, and, consequently, the shock is increased and convalescence retarded.

Langenbeck, I believe, operates, or used to operate, on a totally different plan, and with a different object in view. He makes a longitudinal incision down each side of the joint, divides the lateral and crucial ligaments, and turns the articular surfaces out through one of the wounds. He leaves the patella and its ligament entire; his object being to get a moveable joint, while we look for firm ankylosis. I have no experience of Langenbeck's treatment, but, from my own experience, should always advise the removal of the patella, or, at all events, of the whole of its cartilaginous surface. When the patella is left, it often becomes the seat of the recurrence of the disease, and, if the bones are to be firmly united and soldered together, there is no advantage to balance this risk. You will see by the examination of such cases several years after recovery, that the quadriceps extensor cruris becomes atrophied, and the function of the patella entirely abolished.*

I think, then, that the best plan is to make a single straight incision from the back of one condyle to the back of the other, cutting across the ligamentum patellæ, and completely dividing both lateral ligaments. After turning up and removing the patella, the limb is well flexed, the back of the condyles cleaned, and the lower part of the femur sawn off nearly perpendicular to the axis of the bone; the head of the tibia is then cleaned and sawn across horizontally. The danger to the popliteal is not great, unless it be bound down to the back of the bones—glued to them, as it were, by inflammatory products; nor is there any motive for sawing the femur from behind forwards, as has been recommended.

Be very careful to tie all bleeding points. I always use the carbolised catgut ligatures, and cut off both ends quite short; the knots do not interfere in the least with rapid union. I find this much more satisfactory than torsion, especially for small vessels.

Put up the limb at once, before the patient recovers from the chloroform. There are several different forms of apparatus. The limb should be perfectly straight, and the splint should be carefully adapted to it. The plaster of Paris splint is very good; the best form is that of Dr. Patrick Watson, a description of which is inserted in the *System of Surgery*. The objection is that, if the limb become inflamed and swells, you have at once to take it all down; and if, as sometimes happens, the limb shrinks, the splint allows too much motion. The same objection applies in some degree to Mr. Butcher's apparatus; this consists of a sort of trough, formed by three flat wooden splints, open in front. In this hospital we usually use a McIntyre's splint, cut away at the sides opposite the joint. Wooden side splints are applied to this, and a well moulded leather splint is fitted over the front of the thigh.

Whatever apparatus you use, do not disturb the limb oftener than you are absolutely obliged; perfect rest is the great point of the after-treatment. If you can avoid any changes for four or five weeks, so much the better; by that time there will probably be a sufficient amount of union between the bones to dispense with all special apparatus for the future.

Do not allow the patient to use the limb too soon, and watch him for some little time after he begins to move about on it, so that you may at once check and correct any tendency to bending or bowing at the seat of union.

* See an illustration in Holmes's *System of Surgery*, vol. v, page 708. Second edition.

ON THE USE OF CONCRETE IN ASYLUM BUILDINGS.†

By W. W. WOOD, M.D.Lond.

IT seems necessary to offer some apology for occupying the time which should be devoted to the consideration of scientific subjects with such a small matter as that to which I propose to direct attention; but in these days, when the cost of everything (excepting, perhaps, medical advice) is increasing at a rate which threatens seriously to cramp the means of living amongst many of the middle and lower classes, and so, by adding to their anxieties, tending to the development of brain-disturbance, economical considerations in relation to asylum accommodation are not without some value.

Having had recently to make considerable additions to buildings, a large quantity of material remained in the form of what is commonly called ballast; and, in considering to what use it could be applied, it occurred to me to try an experiment which I had been rather urged to make with the new building itself. Accordingly, in the first instance, I decided to try what sort of a wall could be built consisting of concrete composed of seven parts of ballast and one of Portland cement; and I have found that a wall of this kind may be built at one-half the cost of brickwork, if the soil of the ground on which the wall has to be built be gravel, and at two-thirds of the cost of brickwork if the ballast have to be bought in the neighbourhood. It is to be understood that it is not necessary to have such gravel as is used for making paths—for this, of good colour, in certain localities, it is very difficult to obtain—but rough ballast, the shingle of which is mixed with about one-third of "sharp" sand—*i. e.*, ballast which does not contain loam or garden-mould. Finding that a wall eleven feet high and one foot thick, with occasional buttresses, was very hard and strong, it occurred

† Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

to me to construct summer-houses in the wall of the same material; and two were successively and successfully constructed of this concrete, one seventeen feet by eleven feet, and one twelve feet by seven feet. The arched entrances are entirely of concrete; and, excepting a few tiles bedded in cement in the roof, there is not a particle of any material in the whole of these buildings but ballast and cement. A very great saving of cost is effected in buildings of this kind, in consequence of the class of labour employed. Ordinary bricklayers' labourers do all the work, under the guidance of one experienced artisan; and, if an arched roof covering a room seventeen feet by eleven feet will carry itself without any wooden support, it is probable that a building of proportionately increased solidity might be constructed on the same principle. For cottages and detached buildings, especially of one floor only, a very great saving of cost may be effected; and, if any of the members should wish to see what I have done, or to obtain any further information as to details, I shall be very glad to see or hear from them.

ABSENCE OF THE UTERUS AFTER REPEATED PREGNANCIES.*

By WALTER WHITEHEAD, F.R.C.S.E.,

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ANN DAWSON, aged 39, was admitted an out-patient of St. Mary's Hospital, on the 11th April, 1872, suffering under general debility and amenorrhœa. Menstruation began at eleven years of age. She was married at 25, and had four children within three years and a half; the first two having been born at the seventh and eighth months respectively, the others at the full term. Flooding took place after the birth of each, especially after that of the last child. On that occasion, she was attended by Mr. Rothwell (late of Bolton), who did not arrive for some hours after the child's birth; the placenta had not come away when he got there, and this he appears to have removed. Hæmorrhage subsequently took place to such an extent, that he found it necessary to remain with her four or five hours, during the greater part of which time she was delirious. Previously to labour coming on, there was milk in the breasts; the following day it had disappeared. After the cessation of the flooding, the discharge does not appear to have had the ordinary character of lochia, but to have consisted of a brown watery fluid, which persisted for a couple of weeks without any change in its appearance. Convalescence was so protracted that, at the end of eighteen weeks, she was unable to stand; but there is no history of her having suffered during this time from febrile or irritative symptoms indicating the occurrence of any acute mischief. From this period, her general health somewhat improved; menstruation, however, has never been re-established, so that it is now eleven years since the woman had any appearance of the usual monthly discharge; and although occasionally menstruation ceases at the early age of twenty-eight, each instance, when it does occur, is sufficiently singular to make it worthy of individual consideration. The interest in this case is further increased by the fact that she has never had the slightest leucorrhœa, a discharge which I have usually noticed to persist for a length of time when menstruation has ceased at an earlier period than usual. Neither has she, since the cessation of the menstrual function, experienced any of the *molimina menstruationis*, which, when in activity, were well marked and characteristic in her case. During this period, also, all sexual desire has become abrogated, coitus being attended neither with pleasure nor with pain. There does not appear to have been any hæmorrhage recurring at regular intervals, which could be looked upon in the light of vicarious menstruation, although four years ago she vomited blood, and once lately she spat a small quantity, and, for the last year, the nasal mucus has been streaked with blood every morning. For four months previously to the birth of her last child, large quantities of blood were passed *per anum*; and, at the same time, she appears to have suffered from an aphthous condition of the intestinal tract; and she states that her child at birth was similarly affected. She is a tall, pale, thin woman, with markedly flabby cheeks, and a commencing arcus senilis; the mammæ are shrunken and flat, with apparent atrophy of gland-structure. On digital examination *per vaginam*, no cervix or uterus can be detected, but the finger discovers an opening, of irregular outline, in the position of the os uteri. The speculum reveals the presence of a small growth, of the size of a pea, on the right margin of the opening referred to, and confirms the absence of a cervix. A No. 12 gum elastic catheter passes, without any pressure, and without the slightest resistance, eight inches through the opening. The absence of the uterus is still further confirmed by the approximation of the left forefinger in the rectum to the right hand placed over the pubes, and also by the sound in the bladder with the finger in the rectum. The sound passed through the opening can be felt under the abdominal wall, two inches above the umbilicus; and it can also be moved in a lateral direction for three inches to either side of the centre of the abdomen. The sound, bent at a right angle an inch from its extremity, and passed through the opening, can be rotated so that the angular portion nearly describes a circle immediately within the opening, meeting with some slight obstruction only posteriorly. These methods of exploration have been repeated, and the results generally confirmed by Dr. Thorburn, Dr. Lloyd Roberts, and Mr. Windsor. These various examinations, although apparently rough and dangerous, never appear to cause any distress to the patient, either at the time or afterwards; in fact, she rather attributes an improved appetite to the manipulation she has undergone.

Such is the history and condition of this woman; a case, so far as I am aware, without a parallel in medical literature. The importance of which such knowledge would be is obvious could we determine the precise condition of this woman, and could we further ascertain what cause has effected such changes that an organ like the uterus, after repeated pregnancies, should have disappeared, if not altogether, at least from its usual situation. It cannot positively be asserted, during her life, that the uterus does not exist; but it is quite certain that, if it remain, its situation is either removed beyond reach, or its bulk is so far reduced that it is not detectable by the means which I, and those who have given me the benefit of their knowledge, have employed. There is but one other alternative; and that is to suppose that, by some process, the uterus has been destroyed, and either absorbed or sloughed away. I am aware of the necessity of being cautious in speaking confidently about the presence, or even the size of the uterus; and I still entertain the possibility of the uterus being even now in its usual locality, but that the walls are so attenuated that, although they may exist, they are so thin that, having to be examined through other contiguous structures, they are difficult to recognise—the uterus, in fact, being present in outline, but not in bulk. Supposing, on the other hand, the uterus to have disappeared—and I must confess that, in this case, I feel the supposition to be warranted—how far is it possible to account for such an occurrence? For the solution of this question, the changes which the uterus undergoes in the cycle it performs between impregnation and the resumption of its virgin condition, require to be considered severally in the three stages of development, degeneration, and reconstruction.

It is not necessary to go through the details of these processes, although it is perhaps as well to remark that the stage of development depends less upon the introduction of new elements than on the increase and the higher perfection of its ordinary constituents, and that the degeneration is the fatty degeneration which other tissues in like manner undergo previous to removal. Thus, the pregnant uterus may be compared to a physiological wave, gradually augmenting and steadily subsiding without receiving any perceptible aid from surrounding elements. Of the process of reconstruction we know little; but it will be conceded that it depends upon a healthy condition of the function by which it is brought about; consequently the condition of what is termed superinvolution of the uterus, or atrophy after pregnancy, must depend either upon an excess in the process of involution, an excess of the fatty metamorphosis and subsequent absorption, or on some defect in the development of the new tissues that ought to replace those that have become effete. That one or other of these processes takes place, Sir James Simpson and Dr. Arthur Farre have published cases to demonstrate, and they have both verified by *post mortem* examination that an uterus may become so attenuated that its walls are found no thicker than those of the intestines. The only analogous instance of a body like the uterus spontaneously lessening in bulk is found in fibroid tumours, and here the resemblance is further increasd by the similarity in structure of the two. I do not mean to assert that their identity is complete, but that organic muscular fibre is the main element in the composition of them both; and the muscular fibre only differs in this respect—that whereas in the uterus the fibre-cells are large and soft, in fibroid tumours they are small and dense, and consequently less prone to rapid disintegration and absorption. The spontaneous absorption of fibroid tumours is no longer denied, and the number of well authenticated instances of the complete removal of large fibrous tumours by absorption are now sufficiently numerous not to require special mention. The accepted theory of the disappearance of these tumours is that the fibres undergo, in the first instance, a molecular fatty degeneration, and then become absorbed; so that in both respects the processes correspond to those which constitute the involution of the uterus after delivery. We know absolutely nothing definite of the cause which induces those metamorphoses in the intimate structure of these growths

* Read before the Lancashire and Cheshire Branch.

favourable to their absorption, but it appears most reasonable to conjecture that some perversion of nutrition is the immediate step previous to their disappearance, on the universal principle that when nutrition fails, degeneration follows. I have frequently noted that, in cases of spontaneous absorption of fibroid tumours, an anæmic condition has preceded the change; and in regard to the woman whose case I have related, I attribute to her rapid pregnancies, her profuse and repeated floodings, the illness which followed the birth of her last child, and the ulterior mischief which attended her confinement, the present state of her womb.

We have other analogous phenomena in cases of extrauterine pregnancies, where the fœtus has been found reduced to its bony portions by the absorption of the other solid and fluid parts—the consequence of arrest of nutrition. The same thing has also been known to take place within the uterus, where a dead fœtus has been retained for a long time. It is further admitted that the placenta may become absorbed after delivery at term, and still more frequently after miscarriages. In none of these instances does degeneration and absorption commence so long as nutrition continues. How far we have a right to consider superinvolution the result of an inflammatory process—a theory which has been suggested—I am not prepared to say; but we are aware that inflammation causes an arrest of the "retrograde metamorphosis" subsequent to delivery; so that, to reconcile the two extremes, we must attribute to one action opposite effects. In the case I have given, however, there does not appear to have been any inflammatory mischief; and, as inflammation of the uterus is generally sufficiently well indicated, we have a right to presume that it never took place. I would just add that, supposing my explanation to be correct, and it to be a fact that in the case of this woman the usual fatty degeneration has proceeded to the usual extent, but that the process of reconstruction, owing to a poverty-stricken condition of the system, has been prevented, a practical inference is to be drawn from the circumstance, and it is possible that we may make the knowledge applicable to the removal of fibroid tumours by a system of lessening their nutrition by a restricted diet, and by other measures of a depletory nature.

THE GRAFT-THEORY OF DISEASE.*

By JAMES ROSS, M.D., Waterfoot, Manchester.

THE splendid experiments of Dr. Burdon Sanderson and of other workers upon virulent fluids prove that the active part of contagious matter resides in particles less than the one-twenty-thousandth of an inch in diameter, and very similar in their movements and in their physical and chemical characters to the organisms found in putrefactive fluids. The object of the present paper is to adduce some evidence to show that the particles of contagious matter are, notwithstanding their similarity to bacteria, not independent beings, but modified units of the individual from which they have become detached. It is impossible within the limits of a short paper to do anything more than present a small section of the evidence which can be adduced, either for or against such a proposition. It will be taken for granted, in the first place, that it has not yet been proved beyond doubt that the contagium-particles are independent organisms; since, if it were, the opposite hypothesis that they are only detached portions of a living individual would be at once inadmissible. On the other hand, since I cannot give experimental proof that the latter assumption is true, I must present evidence which will give it some degree of probability. The most obvious objection to this assumption is, that it is very improbable that a particle of one living body not larger than the one-twenty-thousandth of an inch in diameter, however much it may have been modified, should produce such extensive changes by its collision with another individual, as occur in the zymotic diseases. But this objection will be very much weakened, if not entirely removed, when it is remembered that the most wonderful process in nature is initiated by particles apparently as insignificant as these. I allude to the action of the reproductive particles in the genesis of new individuals. A closer examination will also disclose analogies between the reproductive and contagium-particles, which will give additional strength to the supposition that the latter are only modified portions of the individual from which they are derived. The contagium-particles, according to this supposition, are derivatives from epithelial cells; and both the germ-cell and sperm-cell, which by their union give origin to a new individual, are merely modified epithelial cells. The pathological changes which precede the detachment of the contagium-particles are such as to diminish the supply of nourishment to the epidermis; therefore its units lose even the small degree of specialisation which enable them to take a share in the operations of the body of which they form a part, and hence they are cast off. But it has been supposed that the detached and semi-detached portions which are operative in the genesis of new individuals are highly "vitalised" products; and if this be the case, the analogy fails in one essential particular. But Mr. Herbert Spencer has shown that this latter assumption is very doubtful, and that it is probable that the reproductive cells are characterised by being unspecialised or by having undergone very little modification. In many plants, and the lower members of the animal kingdom, whose tissues are the least specialised, a small fragment of tissue is capable of reproducing a new individual. A hydra may be divided into fifty pieces, and each piece will grow into a new and perfect individual. In plants, the reproductive particles arise at the extremity of the axis, where the degree of the organisation is the least; and in the higher animals, the reproductive centres are, as already remarked, merely modified epithelial cells—cells which are remarkable for the simplicity of their structure.

We also find, as a rule, that the lower an organism is in the scale of organisation, the higher is its reproductive power. The fact that epithelial tissue is not highly specialised has just been referred to; yet it possesses the power of reproduction in a very eminent degree, even without concourse with another organic particle. Mr. Herbert Spencer mentions the fact that a species of *Begonia* habitually developes young plants from the scales of its stems and leaves, and that many plants are developed by a single scale. These facts show that the reproductive particles are not highly specialised, and that in this respect they are similar to the particles detached from the body during the contagious diseases. That the contagium-particles become detached from the body at a time when they are sparingly supplied with nourishment, will not be doubted by anyone; and there is strong evidence to show that this is also the case with the reproductive particles. This is best seen with regard to the latter in those organisms where asexual reproduction takes place. Mr. Herbert Spencer adduces a great mass of evidence to show that, during the transition from asexual to sexual reproduction, there must be relative innutrition of the reproductive particles. When a *polype* is freely supplied with nourishment, it multiplies by a budding process; but when the supply of nourishment begins to fail, reproductive cells are formed, and sexual genesis takes place. A similar fact is known to gardeners with regard to fruit trees. Trees which are freely supplied with nourishment "run into wood," and gardeners adopt the method of cutting the roots, and sometimes even go the length of "ringing the bark," so as to diminish the flow of sap to the tree. After this expedient is adopted, asexual gives rise to sexual reproduction, the terminal buds become floral, and finally, the tree bears fruit. The reproductive particles, therefore, which, by their union, initiate the most wonderful process in nature—the evolution of a new individual—are, prior to their union, sparingly supplied with nourishment; and, as just noticed, the contagium-particles are detached from the body from a similar cause. There are, therefore, several agreements between the reproductive and contagium particles, and others might be mentioned; but I shall now proceed to mention one particular in which the analogy between them fails. In the genesis of new individuals by sexual reproduction, an union takes place between two particles detached or semi-detached from two distinct individuals; but in the genesis of a contagious disease, an union takes place between a distinct individual and a detached portion of another individual. But another series of facts is known to biologists where the analogy even in this respect is complete. I allude to the phenomena of grafting, where a portion detached from one individual is grafted upon another; and I shall now proceed to show that some of the phenomena which result from this process closely resemble those of contagion.

It may be remarked, that we must look for the agreements between the phenomena of grafting and those of contagion in the effects which are produced by the scion on the stock, since these are the most prominent features in the contagious diseases. Numerous examples of the effects produced upon the stock by the scion are mentioned by Mr. Darwin in his great work on *Animals and Plants under Domestication*, and in an interesting article in the *Popular Science Review* for April 1871 by Dr. Masters. I can only mention one or two of these examples. "Cases have been observed," says Dr. Masters, "where, from the stock *below* the graft, fruits and flowers of the same appearance as those borne on the scion have made their appearance. This has been observed in the case of the pear grafted on the mountain ash, and in other cases." "It is notorious," says Mr. Darwin, "that when the variegated jessamine is budded on the common kind, the stock sometimes produces buds bearing variegated leaves. Mr. Rivers, on the authority of a trustworthy friend, states that some buds of a

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

golden variegated ash, which were inserted into common ashes, all died except one; but the ash-stocks were affected, and produced, both above and below the points of insertion of the plates of bark bearing the dead buds, shoots which bore variegated leaves. Mr. Brown, of Perth, observed many years ago, in a Highland glen, an ash-tree with yellow leaves, and buds taken from this tree were inserted into common ashes, which in consequence were affected, and produced the blotched Breadalbane ash."

These instances must suffice here; but I am glad to say that both Dr. Masters and Mr. Darwin have noticed the analogy which exists between these phenomena and those of the zymotic diseases. "Adverting now to the effect produced by the scion on the stock," says Dr. Masters, "it may be said that we have here an operation something akin to vaccination." And Mr. Darwin says, "It is certain that, when trees with variegated leaves are grafted or budded on a common stock, the latter sometimes produces buds bearing variegated leaves; *but this may perhaps be looked at as a cause of inoculated disease.*"

It has now been shown that there is a very close analogy between the phenomena of contagion and those of reproduction, and still closer between them and those of grafting. This is the reason why I have called the hypothesis advanced here the Graft-theory of disease. The question now is, how far this hypothesis will account for the phenomena of the zymotic diseases. I shall very briefly apply the hypothesis to the explanation of the phenomena of small-pox and of its allies; and it need scarcely be remarked that I can only seize at present upon the most prominent features of those diseases, without being able to enter into minute particulars. When a drop of vaccine fluid is placed upon a scratch in the arm, the effect produced is so well known that it is needless to describe it. This effect is said to be specific, and if by this be meant that the vaccine vesicle is different from what would be produced by any other agent, it is no doubt true; but if it be meant that the effect produced by the vaccine fluid has nothing in common with other morbid processes, it is not true. A chemical or mechanical irritant may be made to produce a pustule having many characters in common with the vaccine pustule. Passing over the disagreements in outward conformation between those pustules, the greatest difference between them is that the latter can produce its kind by inoculation upon a sound individual, while the former can not. But this difference is one more of degree than of kind, since ordinary inflammatory products frequently possess inoculable properties. Inflammation of the conjunctiva has been produced by inoculation with the discharge from ordinary ophthalmia; and the experiments of Dr. Sanderson show that inflammatory products may be made to assume highly contagious properties.

But inflammatory contagion declares itself not only by producing the disease upon a healthy individual, but also by spreading the morbid process within the organism of the individual first affected. We see surrounding any inflammatory centre a red areola, indicating that the morbid process is being communicated to the surrounding tissues; and if the primary inflammation be violent or prolonged, we also find enlargement of the neighbouring lymphatic glands, indicating an extension of the morbid process to these structures. But the process does not stop here. If the primary inflammation be still more severe, units of the morbid product enter the systemic circulation and produce inflammation in various parts of the body, especially in the internal organs. But this extension of disease from a primary centre—first to lymphatic glands, and second to other parts of the body—is not true only with regard to inflammation, but we meet with the same order of facts in syphilis, tuberculosis, and cancer. It is also very important to notice that whatever may be the nature of the primary morbid process, it tends to impress its own characteristics upon the disease of the glands and other parts of the body which result from it. In syphilis, for instance, the chronic induration which surrounds the primary sore shows itself in the chronic enlargement of the neighbouring lymphatics, and is more or less apparent in almost all the subsequent lesions which occur during the protracted course of the disease. A tuberculous gland and a cancerous tumour also each tend to generate their kind in the other parts of the body. Taking these facts along with us, we may now return to the consideration of the vaccine vesicle. On the fifth day after the insertion of the lymph, a red areola forms round the vesicle, and the neighbouring lymphatic glands begin to swell. Feverish symptoms also make their appearance about this time. On the tenth or eleventh day, the fever is at its height, and both the swelling of the glands and the red areola are greatest. The course of events so far, then, is not much different from what occurs in an ordinary pustule, except that the rapidity of the evolution of the vaccine vesicle is greater, and its intensity of action very much higher. We have found with regard to other diseases that the morbid process tends to spread throughout the organism; nor are we without evidence that such is the case with the vaccine vesicle. What is known as Bryce's test clearly proves that as early as the fifth day the skin over the body has already undergone some modification, since the vesicle which results from a second vaccination performed on that day goes through its evolution so rapidly that it will be at its height, and will decline and disappear as early as the vesicles of the first vaccination. But the action of the vaccine vesicles on the organism at large does not stop here. About the eleventh day, a lichenous, roseolar, or vesicular eruption occasionally appears, which continues for about another week. These spots appear to be abortive vaccine vesicles which would, if the action were more intense, go through stages of evolution similar to those of the primary vesicle. This is rendered probable by the fact that, when a healthy individual is inoculated with small-pox matter, the secondary eruption appears about the eleventh day; and the vesicles of this eruption are similar in every respect to the primary vesicles. We have already seen that the secondary affections of inflammation, tubercle, and cancer, generally occur in the internal organs; but, in the case of small-pox, they occur in the epidermis. Why this should be the case, I cannot fully explain. This belongs to the speciality of the disease; and I wish at present to dwell upon the circumstances in which small-pox agrees with other diseases. One reason why the secondary affections should occur on the surface of the body in the contagious diseases is that, in any other case, infectious particles would not be cast off the body, and the disease would cease to be contagious. Natural selection, therefore, which acts in preserving diseased as well as healthy tissues, would preserve those particles which produced their secondary action on the surface of the body.

I cannot dwell further on the agreements between small-pox and the zymotic diseases generally and other diseases; but, in conclusion, I shall make a few remarks upon the difference between them. We have already remarked that the great difference between the vaccine and an ordinary vesicle is the rapidity and intensity of action of the former; and this is true, to a great extent, of the whole course of the zymotic diseases. Small-pox, for instance, goes through its evolution in a limited number of days, while tubercle and cancer require months or years to pass through their evolution. But rapidity of action means that the units of the morbid tissue are rapidly generated; and rapid multiplication of units involves a diminution of their bulk, since the same portion of tissue may consist of a few large or numerous small units. Rapid multiplication of units also renders free access of nourishment necessary; hence there must not only be abundant assimilable nourishment surrounding the units, but the cell-wall must either be very thin, or disappear, so as to allow it readily to permeate their substance. This disappearance of the cell-wall again renders the growth discontinuous—that is, the individual units are rendered independent of each other, so that they can disperse through the organism or become detached. The morphological characteristics, therefore, of highly infectious tissues are rapid multiplication and diminished bulk of units, great thinness or absence of the cell-wall, and discontinuous growth.

ON ETHER AS AN ANÆSTHETIC, AS A SAFER AND MORE EFFICIENT AGENT THAN CHLOROFORM.

By JOHN MORGAN, M.D., F.R.C.S.I.,
Surgeon to Mercer's Hospital, Dublin; Professor of Surgical Anatomy at the Royal College of Surgeons, Ireland; etc.

THE question of the safety of ether as an agent in producing anæsthesia in surgical operations is one which may justly be considered of importance; and the claims which have been advanced on its behalf, both on the Continent and in America, where it has held its place for over a quarter of a century, deserve the attention of practitioners, who may have had reason, from practical experience, to distrust chloroform, or who may have found difficulty in overcoming the distrust which patients naturally feel in an agent which is accompanied by danger, and which has often instanced its subtle power by causing death under the most favourable circumstances, and where the greatest care had been taken to guard against any mischance. The reports which have been given even during the last week are particularly suggestive (BRITISH MEDICAL JOURNAL, October 5th), and must go far in condemnation of chloroform, and in increasing the nervousness as to its use both with the public and the practitioner, which is daily becoming more marked. We find that in one case, a lady aged 70, presumably healthy for her age, died "when very little chloroform had been used"; another case was that of a man (a hard drinker) aged 34, with whom three drachms of chloroform had been used; and *post mortem* examination revealed so little to explain death, that the question is fairly asked, "How are we to know beforehand that a patient cannot, without dan-

ger, take chloroform?" for this man, though a hard drinker, had been previously examined, but there were no physical signs to enable any disease of the heart or lungs to be discovered. The uncertainty of prognosis is again instanced by a third case of a boy, where the first symptom of danger was cessation of the pulse. We have thus in the three stages of life—youth, middle age, and old age—instances of the subtle and fatal influence of chloroform as an anæsthetic. When to these we add the ratio of one death a week, as the death-rate accorded to chloroform accidents in England, the sum is one well calculated to excite serious apprehension, and should lead us to question at least its safety. It would be "sad, and indeed not possible, that we should come to regard chloroform deaths with apathy or indifference, as events of course". Admitting that the deaths as reported from chloroform are approximately correct, let any surgeon in practice add to these the hair-breadth escapes and the dangerous syncopes he has seen under its influence, which but for timely and most energetic interference would almost to a certainty have terminated fatally, and but barely give him room to congratulate himself not so much on the success of the operation, as on another escape from chloroform danger. We may frankly admit that there is ample room for distrust in an agent which, notwithstanding its virtues, so seriously and so frequently betrays us.

The question naturally arises, Are other anæsthetics equally dangerous? In the *Odonto-Chirurgical Society's Reports*, p. 401, a death from bichloride of methylene is reported, where the heart had been previously carefully examined, yet at the end of two or three minutes danger appeared; notwithstanding efforts to restore the patient being used for three-quarters of an hour, they were useless. Nitrous oxide, even for those who can endure the aspect and condition of the patient while under its influence, is admittedly unsuited for anything of a prolonged operation.

If the force of statistics be of any value, ether, beyond question, is the agent which presents the most powerful claims, and must obtain our confidence as the safest anæsthetic. The reports given at the Medical Society of Virginia during this session are conclusive: by combining American and British statistics, the result is found to be as follows.

Agent employed.	Deaths.	Inhalations.
Ether	4 to	92,815, or 1 in 23,204
Chloroform	53 to	152,260, or 1 in 2,873
Mixture of Chloroform and Ether	2 to	11,176, or 1 in 5,588
Bichloride of Methylene	2 to	10,000, or 1 in 5,000

It is thus proved statistically that chloroform is eight times as dangerous as ether, twice as dangerous as a mixture of chloroform and ether, and, as far as experience goes, it is more dangerous than bichloride of methylene; in fact, chloroform is the most dangerous of all the anæsthetic agents in use. If statistics are of any value, these should be startling and impressive ones. The report of the London Chloroform Committee states the result of careful investigation, that "ether is less dangerous than chloroform;" and that "with every care and the most exact dilution of the chloroform vapour, the state of insensibility may pass in a few moments into one of imminent death;" and the latest surgical work from America advocates ether as the most suitable anæsthetic. I have myself made numerous comparative observations on animals, and found that ether was much superior in safety; and from many observations on patients, I am bound to pronounce in its favour. I have used it at all ages, from 3 and 4 years to 71. I have kept patients under its influence for an hour. I have used it with patients where chloroform had been used before and was in future forbidden, owing to the alarming symptoms which it caused; in one instance, four hours were occupied in obtaining restoration, yet in none of these was there the slightest inconvenience with ether. I have used it in cases where chloroform on former occasions produced a most violent spasmodic stage; with ether there was nothing of the kind to be seen. From amputation to the most delicate operations on the eye, or where so short a period was required as necessary in dentistry to such tedious operations as for vesico-vaginal fistula, ether has proved itself both most convenient and efficient, while it has the great recommendation of being proved to be the *safest* of all anæsthetic agents.

The arguments which have been urged against its use have been those only of its being inconvenient. I believe that these inconveniences have arisen from want of a perfect means of application, and the rough way in which it has been administered, by pouring it on a cloth or on a sponge, and either allowing the air to have free access, enclosing the face, more or less, with a cone of pasteboard. The nitrous oxide gas is found to be most efficient when air is excluded. This rule, I believe, also to apply to ether. The more freely the ethereal vapour is exposed to the patient the better; the more perfect will be the etherisation, but not, as with nitrous oxide, where the symptoms of apnœa are, more or less, rapidly and painfully marked, the insensibility will gradually and equally supervene. For this purpose, I have designed an inhaler which is so constructed that by means of an elastic diaphragm with which the instrument is furnished, and which accommodates itself to each respiration, the patient can re-breathe the vapour, for the diffusion of which the inhaler has an internal arrangement. A flexible tube, furnished with a water-cushioned mouthpiece, conveys the vapour to the patient. I have found this inhaler most efficient. I never had a failure or, I may say, an inconvenience. Four ounces of ether will usually be ample to procure an anæsthesia of twenty minutes' duration. It is to be remembered that the influence is not so rapid in taking effect as with chloroform; from four to eight minutes is usually required, it may be a little sooner and it may be a little longer; the patient falls into a deep sleep and may snore. The mouthpiece may then be removed for a little, and with returning sensibility be again applied. As for sickness of stomach, I have not seen it, if the patient be not allowed to take anything solid for three hours or so before operation; and, as for spasm, it is far less usual, and certainly less marked than with chloroform. I allude to cases where the inhaler is used. Should air be freely admitted, I have found by experience that spasm, excitement, and sickness of stomach are proportionately more frequent. Persuaded as I am by experience in the free application of ether by the inhaler, I would urge a calm and dispassionate inquiry by practical surgeons into the merits of ether. May we not be wedded to an agent which is accompanied unquestionably with danger to the patient, and which too frequently oppresses the surgeon with responsibility, more than the operation in which he is about to engage?

OBSTETRIC MEMORANDA.

CONVULSIONS DURING THE REMOVAL OF THE PLACENTA: DEATH.

As death occurring from convulsions during the removal of the placenta is somewhat rare, I am induced to send the following notes to the JOURNAL.

Mrs. W., aged 24, had been confined three times in two years. The birth of her first child had been followed by a severe attack of rheumatic fever with endocarditis; and, although her recovery was slow and tedious, she subsequently enjoyed good health. Her second child was born eleven months after the first. In this case, the placenta was adherent at a point near the fundus, requiring manual interference for its removal. Twelve months after this, on November 27th, 1872, I was called in to attend her in labour with her third child. Upon my arrival at the house, I found the child had been born about ten minutes. The placenta still remained. She was quite cheerful; her pulse was regular and moderately firm; there was no more than the usual amount of hæmorrhage; and nothing at all in her condition to give me the least anxiety, or to lead me to anticipate what was about to happen. After waiting ten minutes, and finding gentle pressure on the abdomen and traction at the cord insufficient to dislodge the placenta, I introduced my hand for the purpose of its removal. As soon as the hand was in the uterus, the patient was suddenly seized with convulsions, accompanied with stertorous breathing, and died in less than five minutes.

Dr. Ramsbotham refers to similar cases of convulsions followed by death whilst removing the placenta, and considers them due to irritation propagated to the brain through the agency of the nervous system. As no *post mortem* examination was permitted in this case, I am unable to state definitely the cause of death; but I am inclined to believe, from the symptoms exhibited, that it resulted from embolism of the pulmonary artery. It is possible that slight structural thickening of the valves or of the columnæ carneæ, the result of the endocarditis that occurred after the first confinement, may have tended to promote the formation of a thrombus.

A. BROOKE GEORGE, L.R.C.P.Edin.

Whitchurch, Salop, October 1872.

THE DIAGNOSIS OF BLENORRHAGIA IN THE FEMALE.—Professor Kuss of Strasbourg, in examining Lock cases, was accustomed to collect with a glass rod, a little of the secretion of the vagina and cervix, at the speculum examination, and deposit it on little numbered squares of glass. These were subsequently examined under the microscope; if the liquid showed pus-globules, the patient was detained as gonorrhœal; if only vaginal cells, she was declared free from specific disease. (*France Médicale*, September 21st.)

REPORT

OF THE

MEANS EMPLOYED IN MEDICAL SCHOOLS OF GREAT BRITAIN FOR THE PRESERVATION OF SUBJECTS FOR DISSECTION.*

ST. BARTHOLOMEW'S HOSPITAL.

MR. HOWARD MARSH, Demonstrator of Anatomy, writes as follows.

The preservative fluid in use here for some years was arsenic, in a watery solution of carbonate of potash. It was only moderately efficient. In the winter it prevented decomposition, but in the summer bodies could not be kept for more than a fortnight or three weeks.

Garstin's embalming fluid has been employed since the summer of 1871. I do not know its exact composition, but its main ingredients are, I believe, carbolic acid, arsenic, and glycerine. Its action has been very satisfactory. One of the first subjects treated with it was used by Mr. Smith for his anatomical lectures in October, November, and December, of last year. This subject was injected with four pints of the fluid on September 7th. During its gradual dissection it was found to be in admirable condition: the muscles retained, in singular perfection, their natural firmness and ruddy appearance; small nerves could be readily traced and isolated; the cellular tissue was somewhat condensed and toughened, but was very easily removed. One of the lower extremities, wrapped in linen and occasionally moistened, was kept in a spare room from December to March; and it remained apparently without change, except that the foot, which was uncovered, gradually became dry, shrunken, and dark coloured. At the end of seven months from its first preparation, Mr. Smith completed its dissection, and it still had, except where it had been allowed to dry, all the aspects of a recently injected limb.

Subsequent trials of this material have had an equally favourable result. Fresh subjects have been preserved from putrefaction; and in those in which the process had already commenced it has been at once arrested, and where the abdomen, face, and other parts, had assumed a green tint, the natural colour has been in a few days restored. No decomposition has occurred during dissection, and there has been no formation of mould. It has been observed that detached portions of muscle have slowly become dry, shrunken, and blackened, but they have never putrefied.

At the end of July, the storing of subjects for the present session was begun; since that date, fifteen have been accumulated, and are now in process of dissection. They are are all in fair condition; the surface has become somewhat "bronzed", but in many this change is scarcely noticed; the cuticle is more or less detached from the hands, feet, and other parts; the muscles are dark-brown in colour, but firm and conveniently moist; the cellular tissue is easily removed; the nerves are dark coloured, and some are softened, but for the most part they are readily traced and isolated. The brain is found in the majority of the bodies to be not well preserved, and in some it is unfit for dissection.

The method of storing subjects has been the following. Three pints of Garstin's fluid are injected with a large syringe as soon as the body is received; on the following day three pints more are thrown in; and on the third day the injection with wax is performed. The subject is then laid in an underground chamber, upon blocks placed under the shoulders and pelvis. This chamber, prepared for the purpose, holds about twenty bodies. Its summer temperature was usually about 50 deg. Fahr. At first it was made almost air-tight by a double door, close fitting, and lined with felt: it was soon found, however, that the bodies grew clammy and wet, and that the cuticle became detached by serum, which collected beneath it at the dependent parts. The door was afterwards left open, so that the chamber was ventilated into a long passage, and the subjects were turned over from time to time and carefully dried with a soft cloth. Small openings were made in bodies that were dropsical, so that the serum drained away.

From these details the following conclusions may be drawn. Garstin's preparation is highly efficient; it will, if used soon after death, entirely prevent decomposition; if decomposition have already taken place, unless it be very far advanced, the fluid will completely arrest it. By the use of this material, subjects may be preserved in an underground chamber at a temperature of 50 deg. Fahr. for at least three months during the hottest period of summer. The degree of preservation is such that the tissues, with the exception perhaps of the cerebral, may be satisfactorily dissected. The amount required for each body is about six pints—three pints on the first and three on the second day. The wax medium for filling the arteries must be introduced as soon as possible, say on the third day: if this proceeding be delayed the wax will not "run", and a sufficient quantity cannot be introduced. Pains must be taken to preserve the cuticle; to this end the subject must be carefully handled, and the ventilation of the store-cellar must be regulated so that the surface of the bodies is kept free from excessive moisture; for, if the surface be wet, the cuticle slides off from the hands, feet, and other parts. It is advisable to turn the bodies from time to time, so as to air the dependent parts, and also to prevent the gravitation of their fluids too much in one direction.

During dissection, parts treated by this method are likely to become too dry, especially if the cuticle have been lost: it is therefore proper, when dissection is not actually going on, to wrap the part in cloths moistened with weak spirit and water, and cover them closely with some waterproof material. These precautions taken, bodies may be kept under dissection in the summer for at least a month, and in the winter for at least three months.

* Continued from page 384 of last number.

WESTMINSTER HOSPITAL.

MR. RICHARD DAVY, demonstrator of anatomy, states that the following are the ingredients used by the school-porter for subjects: 1 lb. of arsenious acid, 1 lb. of carbonate of potash, two quarts of water; boil, and inject as much as is sufficient. This is named the preservative fluid, and precedes the injection of paint by sixteen or twenty-four hours. The arteries (through the ascending aorta) are injected by means of an eight-ounce syringe, with an admixture of red and white lead, patent dryers, and turpentine. We have used this injection for seven years, and find it answers well. The corrosive sublimate injection (as used in the Edinburgh University) is a very good one for preservation. Nervous structures we invariably preserve in alcohol or methylated spirit. Wet preparations are effectually kept in carbolic acid and water cisterns.

REPORTS AND ANALYSES

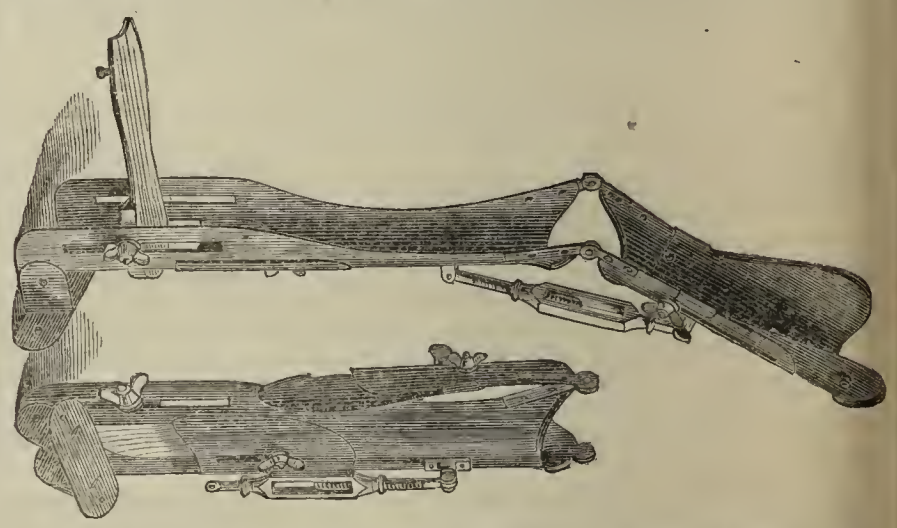
AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NEW FORM OF MACINTYRE'S SPLINT.

THE subjoined drawings illustrate the advantages of an ingenious new form of "Macintyre's splint," made by Matthews Brothers, Surgical Instrument Makers to King's College Hospital, Portugal Street, W.C. When the instrument is in use, it is precisely the same as the old form of splint, the good qualities of which time and innovation have not yet superseded. When, however, the splint is not in use, by simply removing a screw, it folds up upon itself, as it were, occupying half the



space required for the old fashioned appliance, and will go readily into a drawer of moderate size. The sketch shows its compactness and portability, which, combined with the advantage of simplicity, will no doubt find much favour with the medical officers of the army and navy, where facilities of transport and stowage are of so much importance, as well as in private practice. Its presence also in an hospital will doubtless be much appreciated, as it will do much to render the splint-room more accessible and better arranged.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 12TH, 1872.

CONCERNING FOOD.

II.—THE NEMESIS OF BEEF-EATERS.

THE most economical proportion of the various elements necessary for supplying the daily loss is, as we have seen, in round numbers, one part of nitrogenous to thirteen of carbonaceous constituents of food—a proportion best accomplished by the mixtures of the various food-stuffs to which people have been led by natural instinct. Very considerable variations in the relative amounts of the different constituents have, however, been necessitated by external conditions; such as extremes of heat and cold, as well as by other objects desired, whether muscular energy or increase in weight and deposition of fat. In addition to this, the mere chemical question of the relative value of the different articles of food, as far as regards their composition and percentage of carbon and nitrogen, is complicated by a host of other considerations; such as the mode of life, the constitution, the digestive power of different individuals and races, which cannot be, or at least have not been, expressed in chemical formulæ, but which must ever be regarded as most important factors in the case. Though we may reduce all vital action ultimately to heat, and express the value of articles of food in heat-units, no man is practically a furnace into which one can shovel so many heat-units, irrespective of their origin or of the physiological considerations we have mentioned.

A diet consisting exclusively, or almost exclusively, of albuminoids, such as is represented by lean meat, is only possible under conditions of the greatest muscular exertion and activity of the respiratory function; and, in point of fact, though theoretically possible, it has never been found practicable to maintain a man or animal on a diet consisting of albuminoids alone. The researches of Pettenkofer and Voit have shown that albuminoids necessitate a great increase in the consumption of oxygen. This involves greater waste—a waste which steadily increases from day to day, so that a corresponding increase in the amount of food requires to be taken, in order to maintain the equilibrium. Before, however, an equilibrium can be established between the ingesta and egesta, a limit is put to the continuance of the experiment by the impossibility of assimilating the necessary amount. An animal would require for this purpose to consume daily a quantity of lean meat equivalent to one-twentieth or one-twenty-fifth of its body-weight. The addition, however, of fat, or of its equivalent in the shape of amyloids, to the nitrogenous constituents, alters the nutritive value of the latter in a remarkable degree—a fact which is well known to the Indians, who avoid the flesh of lean animals. Fats and amyloids decrease the consumption of oxygen, in consequence of which there is less oxidation of the nitrogenous constituents, so that the animal puts on flesh rapidly. They do not, however, interfere with or diminish the consumption and assimilation of albuminoids, but rather favour both. The joint result is to cause increased tissue-formation and increased muscular energy. A diet, therefore, of which a large proportion is animal food, would thus seem specially adapted for maintaining the body in the highest state of activity, necessitating as it does a great amount of oxidation, and a corresponding liberation of vital energy, and leading to an increased formation of blood-corpuscles as oxygen-carriers. Practically, this has been found to be the case with the prize-fighters, who owe their enormous strength to a diet composed for the most part of animal food.

Albuminoids are important elements of food in another relation. Where the object is to favour the assimilation and deposition of fat, a certain proportion of substances rich in albumen is absolutely necessary. It has been found impossible to cause animals to take on fat without such addition of albuminoids to the carbonaceous elements of their food; and it is not less necessary, though the proportion is smaller, for the due assimilation of amylaceous substances, which, on account of their smaller heat-equivalents, in tropical countries replace the fats of colder regions. An excess of potatoes, bread, and starchy articles of food, with insufficiency of albuminoids, such as we often see in the diet of the poorer classes, leads to a diminution of the nitrogenous and fatty tissues of the body, and replaces the same by water. A purely vegetable diet does this even in a still higher degree, as has been shown by experiments both on man and on animals. Men so fed may have all the appearance of strength and of being well nourished, but it is quite deceptive. Hard physical labour has also a tendency to increase the proportion of water in the muscles; and this, joined to a diet which produces a similar result in another way, must evidently be the worst possible combination. According to Pettenkofer, the wateriness of the tissues predisposes to cholera; hence, among the poor, hard-worked, and badly fed classes, this disease finds its favourite victims; while those who are equally worked, but live on a rich nitrogenous diet, escape. Whether this be the explanation or not, it is at least worthy of note.

What has been said will be sufficient to prove that, in the long run, the most serviceable diet for those who have need of all their physical and mental powers, and exert them to the highest degree, is one in which there is a considerable preponderance of nitrogenous constituents. In England, at least among the better classes, this is effected by a large consumption of animal food, and that, too, of the most costly description, cut and cooked according to certain traditional formulæ and hallowed customs. But it is not the less true that animal food may be replaced by other albuminoids, and strong powerful men and healthy rosy-cheeked children reared on food which to unskilful eyes might seem poor and innutritious. The Scotchman with his porridge and milk and occasional haggis, the German with his "schwartzbrod" and "wurst", the labourer with his bread and cheese or beans and bacon, and even the Bavarian mountaineer with his suet-dumplings, have not only a sufficient supply of nitrogen to replace the daily waste, but a considerable quantity over and above for "luxus-consumption". Of all these, the fresh-meat diet is undoubtedly the most expensive and wasteful. Whence, then, the almost unanimous verdict in favour of this diet among the well-to-do classes, and the universal preference which those less favoured manifest for animal food over their own apparently sufficiently nutritious diet? The explanation is to be sought for among those physiological considerations which we have indicated above. Animal food recommends itself to most people, and particularly to those whose mode of life and occupation render their appetite none of the keenest, by its appetising odour, its racy flavour, its easy digestibility, and the comparatively small bulk which, with all its necessary complement of the other constituents in the shape of potatoes, bread, etc., requires to be taken in order to satisfy

all the wants of the individual. There are many who can digest with ease and relish their dinner of roast-beef, who, if they had to find its equivalent in fish, would complain that it did not "agree"; or if in porridge, would become the victims of insufferable heartburn; to whom the thought of sausages would suggest dogs and other unpleasant things; who, if they managed to eat the requisite amount of beans and bacon, would soon find their stomachs converted into drums; or who, after a meal of bread and cheese and suet-dumplings, would feel for several hours afterwards as if they had swallowed a cannon-ball; and who, if obliged to find an equivalent in vegetables, would think themselves condemned to the tedious labour of hunting for a needle in a haystack. Much of this, however, we are convinced, would disappear on a fair, honest, and steady trial of many of these substitutes for meat, which, if they did not replace animal food altogether, might certainly with economy and advantage diminish its consumption. A great many people in this country eat far more animal food than is good for them. Living under conditions which do not favour that activity of respiration which a highly nitrogenous diet requires, and eating large quantities of animal food, they accumulate in their system an abnormal amount of the less highly oxidised products of tissue-metamorphosis, and make themselves the victims of arthritic disorders. Such people often complain that puddings and sweets do not agree with them; and no wonder, seeing that, after eating more than enough of various forms of animal food, they attempt to add, in the shape of rich puddings, that which would go far to form a satisfactory meal of itself. In view of the great and apparently ever-increasing cost of butcher's meat, an attempt should certainly be made to diminish its consumption by utilising more and more any or all of the articles of food which, in point of nutritive value, may take its place. If people will have animal food, it may be had at a much less cost, but, we are convinced, in a not less nutritious form, in the Australian beef and mutton which are now being largely imported into the country. These may be less attractive than fresh butcher's meat; but a great many of the objections to their use are founded only on prejudice and on traditional notions regarding joints and such-like. The problem of food for the people is one which, in the long run, will work out its own solution. Just as tillers of the soil have driven before them those who live by the chase, so those who can live and thrive and do the same amount of work on cheaper but not the less nutritious food, will inevitably drive obstinate beef-eaters out of the field.

APOLOGIA SCIENTIÆ.

WHILE the general mass of introductory addresses are useless, some are also mischievous. The 1st of October is occasionally used as an occasion for airing crotchets as well as platitudes, and an introductory lecturer finds sometimes the opportunity of being dogmatic as well as dreary. To this happy eminence the orator at University College Hospital this year attained. It has been the glory of University College, and a main element of its success, that, by its organisation and relation to the Arts Department, it offers advantageous opportunities to the few of pursuing the continuous and higher studies which lead to the chief academical honours in the study of medicine and surgery, and which confer on the student who pursues them a complete medical education, such as cannot in any other way be acquired in the same degree. The students of this school have for some years carried off the lion's share of the honours of the University of London; and, if we look round the hospitals of London, we shall find everywhere the graduates of that youngest of the Universities filling the highest places in the pursuit, practice, and teaching of the art and science of medicine. The list of the officers of this school and hospital affords brilliant exemplifications of the results of a course of training for London University degrees, in names such as those of Jenner, Russell Reynolds, Wilson Fox, Bastian, George Harley, Sydney Ringer, Roberts, Graily Hewitt, Tilbury Fox, Henry Thompson, Michael Foster (now removed to Cambridge), Berkeley Hill, Williams, etc.; and, if we look round the metropolitan hospitals, or consult the University Calendar, we shall equally observe that the education which has enabled the student to acquire the degrees, scholarships, and honours of the University of London, has also trained him to the highest and best class of professional work. Young as is the University, it can, we believe, already count a majority of the hospital physicians of London as its graduates, and among them such men as Gull, Quain, Sibson, George Johnson, Wilks, Garrod, Barnes, Lionel Beale, Pavy, Anstie, Moxon, Ballard, Headland, Broadbent, Cayley, Morell Mackenzie, Hilton Fagge, Gee, Green, Kelly, Douglas Powell, Buchanan, Edis, Meadows, and a score of others whose names will rise to the memory if we endeavour to make a complete list of the working celebrities of young medicine. It must be said, however, that the pure surgical, which has always been the less educated part of the medical profession, has not availed itself to the full or fitting extent of the educational tests of this University. With many brilliant exceptions, it is surprising how imperfectly educated are a large proportion of the surgeons who occupy high places in practice. The mechanical part of their profession has acquired so great an importance, and there are so many examples of successful surgeons who are little more than gentlemanly, cultivated, and well informed mechanicians, that many of the rising generation of surgeons are still disposed to look but little beyond the knife. Till recently, the imperfect and partial examinations of the Colleges of Surgeons openly favoured this tendency; for until the last few years it was open to most men to pursue successfully the highest and purest branches of surgery with little more general information or exact mental training than falls to the share of the typical well informed cabman, whom a well known grinder boasted that he could prepare for the surgical diploma within three months.

Notwithstanding the tendency of surgeons of a certain quality of mind to depreciate culture and to favour the traditions of barber-surgery, it was hardly to be expected that a surgeon should be found to lay before students at University College the sort of views which are expressed in the oration delivered by Mr. Christopher Heath, of which we last week published the abstract. He desired them to understand that the work required for the degrees of the London University implied, except for the purposes of merely honorary distinction, so much time thrown away. If they had abundance of spare time and cash, they might aim at the decorations, since other people seem to think a good deal of them; but for this purpose they must waste their time in learning "science". Such dicta are very likely to be acceptable to students; for to follow them saves a great deal of trouble, and to adopt them affords a cheap sneer at the distinctions which they will probably fail to gain, and at the knowledge and power which they will neither acquire nor appreciate. It is worth while, therefore, to point out the fundamental error which pervades them, and which may often be observed to characterise shallow criticisms of the University of London.

It is the practice of all British Universities which grant degrees in medicine to require on the part of their graduates a knowledge of the sciences upon which medicine is based. The various subjects, and the order in which they should be studied, are defined in accordance with principles which will stand the test of criticism. Apparently the orator has not heard of a classification of knowledge, or of a classification of sciences. He strangely needs to be told that there is a good deal of difference between a knowledge of *things* and a knowledge of *phenomena*; that science has two equal and yet distinct departments, the concrete and the abstract; that art, when it is something more than the blindest empiricism, is the fusion of these two. The conditions of the study of Nature require that the sciences should be learned in the order

of their complexity and mutual dependence; and this order is the order of their difficulty. The student, in passing from one subject of study to another, in the order from the simple to the complex, does but fulfil the conditions of the study of Nature imposed on him by Nature herself. Mr. Mill says: "The scientific intellect, both in the individual and in the race, must learn in the more elementary studies that art of investigation and those canons of proof which are to be put in practice in the more elevated. No intellect is properly qualified for the higher part of the scale without due practice in the lower." If the science of medicine had received its final constitution, if it were anything more than a collecion of materials for a science, we might be better content to ignore the necessity of training scientific physicians and surgeons; but, as we have to evolve the science of medicine, we must work in harmony with the laws of the evolution of knowledge, and recognise in our teaching the fact that physiological phenomena depend on the laws of physics and chemistry, as well as on their own laws in addition. At least the details of a machine must be known before a successful attempt can be made to put in order any part that may get wrong. Even Mr. Heath would admit that the surgeon must proceed through the simple facts of anatomy to the more complex parts of his science. Mr. Heath's oration is, in fact, an echo of the rash tendency to regard with impatience the presence in any curriculum of studies which demand time and thought for their successful prosecution. It is the reflex of a senseless intolerance of studies which are troublesome to mental inactivity, and which are not readily adjusted to the process of veneering for degrees. London medical degrees, like all other results of like nature and value, require the expenditure of time and thought. It is not a function of the London University to cheapen its degrees by adapting its regulations to the precocious and immature practice of a profession, its examinations to teaching power of a low order, and to capacities dulled by nature, artifice, or neglect. It is not right that its badge of scholarship should be placed within the reach of those who do not care or are unable to comply with the conditions under which alone true scholarship can be attained. It is fitting that those who have won it through years of patient cultivation of the mental powers, should resist the appropriation of the scholar's voucher by those who have never thought seriously on any subject for a day. The Arabian rage against books and learning has lost some of its importance; but it seems still to be as innate in the uncultivated mind as when it lit the flames of Alexandria, and sought to deliver over the world to practical men, whose common sense dispensed with learning, and achieved two centuries of intellectual dulness. This is not the moment to attack the foundations of higher education, or to endeavour to arrest the efforts which we are making to train a race of well-grounded investigators, who shall not be content to leave original investigation to Germany or to France, or to live in abject veneration of the few who know how to handle the facts, while they themselves have but learnt by rote the words or formulæ of medical science. We would have a race of real, earnest, cultivated workers; and for this end it is advisable that Mr. Heath's advice should be noted as precisely indicating the point of view which is most to be shunned, and the course which is to be most strictly avoided.

SECRET POISONING.

THE extraordinary story of secret poisoning told in the police report concerning the woman Mary Ann Cotton, recalls to mind the blackest days of the sixteenth century, in which Tophana flourished and the Marchioness de Brinvilliers plied her deadly arts. Whoever may be the culprit, there seems little doubt that at least five persons have been buried with certificates of death from "gastric fever" who in truth died from chronic arsenical poisoning. In these days, when secret poisoning is generally supposed to be a thing of the past, such a charge, however incredible, should it prove well founded, will naturally excite considerable alarm. The first question which arises is, Is it possible, notwithstanding all the knowledge we possess in modern times of the phenomena and causes of disease, and in spite of the perfection of chemical methods of detecting poisons, that poisoning on a scale such as here represented can be successfully carried on for so many years, and yet avert suspicion and elude detection? The question is one which must be cautiously answered. Ordinary arsenical poisoning presents a train of phenomena which cannot well be confounded with any natural disease, cholera alone excepted. Even here the diagnosis is not a matter of difficulty, as in most cases there are collateral circumstances of such a nature as to call for special attention, arouse suspicion, and lead to analysis which places the matter beyond all possibility of a doubt. It is otherwise, however, where, instead of the usual unskilful administration of rapidly fatal quantities of the poison, it is given with a skilful hand, and in small oft-repeated doses. In these cases, death may ensue many days or weeks afterwards under a train of symptoms, which on cursory examination can readily be confounded with gastro-intestinal irritation or "gastric fever", the result of other causes. Especially is this mistake likely to be made when the poison is administered at times when such diseases are prevalent, and where even a considerable number of anomalous symptoms would not excite special attention. It is true that a careful investigation of the symptoms would reveal facts which ought to lead to an inquiry, and, suspicion once aroused, would inevitably result in detection. It is indeed always easy for any one, when the whole of the facts concerning the accused are brought together in a cumulative manner, to see matter for grave suspicion. Where, however, there are no specially suspicious collateral circumstances, and no apparent motive for crime, a medical man engaged in large practice might, it must be sorrowfully admitted, readily overlook apparently trivial divergences from the ordinary forms of disease daily presented to him. It is quite possible, therefore, that real cases of chronic poisoning may and do escape detection. More than once, indeed, medical men have, like Mr. Image of Bury St. Edmunds, detected and arrested secret arsenical poisoners in the midst of their career and brought them to justice; but the possibility of such crime is not always before our mind. It is, perhaps, too much the custom to consider toxicology a subject only for specialists and chemists, to think too little of symptoms during life as evidence of poisoning, and to ignore the possibility of poisoning in clinical examination. The analyst's work in such cases is comparatively easy: poisoning can be detected in the first instance only by medical men in ordinary practice, and their work is most delicate, difficult, and, in the first instance, conjectural. We should be loth to suppose that monsters of iniquity like Tophana, or such as the woman Cotton is suspected to be, are common in this age. Their existence, however, should be impossible. We cannot expect all medical men to be experts; but if attention were directed always to toxicological possibilities, and if *post mortem* examinations were more common in ordinary practice, we should not hear of poisoners escaping detection. In the latter consideration, indeed, lies the key to this difficult problem. Were examinations after death the rule in private practice, as they are in hospital practice, there would be no room left for the dark practices of the secret poisoner. Detection would follow inevitably and instantly on crime, and, indeed, poisoning must cease; but the insuperable prejudices of the public interfere. Even in hospitals *post mortem* examinations—the very essence of all progress and security in medical knowledge—are frequently opposed and sometimes denounced by magistrates and persons in authority. An inquest without a *post mortem* examination has been justly declared by the greatest European medico-legal authority, Dr. Taylor, to be a dangerous and deceitful farce; yet the the one Middlesex coroner who is so just and wise as to make his inquiry thus adequate, encounters, as the daily journals show, the incessant persecution of the Middlesex magistrates. If inspections of the body after death were the rule instead of the exception in private life as it is in public institutions, crime would be baffled, and knowledge would be advanced in an almost equal degrec.

By inadvertence, Mr. John Croft, one of the surgeons of St. Thomas's Hospital, and the Introductory Lecturer this year, was described as assistant-surgeon. Mr. Croft has been full surgeon to the hospital since July 1871.

The French Faculty of Strasburg has been transferred to Nancy, retaining its theoretical departments of teaching only. It is intended, in some measure, as an university of observation. France recognises how much the recent preponderance of Germany is due to her superiority in the organisation of the higher education; and, by multiplying educational centres, seeks once more to emulate and surpass her Teutonic rival. May the knowledge always be used to good ends: the learning of such an university as this cannot fail to be fruitful; for, in any case, its lessons can only serve to mitigate more effectually the horrors of war.

UNIVERSITY COLLEGE HOSPITAL.

The Council of University College propose to appoint an additional assistant-physician, assistant-surgeon, and assistant medical officer in the skin department.

LOCAL GOVERNMENT.

Mr. Stansfeld has suggested that the Hampstead Hospital could be used for the reception of those lunatics who were awaiting certificates of removal from workhouses to lunatic asylums, so as to secure better treatment previous to admission into an asylum, and to enable Boards of Guardians to dispense with the servants who now had charge of lunatics in workhouses. The managers are prepared to undertake the conversion as proposed, if the Local Government Board issue the necessary orders.

ARCHBISHOP MANNING ON EVOLUTION.

The address of the Roman Catholic primate, on the occasion of the distribution of prizes at the London Hospital last week, was able and remarkable in many respects. He skilfully summarised the intellectual qualities which lead to professional success, laying stress on three—intention, attention, and intensity. But it was chiefly remarkable as containing what has been interpreted as a definite adhesion—important by reason of his position in the Catholic hierarchy—to the doctrine of evolution. It was contained in the following passage: "Whence comes the type of man? We see it beginning as a speck of organic matter, and gradually developing into a marvel of engineering skill." It has for some time been stated that the able minds among the Roman Catholic clergy see nothing in the doctrine of evolution which is incompatible with their theological system. Some able articles in the *Contemporary Review* gave colour to that view; and the categorical declaration of Archbishop Manning has therefore created the less surprise among biologists.

PSYCHOLOGICAL EFFECTS OF WAR.

a paper read before the Académie de Médecine, Dr. Lunier considered the question of the "Influence of the Events of 1870-1871 on Insanity in France". He proposes and answers the two following questions. Have great political and social commotions the power of determining an outbreak of insanity? Do they contribute to increase the number of the insane? To this end M. Lunier has instituted an inquiry into all the French asylums, and he has tabulated the results obtained, which are as follow. The number of admissions into the asylums of France, which from the 1st July, 1869, to the 1st July, 1870, were 11,655, in the following year (that is during the war and the Commune) decreased to 10,243—that is, 1,412, or 12 per cent. less than the previous year. During the last six months of 1871, the number of admittances was rather higher than during the corresponding six months of 1869, but it still remained notably below what it would have been had the augmentation been followed by the minimum progression of the preceding years. The admissions of the last six months of 1871 are then far from making up the deficit of the preceding six months. Of the 10,243 insane admitted into the asylums from the 1st July, 1870, to the 1st July, 1871, 1,322—that is, nearly 13 per cent.—became insane in consequence of the events of 1870-1871; 15 per cent. of these were men and 9 per cent. women. During the last six months of 1871, the French asylums received 400 patients who had become insane in consequence of the events of 1870-1871: the proportion, in comparison to the whole number admitted, is 8 per cent. men and nearly 6 per cent. women. The examination of the statistics for the 1st January for the years 1870, 1871, 1872, gives the following result. On the 1st January, 1871, the French asylums contained 38,100 insane, 64 less than at the same time the previous year. On the 1st January, 1872, the number was 713 less than in 1870; but if it were calculated that insanity had increased at the same rate as in previous years, it would be found that the diminution of cases attributable to national events was, in fact, 3,268. The events of 1870-1871 have, therefore, produced two apparent contradictory results: they have caused the outbreak of from 1,700 to 1,800 cases of insanity, and yet they have led to a decrease of more than 3,000 in the number of the insane. The principal causes for this decrease seem to be: the disturbance caused by the invasion in the organisation regarding the insane; the greater strictness used before admission was granted; the diversion produced by these events in the minds of a certain number of persons predisposed to insanity; in certain parts of the country, the momentary decrease of excessive drinking of alcohol; and, lastly, the rapid termination by death, or, much more often, by recovery, of insanity caused by the events of the war.

INFECTED DRINKING-WATER.

The autumnal records of the Registrar-General always show a considerable increase of mortality from diarrhœa. It is very much the fashion to attribute this to "unripe fruit"; it may, however, much more certainly be traced, in a large number of cases, to infected water. Mr. Wanklyn writes to say that the water supplied by the Southwark and Vauxhall Drinking-Water Company is remarkably impure at the present time. According to his analysis, it yields, in one million parts,

	Analysis 1.	Analysis 2.
Free Ammonia ...	... 0.06	... ... 0.06
Albuminoid Ammonia ...	0.13	... ... 0.12

There ought not to be more than 0.02 of "free," and .06 of "albuminoid" ammonia. The presence of the excess of free ammonia shows very recent sewage contamination. As will be remembered, this company has been uniformly found to be supplying bad water ever since the year 1867, when delicate analyses of water were first made.

LADY-PHARMACISTS.

A further important step has this week been made in the scientific education of women, and their admission to useful and privileged callings. At the last meeting of the Council of the Pharmaceutical Society, it was moved by Mr. Hampson "that ladies be admitted to attend the lectures and the laboratory of the Pharmaceutical Society." Mr. Hampson said that ten years ago a resolution was passed by the Council prohibiting the admission of ladies, and that during the attendance of Miss Garrett this prohibition was unrescinded; but the professors, finding that her presence increased the order and decorum observed in the classes, raised no objection to this irregular proceeding. By the Pharmacy Act of 1868, ladies were admitted to the examinations and were legally qualified to practise pharmacy, and he could see no valid reason why they should be excluded from the instruction enabling them to pass these examinations. Mr. Brown seconded the motion, adding that, if women were thus educated in pharmacy, a father might train up his daughter to take a part in his business, and a lady might be enabled to carry on the business after the death of her husband. Objections were made by other members to the laboratory being opened to ladies; the principal objection urged was that possibly they would come in such numbers that new accommodation would have to be sought. Mr. Brown therefore consented to withdraw the word laboratory; and it was finally "resolved unanimously that the resolution passed in 1862, prohibiting ladies from attending the lectures, be

rescinded, and that ladies be admitted as students to the lecture-classes of the Pharmaceutical Society." At present, but one lady has taken advantage of the privilege offered; but, as soon as the resolution becomes more widely known, it is probable that the liberality of the Society will be recognised by ladies, who will avail themselves of this excellent opportunity of studying practical chemistry and botany. The courses of instruction in these sciences at the Pharmaceutical Society are remarkable for their excellence, completeness, and cheapness. The lectures on chemistry are by Professor Redwood; those on botany, by Professor Bentley, commencing early in October. The chemical lectures are continued three days a week until the end of July; the botanical lectures, lasting for the same period, being delivered on two days in the week. During the summer months, they are delivered in the Botanical Gardens, Regent's Park. The fees for the entire course are only £2 2s. They are probably the most complete courses delivered in London.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THE first meeting of this Society was held on the 3rd of October; Dr. Hall was in the chair. The following officers were elected for the ensuing year. *President*—Mr. W. F. Favell; *Treasurer*—Mr. H. J. Walker; *Committee*—Dr. Hall and Dr. E. Jackson; *Secretaries*—Messrs. Hallam and A. Jackson. Mr. W. F. Favell will read a paper at the next meeting to be held on the 17th.

MACCLESFIELD INFIRMARY.

A NEW Infirmary has just been opened by Lord Egerton in Macclesfield, The total cost of the building is £20,000, which sum has been raised by public subscription. There is an endowment-fund of £31,000, £30,000 of which was left for this purpose by the late Mr. Joseph Tunnicliff, and £1,000 by the late Dr. Swanwick. The building is built on the pavilion plan, and all the arrangements are as perfect as medical science can suggest. With the Infirmary are combined a dispensary for out-patients, and a children's hospital, supported by independent contributions.

THE HEALTH OF THE BRITISH VOLUNTEERS IN BELGIUM.

MR. HINCKES BIRD, chief medical officer of the Anglo-Belgian Staff, has drawn up a report of the state of health of the British Volunteers who recently visited Belgium. With the exception of a case of pneumonia and two severe cases of epilepsy, the usual run of diarrhœa, and catarrh, chiefly made up the list of ailments. Drs. Helsham, Sandwell, Ryan, Ambler, and Ridsdale, were the other members of the medical staff.

DEATH FROM BICHLORIDE OF METHYLENE AT THE MIDDLESEX HOSPITAL.

WE regret to state that a death from the administration of bichloride of methylene took place on Wednesday at the Middlesex Hospital. The patient, a man aged 48, was admitted for a deep abscess in the buttock, discharging a short way within the sphincter ani. He was apparently healthy. It was thought desirable to lay the abscess open, and, if necessary, to complete the operation as for fistula. Methylene was used on this occasion: about two drachms had been inhaled, and he was insensible; when, as the operation was about to be commenced, and a minute after the inhalation had been stopped, it was noticed that his breathing had ceased, and he became very livid. Silvester's method of keeping up respiration was at once resorted to, and he gasped once or twice. Galvanism was employed, but no effort produced any effect. The only *post mortem* condition of importance was the existence of a rather large and very flabby heart. We shall give a detailed report of the case in our Hospital Reports next week.

THE FUNCTION OF CONVALESCENT HOMES.

IN the Annual Report of the Convalescent Society for Newcastle-on-Tyne, a fear is expressed that, because of want of sufficient care and investigation on the part of the givers of letters, convalescent homes are in danger of being abused by being made available as a residence for persons simply needing a change to the seaside, and who are not convalescent from some previous illness. This may be a subject of anxiety; and it truly behoves every subscriber to make due inquiry as to the real need of the recipient and the suitableness of the case before giving a convalescent letter. But we think that, as the task of medicine is prevention as well as cure, so to poor persons fallen into a condition of debility and decay, without any previous acute illness, a convalescent letter, enabling them to gain health and strength at the seaside, is as great a benefit as to a person recovering from an attack of illness; and the Society, established for the purpose of aiding poor invalids to regain strength, is not in any way departing from its objects in accepting such inmates.

PHTHISIS AND DAMP SUBSOIL.

A RESPECTED correspondent writes to us on this subject:—

I observe that, in his paper on the Geographical Distribution of Phthisis in last week's JOURNAL, Mr. Haviland gives the entire credit of discovering the relation which is held to exist between dampness of soil and phthisis to Dr. Buchanan. Without the slightest wish to depreciate the importance of the evidence which this distinguished physician has collected as to this point, I feel sure that this claim is one which Dr. Buchanan himself would be the first to disown. Some time before he began his researches, a medical practitioner at Salisbury, whose name I do not for the moment remember, published a very interesting and able paper on the mortality of Salisbury, past and present, in which he drew special attention to the very remarkable reduction in the mortality from phthisis which had followed the laying down of an improved system of drainage in that city. The writer attributed this reduction entirely, if I mistake not, to the diminished dampness of the subsoil which had resulted from that operation. Of the reality of this diminished dampness he gave many decisive proofs. The data adduced in the paper are in the highest degree precise, and the whole case is put with great force and clearness. As long ago as 1838, in a very interesting paper published in the *Journal des Connaissances Médico-Chirurgicales*, Fourcault recorded observations which he considered entitled him to lay down the following proposition:—"La phthisie tuberculeuse a son maximum de fréquence dans les lieux où l'air se trouve à son maximum d'humidité." But the credit of being the first to establish, on a scientific basis, the existence of a fundamental relation of some sort between phthisis and dampnees of soil, belongs wholly to my revered friend, Dr. Bowditch, of Boston, in the United States. Dr. Buchanan's investigations did not commence until 1865 or 1866. Now, in a preface to a paper on Consumption read by Dr. Bowditch in 1862, after remarking that there are some spots which have very little of that scourge of the human race, while in other places, and even in particular houses, it prevails to a frightful degree, the writer adds the following remark: "Facts, I believe, indicate that dryness of the soil in the surroundings of any place is the prominent characteristic of the former, or of places comparatively free from consumption; while dampness of the soil characterises the latter, or, as they may be aptly called, consumption-breeding districts." As, however, in matters of this kind it is always best that writers should speak for themselves, I have sent with this letter Dr. Bowditch's work—a work in which this very question of priority is fully discussed. Toward the end of his paper, Mr. Haviland speaks of Dr. Buchanan's discovery having been *confirmed* by Dr. Bowditch. A perusal of this book will, I think, show that it would have been a truer statement of the case to speak of Dr. Bowditch's discovery having been confirmed by Dr. Buchanan.

PROFESSOR KINGSLEY ON PHYSICAL CULTURE.

IT is a sign of healthy progress when a man of Professor Kingsley's professional influence is found advocating the cause of physical education as the necessary complement of intellectual soundness. He bewails the progressive degeneracy of the British race, which he declares himself to have observed within the last thirty-five years. He ascribes this alleged degeneracy (which we venture to doubt) to two causes: the rapid increase of the population at the beginning of this century, following closely upon the long French wars, in which the "fittest to live" had been killed, while the weakest or "fittest to die" were left to become the fathers of the next generation. He ascribes a large, and perhaps juster, part to the unhealthy dwellings and crowded cities in which the majority of the people pass their lives, and to their sedentary occupations. But Professor Kingsley believes that the seeds of here-

ditary disease may be rooted out and the human race regenerated by an obedience to the laws of health. These laws must be known to be obeyed; and he therefore warmly advocates the teaching of physiology and the physical science of health to all men and women. To the objection that we want not a nation of athletes, but of intelligent men, he gives the reply, learnt from sources familiar to our profession, that "*mens sana in corpore sano*" is the maxim of true philosophy; that without healthy bodies we cannot, in the long run, have healthy intellects; and that, whenever we have a population generally weakly, stunted, and scrofulous, a corresponding type of brain will be found, which cannot be trusted to do good work. As our models, he reverts to the type of the ancient Greeks, who, by cultivating body and mind to a great degree of perfection, have left us, as precious heirlooms, statuesque representations of "the tender grandeur, the chaste healthfulness, the unconscious, because perfect might" of physical perfection, and, at the same time, a philosophy, literature, and art which are to this day unrivalled. All this has been often said before, and with greater exactness, but not always with so much picturesque force. Moreover, the familiar teachings of the physiologist and physician acquire freshness and new influence when repeated with conviction by a popular canon to a popular audience. They are welcomed just now by leading journalists as a sort of new revelation, and indeed there are few public journalists who would not be the better for an elementary course of physiology and a knowledge of the rudiments of natural science.

DEATHS FROM CHLOROFORM.

We are indebted to Dr. L. W. Marshall, of the General Hospital, Nottingham, for the following note.

I beg to forward to you a few notes upon a case of death during administration of chloroform which occurred in this hospital last month. J. T., a very stout man, was admitted at half-past nine on Thursday evening with compound comminuted fracture of the left leg. Amputation was resorted to, and commenced about twenty minutes past ten. He did not appear to be suffering from shock; and the quantity of blood lost, although large, was not so great as might have been expected from the nature of the injury. Chloroform was administered to about three drachms, and unconsciousness was procured without any untoward symptom, with the exception of vomiting twice. He was moved to a convenient position for operation. During this process his face became livid, the tongue was thrust between the teeth, and respiration ceased, but was immediately resumed on removal of the tongue by forceps. He continued to respire with ease, and became partially conscious. The operation not being quite completed, I was asked to give more chloroform, as he was moving the stump, and at that time (ten minutes or a quarter of an hour before death) I placed a few minims on the mask, the vapour from which was inhaled for a few seconds only. Ten minutes after the removal of the mask from his face, I noticed that the respirations were more shallow and less frequent, being, however, unaccompanied by lividity of face or failure of pulse; when suddenly his face became livid, his teeth firmly fixed, and respiration ceased entirely, no effort of that nature being made after this time. Galvanism and artificial respiration were resorted to and used for thirty-five minutes, but with no effect. A necropsy was made thirteen hours after death in great haste, on account of the short notice given by the coroner. The body was well nourished, in fact, excessively fat. No other injuries, with the exception of a slight abrasion of the right cheek and thigh, were found, besides that of the left leg. He had lived very freely, although not a drunkard. The heart was pale, empty, and appeared to be of the usual size, but was not weighed. The mitral valve was slightly thickened; and there was atheromatous deposit in the aorta. The striæ of the muscular fibre were found to be distinct on microscopical examination. The lungs were congested. The liver weighed 6 lbs., and to the eye appeared to be fatty. The kidneys unfortunately were not examined, as I was called away by the coroner. Besides the pathological conditions, the entire absence of general venous engorgement was noticed. The stomach was distended and half full of partially digested food: the pharynx contained some of this.

Mr. William Bird, York, writes:

As I fully coincide in the view you express in last week's Journal, that every case of death from chloroform should be placed on record, I forward you the details of a case that unfortunately occurred in my practice a short time ago. My patient, Mrs. C., was a washerwoman, aged 57, of active habits, temperate, and in good general health. For some months she had noticed an enlargement in her right breast, and, as it gave rise to but little inconvenience, she took no notice of it until about six weeks before the fatal event occurred. When I first saw her, she complained of much pain in the tumour. I advised her to place the arm in a sling, enjoined complete rest, and prescribed soothing applications. By these means she was much relieved, the inflammatory condition subsided, and on the day before the operation was to have been performed for the removal of the diseased part the inflammation that had previously existed about the gland had completely gone, and there was neither tenderness nor enlargement of the axillary glands. Mrs. C. was apparently in the best of health, although very nervous about the operation, which was fixed for August 30th. On that day my assistant, who is a qualified gentleman, accompanied me to the house of the patient. Mrs. C. and her friends had expressed a wish that chloroform should be administered. Before its administration my assistant and I examined the condition of the heart and lungs (as, indeed, I had done previously a week before), but, so far as we could judge, there was no discernible abnormal condition. The patient, by direction, had had no solid food for between three and four hours prior to our visit; and, according to my usual custom, I directed her to have a tablespoonful of brandy in a little cold water. Less than half a drachm of Duncan and Flockhart's chloroform was then administered to the patient on a sponge by my assistant. The sponge was a very porous one, and was at first held at least an inch from the mouth and nostrils, which it was gradually made to approach. I had charge of the pulse on one side and my assistant on the other. From time to time I examined the condition of the eyes. The first stage was quickly passed. Then the patient became very excitable and struggled, but not so much as I have witnessed in many cases. She talked incoherently about her business and other matters, and once or twice called out "Fetch the police." A second half-drachm of chloroform was now further administered in the same cautious manner as before. Within a minute after this the pulse, which throughout had been somewhat feeble, suddenly stopped. The breathing almost at the same moment became short and shallow, and then ceased, and the countenance became livid. These symptoms of danger occurred almost simultaneously. A few seconds before reflex contractions of the eyelids took place on touching the conjunctiva, and the pupils were slightly contracted. The administration of chloroform was immediately suspended, the window thrown open, cold water dashed on the face and chest, the tongue drawn out by forceps, and artificial respiration (by Silvester's method) adopted; but it was evident from the first by the extremely dilated pupils, the quickly increasing lividity and sudden and contemporaneous cessation of respiration and circulation, that the case was hopeless. Such are the details of the most unfortunate case that has ever occurred in my practice. I have myself administered chloroform some hundreds of times, and my assistant has given it about fifty times; indeed, he had given chloroform from the same bottle to a child earlier in the morning for the removal of a large nævus. An inquest was held the next day, when "death from chloroform" was recorded. I regret that the medical gentleman called in by the Coroner did not consider a *post mortem* examination necessary. There is one question I should be glad to have answered relating to the administration of chloroform—Is it improper or injudicious for a qualified practitioner and his qualified assistant together to administer chloroform, or should there be always in attendance a third and independent medical man. Since this unfortunate death took place I have been informed by two medical gentlemen of standing that it is better to have a third practitioner present in order that public opinion may be satisfied in the event of a fatal result happening. As this is quite a new idea to me, I shall be glad to know if it is the general custom. I can understand the observation as coming from an unprofessional person, but not otherwise.

ORAL INSTRUCTION OF DEAF-MUTES.

The effort made to introduce into this country the system of instructing deaf-mutes in lip-reading and articulate speech shows gratifying signs of success. We gave prominent notice to the subject in our leading columns this time last year, which led to a correspondence on the part of the advocates of the old and new methods. An Association had previously been promoted with the object of assisting Mr. Van Praagh, who introduced the method into the country, to carry out, on a more extended scale, the oral teaching of deaf-mutes, and for the purpose of training qualified teachers according to the approved system. The Association has now been firmly established, supported by a large number of influential gentlemen; and a normal school has been opened at

No. 12, Fitzroy Square, under the direction of Mr. Van Praagh. A form has been drawn up by the Committee, which has to be filled up by the friends of applicants for admission. The information collected by means of these, as to many of the causes of deafness in children, will, if the details are carefully inquired into, prove in a few years of much value.

SCOTLAND.

THE West of Scotland Convalescent Seaside Homes are, we are very pleased to observe, thriving. At a meeting of subscribers, held on Monday, it was stated that between six and seven thousand pounds of debt had been cleared off, and that two thousand pounds now remain at the credit of the institution.

NEW GLASGOW LUNATIC ASYLUM.

THE foundation-stone of the new asylum at Lenzie for the insane poor of the Barony parish, Glasgow, was laid with masonic honours on Monday. The building will be in the Elizabethan style, and will cost about £60,000. One hundred and seventy-six acres of ground have been secured by the Board, and about twelve acres of this will be covered by the new buildings.

EDINBURGH UNIVERSITY COURT.

AT the last meeting held on Monday, Dr. Claud Muirhead and Dr. John Duncan were recognised as extra-mural lecturers in the practice of physic and surgery respectively.

UNIVERSITY OF ABERDEEN.

THE following Assistant Professors in the Faculty of Medicine were appointed for the ensuing year at the University Court, held on Tuesday. *Medical Jurisprudence*—Dr. Alexander Ogston; *Materia Medica*—Dr. A. D. Davidson; *Anatomy*—Dr. Robert Reid; *Chemistry*—Mr. Joseph H. Franklin.

THE LADY MEDICAL STUDENTS.

AT the ordinary weekly meeting of the managers of the Royal Infirmary, held on the 7th instant, the subject of admission of lady medical students to the practice of the infirmary was brought up, in consequence of a letter addressed to the managers by Miss Jex-Blake. A resolution was moved that the same educational advantages be granted to female as had hitherto been allowed to male medical students, in accordance with the statute passed by the Court of Contributors. As no notice of this motion had been given, the consideration of the matter has been postponed to a future meeting.

THE DUNDEE ROYAL INFIRMARY.

THE annual report for this year of the Dundee Royal Infirmary, which has just come into our hands, presents at the first glance a rather appalling item. Nearly one-half of the patients admitted into this valuable and important institution during the past year was made up of fever cases. Only 568 medical and 612 surgical cases were treated, whilst 1,138 fever-patients were received into the infirmary. We gather from the report that the fever-patients were cases of typhus and relapsing fever and small-pox, all of which diseases have been raging in Dundee during the year. That the slums and wretched sanitary arrangement which, to the discredit of the inhabitants, are still permitted to exist in many parts of Dundee, should offer every facility for the full play of an epidemic disease, the most friendly critic of that town could not with safety commit himself to deny. The facts contained in the report before us are a sufficient proof of this; but why the only hospital existing in the town for general diseases should be glutted with small-pox and fever-patients, baffles us. Not only was the infirmary "full even to overcrowding", but the directors, with a wail, express their disappointment that an arrangement with the local authority and parochial boards to take over their cases also and erect a building *within* the hospital grounds for their accommodation had fallen through. We can express no wonder that "the medical and surgical cases in the house greatly decreased". People are not easily enticed into exposing themselves to the risks of infection so amply offered by the directors of the Dundee Infirmary. These gentlemen were not satisfied with filling both wings, but they considered themselves justified also in appropriating the top flat of the infirmary for a fever hospital. No wonder that during the epidemic small-pox broke out in the medical and surgical wards and carried off a number of patients, while others who had been discharged convalescent from relapsing fever were readmitted suffering from typhus, which it is not improbable they in many cases contracted before leaving the hospital. That such a state of things should be permitted by an intelligent and wealthy community is astonishing; and this surprise is not by any means diminished when we find at the end of the report that the charity of the wealth-vaunting manufacturers of Dundee has not, after abundant opportunity for subscribing, exceeded the paltry sum of £1,314 for the erection of a fever-hospital, and this sum is made up by one munificent donation of £1,000 Such a state of matters, we may fairly expect, will not be allowed to last long. The report contains a general abstract of the cases treated, drawn up by Mr. Edward Smyth. During the year, in consequence of Dr. Moon's resignation, Dr. A. C. Campbell has become the colleague of the attending physician, Dr. James Miller, and has been appointed attending surgeon to the infirmary.

IRELAND.

AN association of the Workhouse and Dispensary physicians of the County Donegal has been formed for the purposes of watching over local professional interests, and of acting in concert with the Poor-law Medical Officers' Association. It is designated "the Donegal Branch of the Irish Poor-law Medical Officers' Association." Dr. Ashe has been appointed the county representative.

CENSUS OF IRELAND, 1871.

THE first of the census abstracts and reports for Ireland has been just published. It is for the county of Carlow. The Commissioners have decided that, in the census for 1871, the counties are to be published in alphabetical order, beginning with the province of Leinster, to be followed by those of Munster, Ulster, and Connaught. This principle has much to recommend it; as it enables those of the public who might not require the census reports in their completeness to have access, at a small cost, to the statistics of the territorial division in which they have a more immediate interest. Carlow, with the exception of Louth, is the smallest county in Ireland. It has a population of 51,650 persons, or one to every four acres. They dwell in 9,701 houses, that is, about five persons to each house. Of these residences, 1,366 are described as fourth-class houses, that is, having but one room and one window: of these, 267 are mud-cabins. In these 1,366 fourth-class houses reside 1,420 families. The public institutions of the county consist of a workhouse, three fever hospitals, a county infirmary, a district lunatic asylum, a county gaol, and military barracks; all of which contained 746 persons, including the staff, on April 2nd, 1871. There were 55 blind persons, 59 deaf and dumb persons, 81 idiots, 186 lunatics, 876 paupers, 89 beggars and vagrants, and 235 persons sick at their own homes, and 39 in hospital, at the same date. During the decade, 7,337 deaths had occurred, according to the census returns, and 295 inquests had been held during that period. At the time of taking the census there were said to be four persons—three female and one male—over the age of 100 in the county of Carlow. There are 20 physicians and surgeons in the county: of these 12 are Poor-law medical officers. There are, therefore, about 2,500 persons to each medical man, the population being 51,650. Of these, the dispensary and workhouse physicians attended close upon 9,000 during the year 1871. We trust that no unnecessary delay will take place in the publishing the abstracts of the census of the other counties. The vital statistics will not appear until the publication of the present series is complete.

ABSTRACTS OF INTRODUCTORY ADDRESSES

DELIVERED AT

THE METROPOLITAN AND PROVINCIAL SCHOOLS,

On OCTOBER 1st and 2nd, 1872.

ST. MARY'S HOSPITAL.

THE Inaugural Lecture was delivered by Mr. A. T. NORTON. He remarked that the question how to educate so as to befit members for the profession had given rise to much discussion at one time, and not long ago no examination was held upon subjects of general education. Consequently, men totally ignorant of their mother tongue presented themselves for examination for a diploma. They were capable of passing that examination, and they became duly qualified. They could not be surprised that such individuals not only brought the profession into disrepute but also delayed its progress. Then, of course, came the question whether it would not be possible to add to the preliminary education, to which those preparing for the profession must pass, several of those subjects which were at present taught in the medical schools. The time spent at the hospital was too short to acquire a knowledge of medicine, and yet they had to work into that time several extra studies, any of which might occupy a life. Their own school (St. Mary's) had endeavoured to lead the way in that respect. They had instituted three scholarships in natural science, each of the annual value of £40, and tenable for three years, the subjects being chemistry and experimental physics, with the addition of either botany or zoology, at the option of the candidates. This examination was, of course, voluntary, but if all medical schools would unite and necessitate an education in these subjects before admitting pupils to their lectures, the youth of the future would benefit by the change. The primary education was now more than sufficient to occupy the time of a school-boy, and he was not capable of adding to the already long list of subjects which were at present taught in the colleges of medicine. He noticed that the names of boys of sixteen years of age appeared on the first division of the honour list at the matriculation of the London University, and therefore it was but fair to suppose that if a proper method of instruction were adopted the capability of learning was greater than had hitherto been accredited to them. So far as pupils in medicine were concerned, he would advise them to add to their early education the time which many now unnecessarily occupied at the medical school. They ought not to come to the medical schools at too early an age, inasmuch as their minds required to be matured and ready for the calculating and deep thinking which were required to be undertaken by them. There would, then, be no case of a man idling away from six months to a year because he had attended all his lectures and was not old enough to pass for examination. He would have them all at once set aside the idea that attending all the lectures, or even passing the required examination, made a man a physician or a surgeon. No man could master his profession by merely complying with the requirements of the medical curriculum. How could this be remedied? He regretted to reply that it almost resolved itself into a question of money. If they lengthened the time at the medical school, the medical education became so expensive that a large number would be prevented from entering the profession. If the number of medical men was materially diminished, it would follow that the poorest districts would be beyond medical aid. But there was a more liberal way of overcoming the difficulty. At the present time education was advancing by rapid strides. Shortly the education of the servant would be but little inferior to that of the master. Even amongst the abandoned children that haunted the brickfields and the loathsome alleys on the eastern side of London there lurked a fair percentage of shrewd and clever minds, and when education was enforced that genius must become exhibited. He did not propose that they should enrich themselves by recruits from that class. Many of them would improve their condition when, by education, they were capable of understanding that they were fit for a higher post than they now occupied. They were yet unfit for professions. They were wanting in social and in tender feelings, to be gained only by association; but yet amongst all classes, amongst all professions, amongst all trades, there were some who had raised themselves from that level. If they would raise the standard of the medical profession, it was not by increasing the time required to be spent at the medical schools, or by increasing the expenditure of those who would join them, but by increasing the standard of the examinations. Some excellent suggestions on the education of general practitioners followed.

CHARING CROSS HOSPITAL.

THE Introductory Lecture was delivered by Dr. J. WATT BLACK, Physician-Accoucheur to the Hospital.

After offering a friendly welcome to the students, and referring to the recent changes in the hospital and staff, the lecturer proceeded to state the nature of the task which the medical student has to perform, and urged the importance of thorough preliminary training as a preparation for professional study. "It is not," he said, "so much a large amount of general knowledge that is required as the possession of well cultivated intellectual faculties, well exercised senses, and a habit of continuous application. It seems to me that our preliminary examinations are too aimless—too little framed in accordance with the special requirements of the medical student. While proof of memory is abundantly insisted on, there is, I venture to think, no sufficient test applied to the candidate's other intellectual powers. For this latter purpose, evidence of the mastery of one well selected subject would go further than the exhibition of a smattering of fifty. Again, it might be advantageously insisted on, that the candidate should show adequate powers of observation, to say nothing of any sense except that of sight. This might easily be done by demanding a practical acquaintance with an objective science, such as botany, zoology, geology, or even entomology. Further, it is perhaps matter for regret that more prominence is not given to the subject of physical science. It is in physics that we find the explanation of a great mass of medical phenomena, and to the student who has not attained considerable proficiency in that science many of these phenomena must be unintelligible. Lastly, in order to ensure as far as possible that men will come fresh to the study of medicine, it might be wise to require the passing of all preliminary examinations some time—say two or three months—before beginning the professional curriculum. It may seem to you too late thus to press on your notice the importance of preliminary training, but it is still in your power to remedy some of its defects by well directed industry in the pursuit of your medical studies."

The lecturer then proceeded to insist on the necessity for downright honest, hard work, on the part of every medical student, and spoke of certain principles which should guide them.

"It should be your ultimate aim to combine in just proportion science and art. In the practitioner these two agencies should always go hand-in-hand. The result they yield is like the multiplication of two factors which, added together, make up a given number. The product is greatest when the two factors of the multiplication are equal. It is diminished if one of them be reduced, even though the other be correspondingly increased. The most exact and extensive knowledge will be of little use to you if you cannot apply it to the prevention, diagnosis, and treatment of disease. On the other hand, so-called 'practical skill,' unsupported by scientific knowledge, is utterly worthless and even misleading. The mere practical man is in reality a mere *doctrinaire*, full of false pathological theories which often form the basis of a mischievous treatment. You cannot have too much scientific knowledge, but you must not spend all your time in acquiring it. Again, you cannot have too much practical skill, but that, to deserve the name, must be based on scientific knowledge. As a man may know all the principles of art, and yet be as incapable as a gorilla to make a picture, and as another may produce daubs which he imagines to be fine pictures, though they contradict all the truths of nature, so it is in medicine with the merely scientific and the merely practical man."

The uses of lectures were not touched on. "But," he continued, "though it is well to say a word in favour of lectures, it is still more desirable to guard against over-estimating them. With many students the tendency is to rely too much on lectures and books, and to shape their course with far too exclusive reference to examinations. They think they can never have enough of the class-room and the manual, and become altogether bookish. The cause may be partly found in the character of the examinations themselves, for there can be little doubt that these compel students to cram their memory with many *minutiæ* which have little or no bearing on practice, and which might be profitably exchanged for increased practical knowledge. This is the more to be regretted because books are always at hand, whereas hospital opportunities once past never return, and clinical phenomena,

"'Like a snow-flake on the river,
A moment white, then melts for ever,'

cannot be reproduced at will. However valuable and even indispensable lectures and books may be, they should never be allowed to usurp the place of the dissecting-room, the laboratory, and the ward. As much of your knowledge as possible should be personal, not derived.

"Students absorbed in their pursuits and impressed with the magnitude of the task they have to accomplish, are prone to overlook the fact that unremitting toil is not the most productive. When a man is

fagged, his work is comparatively profitless, as well as exhausting. Generally speaking, all labour should be suspended when real fatigue sets in. Each man has to find out for himself what amount of time he can most profitably devote to work. Anyhow, to produce the maximum of result, the health must always be kept up to the requisite standard.

"In the curriculum of every one there must be a certain amount of leisure time. A portion of this may be pleasantly occupied in learning the use of the various instruments of medical research. Every student should possess a good microscope, and can amuse himself by examining different substances and textures. It is an excellent introduction to the practice of auscultation in the ward to familiarise the ear with the healthy breath, heart, and other sounds at home. Two students can accommodate each other in this particuiar. The same is true of the ophthalmoscope and the laryngoscope. The sense of touch can be educated by exercising it on one's own person. When all this is done, there should still be sufficient time left for non-professional recreation.

"Frequently the ardour of the student is chilled by anxious misgivings as to the beneficial effects of medical treatment. He is perplexed by present diversities of practice and by past changes in the general treatment of disease. Fifty years ago, he says, doctors were perpetually bleeding, purging, and salivating, and vaunted the success of their bold measures. The doctors of to-day, he continues, discredit that system of procedure, and are yet equally satisfied with the results which they obtain by very different means. Is it not probable that within the next fifty years, or sooner, the therapeutics of to-day will in turn be overthrown, and proved to be hurtful rather than beneficial?

"Differences of opinion and of practice are inevitable whenever men come to think and act for themselves. In this respect medicine is in no worse position than other departments of learning. Conflicting opinions are to be found in theology and law; yet theologians and lawyers have the benefit of authoritative written standards—a boon which is denied to the medical practitioner. In medicine, too, the differences of practice are often of much less extent and importance than they seem; for, happily, there are frequently more ways than one of procuring a good result in disease, and two different methods may prove equally successful.

"To pass to the second objection, several considerations might be offered with reference to the changes which have occurred in therapeutics in modern times. For example, it may be legitimately pleaded that the treatment of our forefathers was largely dictated by theoretical notions concerning disease and the effects of remedies, while modern treatment is more and more based on actual results. Further, the theories on which treatment was formerly in great measure grounded were frequently erroneous. Mistaken views are entertained respecting the existence of peccant humours which could be purged out, depraved blood which could be let out, and ill-defined morbid processes and poisons which could be altered or eliminated by mercury. An increased and increasing knowledge of pathology has greatly corrected our ideas regarding the means capable of acting beneficially in disease. Thirdly, the treatment of bygone times was mainly traditional. We can have no assurance of the intrinsic merits of a system which has been handed down by tradition and adopted without question. In the olden days of bleeding, there was, in medicine, comparatively little of that wholesome questioning spirit which prevails in our time. The fire of criticism has been ruthlessly assailing the hoary dogmas of the medical art, and bids fair to consume all in them that is false. We hail it as our best friend, next to the faculty of construction; and we want to see it blaze yet more fiercely and widely amongst the remaining rubbish of therapeutics. A fourth reply is to be found in the fact that our predecessors of fifty years ago seldom dared to let diseases run their natural course, and so never discovered that in many acute cases the natural processes tend to bring about recovery. Finding that they could often relieve pain, dyspnœa, etc., by their heroic measures, they failed to perceive that the relief was usually procured at too great a cost, and that better recoveries, and more of them, could generally be obtained through the use of gentler methods of treatment. Till we know something of the natural history of a disease we cannot form a sound judgment on the effects of treatment. Another answer is that all the treatment of fifty years ago was not comprehended in unnecessary bleeding, purging, and salivating; and that in many things we can commend and usefully imitate our ancestors. Though they were wrong in some particulars, we have found them right in many. Though we must sift and correct their results, all honour be to them for much good work accomplished. They laboured, and we who are entered into their labours owe them full acknowledgments. They not only accumulated an immense amount of knowledge of disease, but they also devised a great part of the treatment now in use. It is only when we put our own shoulder to the wheel that we discover the difficulties with which this department of medicine is beset, and learn to honour duly those to whom our present position is attributable.

"The mere fact of change is no proof that the foundation of medical treatment is insecure. Though every change cannot be characterised as a ringing out of the false and ringing in of the true, yet absence of change means absence of progress. One is, indeed, free to confess that therapeutics has not yet made progress commensurate with its importance, or with the position of some other departments of medicine. But the zeal and exactitude with which the physiological action of remedies is being studied, and therapeutic facts are being observed and recorded at the present time are eminently cheering. Though therapeutics is a lazy boy, who, during a long childhood, has been always lagging behind his fellows, there are plentiful indications that, as the years of discretion have stolen upon him, he has been leaving off his early foibles, and that, feeling his gigantic powers stir within him, he has awakened to a consciousness of his high destiny. Already he has burst many of the shackles which contributed to retard his progress, and is eager for triumphs which will gloriously redeem his reputation. Innumerable therapeutic facts of priceless value have been ascertained, and, though we cannot as yet group those facts into a scientific system, we are now able to discern it in outline. In so far as we have learned the nature of those changes in structure, qualities, and function which constitute disease, and the conditions which favour or impede the natural processes and effects, we are in a position to treat disease scientifically. This knowledge is immensely in advance of the position it held fifty years ago. One highly valuable result of a better understanding of the pathological nature and natural history of disease is this, that we are thereby prevented from making mischievous attempts to perform the impossible."

The lecturer next spoke of the pleasure derivable from a study of the exquisite structures and processes of the human body, and passed on to the evidences of design displayed therein, arguing that, though some seemed to think otherwise, these evidences are not impaired by Darwinism, even should it be accepted as true. He concluded by an allusion to the Great Healer.

DENTAL HOSPITAL OF LONDON.

Mr. James S. Turner delivered an Introductory Address on Wednesday evening, October 2nd, on the position of Mechanical Dentistry.

The lecturer said: Since we last met, the Council of the Royal College of Surgeons has issued an order which points clearly to a more stringent examination for the licence to practise dental surgery. I believe that this is a wise step, and that you will meet the additional demands successfully I do not for a moment doubt. But the examination at the College is principally of a surgical nature; the mechanical branch is perhaps unavoidably left to take care of itself. For my own part, I do not object to this arrangement, because I believe that the subject of mechanical dentistry is sufficiently interesting and of sufficient importance to take care of itself. It is interesting, because it is altogether different from the rest of your studies. It brings into play a different set of faculties, and, by affording scope for ingenuity and invention, administers as it were a tonic to the mind which may be wearied by the objective teachings of surgery or physiology, or surfeited with the endless details of the dissecting room. It is of importance to you, because in your future career it will very likely form the staple source of your income. The ophthalmic surgeon receives a high fee for performing iridectomy, or for the removal of cataract; so also does the orthopædic surgeon for the subcutaneous division of a tendon, and kindred operations: yet either of these is not more difficult to learn, and, when once mastered, does not involve half the mental or physical labour extracted from the dental by the majority of gold stoppings, for which he receives the munificent fee of a guinea. Perhaps the secret of this disparity lies in the fact that the mechanical contrivances which are applied to remedy the defects and inconveniences of a contracted tendon or a deformed limb are generally both clumsy and inconvenient, as well as ugly, and, worst of all, their hideousness is nearly always apparent; while the substitute for an eye is only a glittering sham, worn more for the sake of others than for the comfort of the wearer. In dentistry, the reverse is the case: a good artificial tooth is a thousand times better than an inferior natural one; the artificial substitute is at once an improvement in appearance and a valuable adjunct to health. Hence the public, in this country at least, are impatient of long, and oftentimes painful, operations for the preservation of their teeth; and ladies especially object to having their front teeth patched up with gold, which in many instances seem to the uninitiated ligatures securing a badly made artificial denture. These, to my mind, form some of the reasons for the inadequate remuneration received by dentists in the country for

that most laborious of all occupations, gold-stopping. Hence, as I said, the particular branch of your profession which you are now studying is likely to be the main source of your income, and, looked at in this light, it becomes of great importance. But there is another point to which I would call your attention. I have said that this branch of our profession has been left to take care of itself; and I say further, that it is likely to do so; for, whatever position dentists may take, or whatever protection dentists may, as a body, receive from law when they have shown themselves worthy of such protection, I do not see how any special privileges could be granted to dental surgeons which would extend to the mechanical branch of the profession. Thus the most lucrative portion of our occupation is the most vulnerable one, and most open to unprincipled opposition: and, although the man who has a thorough knowledge of dentistry in all its branches will undoubtedly be the safest and best, and will always be sought after in cases of difficulty, still we know that the masses of people are prone to serve themselves in the cheapest, if not always in the best, way. As a consequence of this, a great number of cases are likely to pass into the hands of those who can work for a smaller fee, because they have not given either the time or money in acquiring the knowledge which you possess. It is true that difficult cases will always find their way to the man who is prepared to meet them; but there are many cases which to a good mechanic are not difficult, and where the artificial contrivances, when constructed with a moderate amount of skill, may be worn with a fair amount of comfort by those who do not know how much better off they might be. Besides, it is hard to be always fighting with abnormalities, particularly when we know that others are fattening on cases more easy of digestion.

In the face of this unfair, but, so far as I can see, highly probable state of things, we may console ourselves with the reflection that our profession is gradually but surely taking its position as an important branch of surgery. Dentists who choose to educate themselves can now be affiliated to the Royal College of Surgeons as dentists; so that, although in many instances holding the diploma of membership, they are distinguished from the general surgeon or from other specialists by the dental licence.

Now, the position which medical men occupy towards their patients makes them an authority in the choice of a dentist. Our dental certificate is now, and will become more and more, a guide to those gentlemen in advising their patients. We may, therefore, expect with confidence the support of the medical profession in our attempt to supply the public with scientific dentistry. But this will not of itself meet the difficulty with which we started; you must be prepared by superior skill to justify the recommendation of your medical friends. You have the conditions all in your favour; an eye trained to be sure, a will trained to act, and a store of knowledge at your command which gives you a great start in the race; and if your terms are necessarily higher than those of the men to whom I have alluded, you ought, by your superior advantages, to be able to recompense your patients for their extra outlay. I would ask you, then, for your own sakes, not to imagine because there is no crucial standard for you to pass under in Lincoln's Inn Fields, that you may be contented with a superficial knowledge of mechanical dentistry. Do not run away with the idea that you can delegate your work to others. I believe that unless you can do it for yourself, very few will be able to do it for you, and still fewer will care to do it for you, knowing as they must that their efforts will not be appreciated.

I am of opinion that it is an easy matter to arrive at a moderate degree of excellence in dental mechanics; but when you wish to make a step beyond this, it is like the extra mile in speed to be got out of the marine engine when it has been nearly worked up to its full driving power: it requires more pressure and more fuel to get that one extra mile than was required for any two or three miles in the lower scale of speed. Now this is the pressure you will require to put on if you wish to hold your own against the competition to which you are sure to be subjected. It will not be injurious to you; it will not, like cramming, addle your brain and confound your knowledge, but it will be a source of comfort and power to you all the days of your life.

LEEDS SCHOOL OF MEDICINE.

DR. HEATON delivered the Introductory Address. He said, they had met this day to inaugurate the forty-second year of the Leeds Medical School, which had pursued its work for so many years with steady progress in efficiency, and in numbers, and in public estimation. Opening addresses had for so many years been delivered in this and in other schools, provincial and metropolitan, that all the ordinary subjects of such discourses must now be trite and uninteresting. Without discussing, in succession, the merits and peculiarites of each subject taught in this school, he would take from some of them only matter for their consideration this day.

In every branch of natural science the faculty of observation must be carefully cultivated; that faculty which enables us rightly to see and feel and hear what comes within the range of our senses. Scientific investigation must begin with exact observation of facts actually brought before us; and, from what we thus learn with certainty, we endeavour to arrive at correct conclusions as to what is removed from the possibility of this direct examination. Besides the very obvious importance and necessity of practical anatomy, it has the advantage of being an excellent means of cultivating this observant faculty. In the study of the bones, for example, it is not sufficient to know that a bone of the arm is an elongated body with an enlargement at each extremity; each little groove and prominence and perforation has to be most carefully examined, and its relation to the structures with which it has been surrounded. And similarly, it is not sufficient to say that a vessel, or nerve, is found to branch and subdivide, something like the branching of a tree; but each branch and fibre must be carefully traced, and its relation to neighbouring structures exactly ascertained.

Another remark the lecturer wished to make; the anatomy of the dissecting-room is the anatomy of the *dead body*. But the anatomy with which we are concerned in practice, is that of the living, moving, bodies of our patients, in whom the form and size and relative position of internal organs differ to some extent from those of the dead corpse, and are also continually undergoing changes in the performance of the vital functions. This anatomy of the living body is important to the operative surgeon; but also, and very especially, to the physician, as aiding and correcting the diagnosis of the condition of internal organs removed from the direct application of our senses. This *medical anatomy* Dr. Heaton has always taught and illustrated to his class, in its bearings on diseases under consideration.

Materia Medica and therapeutics is one of the less popular subjects of study taught in medical schools. A mere description of the numerous drugs and compounds of the *Pharmacopœia*—some of them of little practical value, and of the medicinal properties which, often upon very uncertain grounds, they are supposed to possess, may be sufficiently tedious. But there is no medical investigation more interesting and more capable of leading to important practical results than that whose object is to ascertain, with scientific certainty, what are the effects of important remedies upon the human body in health and in disease. It is true that there are special and very great difficulties in this inquiry into the effects of external agents upon man's living body, continually subject, as it is, to so may varying influences from which it cannot be isolated; and too sacred, as it is, to be made the subject of hurtful experiments. But the refinements of chemical analysis, and the various precise modes of examination into the physical condition of the body and its functions now practised, together with experiments upon inferior animals, may enable careful observers to obtain very valuable results. It would be quite within the power of medical students to unite together for the purpose of making inquiries of this nature, either by observations on their own bodies, or otherwise, which might, upon many points, give us certain information in the place of vague conjectures.

Dr. Heaton illustrated the difficulty of such inquiries, their importance, and the unexpected results which may be obtained, by reference to the experiments of the Edinburgh Committee of the British Medical Association, under the presidency of Dr. Hughes Bennett, as to the action of mercury upon the biliary secretion. The result of these experiments upon dogs—as is now well known—is that mercurials tend rather to diminish, than to increase the secretion of bile. He fully relied upon these experiments as proving that mercurials have not that direct and specific effect upon the hepatic secretion which has been popularly attributed to them; and he accepted them, so far, as an important guide in medical practice; but he could not disbelieve his own experience, and that of the profession, as to the therapeutic value of a dose of blue pill for the relief of many complaints which we call "bilious."

The immediate effect of mercurials is upon the mucous membrane and glandular structures of the intestines, between which and the liver the direct communication was cut off, in the experiments upon dogs, by division of the hepatic duct. He believed that the stimulant effect of a mercurial purgative is chiefly upon the large intestines and the solitary glands of the colon, which are important depurating organs. It is in the cæcum that the intestinal contents first acquire their distinctly feculent odour and appearance; and he thought it probable that the character of the evacuations obtained by a mercurial purgative, and which we call bilious is much, due to increased intestinal secretion in the cæcum and colon; and that to this action, and to the unloading thereby of the portal vessels, as well as to its effect upon the liver, are due the clearing of the sallowness of the complexion and the relief to abdominal

congestion and "bilious" symptoms, obtained by a dose of blue pill or other mercurial.

This study of therapeutics, it will be seen, pursued in a scientific spirit, is of the greatest interest and importance. It leads directly to the practice of healing—that is, to medicine and surgery. To illustrate the great interest which attaches to the scientific investigation of many questions which belong to the practice of medicine, and the importance of applying to them the most exact methods of investigation, the subject of zymotic diseases was brought under consideration. After some explanation of the theory of zymosis as applied to a class of diseases, the microscopic examination of vaccine lymph by Dr. Burdon Sanderson was described, and the discovery therein of infinitely minute mobile particles, in which the power of communicating the vaccine disease specially resides, thus demonstrating to the senses, in this particular instance, the germs of the disease. The question of the spontaneous generation of disease-germs was shown to be yet open; and then the important question whether such diseases as the exanthemata and cholera are to be treated upon the principle of *elimination*, was briefly discussed, and whether such elimination is *curative*. Dr. Heaton pointed out the difficulty of obtaining results of that certainty which is universally convincing; but expressed his own opinion as adverse to the doctrine of curative elimination.

In the concluding remarks, the student was advised, as he progressed in his professional studies, to observe, and think, and reason for himself, and not to content himself with accumulating a store of barren facts in the storehouse of his memory, a facility for which may even prove a hurtful gift to the student who does not seek to exercise those higher faculties by which a fair structure of wisdom and sound judgment is built up out of the materials of knowledge. The constant tendency of the changes in the course of study prescribed by the licensing bodies, and of the modes of teaching adopted in our schools, and also of the examinations to which candidates are subjected, is to discourage any disposition to be content with merely cramming the memory with facts, and to test the observant faculties, the judgment, and the practical experience. The reputation of a school with the public must depend upon the credit with which its students pass their examinations, and the position which they afterwards assume among their fellow workers in the business of life. Judged by these tests, the Leeds School has hitherto stood high; and it now commits, with confidence, its continued reputation to the keeping of those students who are assembled here this day.

QUEEN'S COLLEGE, BIRMINGHAM.

THE Introductory Address was delivered by Mr. C. J. BRACEY, M.B., Professor of Anatomy.

There were, he said, three classes for whom this session marked a new era—those who to-day commenced the study of medicine; those who, having passed the examinations in anatomy and the other preliminary sciences, were about to devote themselves to the practical study of medicine, surgery, and midwifery; and those who had completed their studentship and came to receive prizes and other distinctions, and to take leave of their teachers and fellow-students before commencing practice. To each of these he would offer some advice. After a reference to the pleasant freedom of a student's life, he showed how the profession of medicine was calculated to develop the mental and bodily powers of those engaged in it; as a science, it included many sciences, and touched upon nearly all, so that a well-educated medical man had a general acquaintance with the whole range of physical sciences, and was in a good position to cultivate any of them. But the study of disease alone, he maintained, would afford sufficient field for the most active mind, there being no less than 1,146 separate diseases registered in the official nomenclature, most of them presenting many varieties, and each requiring careful study. As an art, the practice of medicine, whilst it quickened the faculties of observation, stimulated the reasoning powers, strengthened the judgment, and steadied the hand, at the same time called forth the better part of a man, elevating his aims and extending and deepening his sympathies. After giving some advice as to the judicious disposal of time and the choice of the best kinds of recreation, the lecturer urged the first year's men to be careful in forming acquaintances, to choose those who were not only pleasant fellows but steady workers; and spoke of the improved discipline of the College, the present authorities being determined to send away those students whose misconduct became a source of danger to others. At the same time he pressed upon the students the need for self-respect on their part, and feeling of *esprit de corps*. He next referred to the attending of lectures as an antiquated custom, which, being in force, must be made the best of; and showed the good points of the system—a subject thus being brought out in a lively form and illustrated by experiments, specimens, etc. By attendance upon lectures, too, the valuable habit of attention or mental concentration might be formed. The lecturer pointed out the advantages which Birmingham possesses as a medical school in its large and well-appointed hospitals, with the various special institutions, in which disease in all its varieties, both mental and bodily, might be studied; and referred with pride to the position taken by Birmingham physicians and surgeons in medical literature, mentioning the names of many eminent men of past times, and speaking in more general terms of the achievements of those now living. He especially commented upon the frequency with which the Jacksonian Prize—the blue ribbon of surgery—had fallen to the lot of Birmingham men.

After referring to the conduct of medical men towards their professional brethren, and showing that medical etiquette was nothing more than the fulfilment of the Divine law, "do unto others as ye would they should do unto you," the lecturer concluded by quoting some Hudibrastic lines descriptive of the hard fate of a country surgeon. He expressed a hope that those present would not be so hardly tried, and he assured them that, if their profession involved hard work, it might bring them a high reward in the love and gratitude of their patients, the respect and esteem of their fellows, and the approval of their own consciences.

SHEFFIELD SCHOOL OF MEDICINE.

THE Introductory Address was delivered by Mr. T. H. MORTON. Dr. Bartolomé, the President of the School, occupied the chair.

Mr. Morton, after a brief historical introduction summarising the early history of medical schools and institutions in Great Britain, continued:—The provincial schools of medicine had, in the majority of instances, been established since the foundation of the hospitals in their respective towns. It was worthy of notice that the Sheffield School stood second in age, but unhappily was the smallest in regard to number of students. The Manchester School, founded in 1824, had 110 students last winter session; the Bristol, founded in 1833, had 35; the Liverpool, erected in 1834, had 77; the Leeds, founded in 1831, had 77; at the Newcastle College of Medicine, founded about 1839 or 1840, 55 students in medicine and 6 in pharmacy entered last session; while at the Sheffield School, founded in 1828, there were only 19 students. The creation of provincial schools might be considered due to three causes: first, the immense population of the towns and the necessity for hospitals; secondly, the advantages derived from extended knowledge of anatomy and other subjects to resident medical men; and, thirdly, the protracted and somewhat dangerous journey to London. The last-mentioned reason did not apply now; still, for many students, it was convenient to prosecute their studies where their friends resided, or where they obtained employment. The medical profession in Sheffield early saw the desirability of a school, and, to their credit, petitioned Parliament three times, on April 19th, 1828, January 27th, 1829, and February 25th, 1830, "to remove the obstructions preventing the study of anatomy." Many of the old inhabitants would recollect the difficulty of obtaining subjects for dissection, and many stirring tales might be related of occurrences in connection with this matter which took place before the Anatomy Act came into operation. The first notices they had of the present substantial building, as stated in the Local Register ran thus:—"1828.—April 21st. Sheffield Medical Institution Trustees presented with a donation of one hundred pounds from the Duke of Norfolk, and two hundred pounds from the Earl Fitzwilliam.—June 7th. Town Trustees vote £50 towards the intended Sheffield Medical Institution.—1828. July 9th. First stone of the new Medical Institution, near the Music Hall, laid by Dr. Knight." Mr. J. Holland had obtained from a scholar a new translation of the inscription, "Ars Longa Vita Brevis", upon the front of the building; it was, "Our art is long to shorten life"; but he judged that the clever gentleman who gave that rendering was not a member of the medical profession. His hearers were perhaps aware that there existed another medical school in Eyre Street, but it met with an ill end, for they read: "1835. January 26th. Riot in Eyre Street, and destruction of the Medical School by the mob." Mr. Morton then proceeded to state that, on behalf of the lecturers, he welcomed both the new and old students to the school. Although the pupils had hitherto been somewhat limited, he could assure them that the opportunities of witnessing rare and interesting cases, surgical and medical, at the hospitals, and the facilities they had of studying anatomy within those walls, were equal to those of any similar establishment in the country. He then addressed a few words of advice to the new students, giving a brief sketch of the nature of disease, alluding to the gigantic strides towards perfection as an exact science which the practice of medicine had made of late years, and

mentioning the connection with the study of anatomy, physiology, chemistry, botany, and other subjects had with the success of a medical man. He also dwelt upon the importance of respectful conduct towards patients; and urged those who were entering the profession to be influenced by higher motives than the acquiring of wealth. A medical man had great influence and power for good, not only on account of the possession of knowledge of which most people were woefully ignorant, but because his skill brought him into contact with an immense number of persons whose lives were almost placed in his hands. Their advice respecting the preservation of health, cleanliness, habits of sloth, excessive indulgence, intemperance, hurtful prejudices and conduct generally, struck at the very root of immorality and infidelity. A medical man was the custodian of the innermost secrets of his patient's heart, and in the hour of death he was often the only earthly comforter. Hence the obligations of their profession were great, and it behoved them, on the threshold of their career, to consider seriously whether they would sacrifice their time, health, and strength for the benefit of man—rich or poor, irrespective of creed. This, he said in conclusion, could only be done by a love of their fellow creatures and of their profession, and a veneration of the Great Author of all.

NEWCASTLE COLLEGE OF MEDICINE.

DR. ARNISON delivered the opening Address. After referring to the advantages derived from their meeting together on such occasions, he said there were some there who entered into those walls for the first time, who were leaving behind them, with perhaps one lingering look, the troubles, the pleasures, and the frivolities of boyhood, and were, it was hoped, prepared to enter earnestly on the work of manhood and of life. To such he would say the task before them was no easy one; but it was one which, with care and diligence, might be accomplished by them, as it had been by thousands before them. It had been said that genius meant hard work, and in no profession was that more true than in the one they had chosen. He then proceeded to give an outline of the work that would have to be done by them in the four years of their curriculum, and then urged upon them that the practical applications of what they were taught there could only be learned in the hospital. There should be their real field of study. Only those who had experienced it could tell how fearfully the weight of responsibility oppressed the young practitioner when he was first thrown on his own resources. On him, perhaps, he felt that it depended whether or not a wife should be a widow, and children fatherless. Let a man spend his time as a student to the very best advantage, lose no opportunity of advancing and perfecting his knowledge, and yet he must feel this. How then must it be with the man who has wasted his time and neglected his opportunities, and at last dares to take upon his own shoulders the responsibility of human life, without having even tried to fit them for the tremendous burden? Suppose that their four years of medical study were completed, and suppose their examination creditably passed, then a new scene of time began, and the work of their life was before them. The verdict of their examiners they had no longer to fear; they had then to face the verdict of the public and their own conscience. The duty of kindness and sympathy to their patients, of whatever class, was so obvious that it need not be insisted on; a few cheerful and hopeful words would often dispel the gloom of the sick room, and go far to help their patient in his struggle for life. Family and professional secrets should be absolutely sacred. He enjoined them to be simple in their language, and to avoid technicalities. If ever they heard a man—be he doctor, lawyer, or engineer—making use of ponderous technicalities in place of equally expressive plain English, they might almost conclude that he was trying to raise a cloud of dust in which he hoped his real ignorance might pass unnoticed, or might even be taken for superior knowledge. As a rule, it was only inferior men who did this. A lady is said to have sent for an inferior practitioner to see a sick daughter. He said, "I perceive in your young lady symptoms of incipient *rubeola*." Alarmed at such a dreadful state of things, she sent for a first-rate physician, who said, "The child's getting measles." Especially was this simplicity of language necessary in courts of law. He once heard a doctor's assistant in an Assize Court, when asked to describe a patient's injuries, say there was bleeding from the ear, but, on consideration, he seemed to think that such a simple term as "bleeding" would not sufficiently impress the court with a sense of his own cleverness, and so he corrected himself, and said "hæmorrhage from the ear." Could anything be more absurd? Some terms, such as bronchitis and neuralgia, had now come into such common use that their meaning is pretty well known, and they might, therefore, be used; but in their intercourse with the public they should never say hæmorrhage when they meant bleeding. Would anyone think the better of them for calling a broken leg a "simple fracture of the tibia and fibula," and would they be likely to calm the fears of an anxious mother by telling her that her boy had "ecchymosis of the eyelids and subconjunctival extravasation," when they only meant that he had got a bad black eye? While carefully guarding professional secrets from the outside world, they owed a certain amount of candour to their patients and to their immediate friends; except in very rare instances, they had a right to know what was the nature of the case, and its probable termination, so far as they could tell; and here came the question of their duty to the dying. It was at any time a painful duty to have to tell a fellow creature that he must bid farewell to time, and set his face towards the unknown land. Perhaps some would say was it a duty? He thought it was. There were different ways of doing it, but it ought to be done. Gently it should be done, but decidedly, for, not to speak of provision which might have to be made for those who are left behind, it seemed to him a fearful thing wilfully to allow any one to take the awful leap into the dark without at least giving him the opportunity of trying to find a beacon to light him on his path. The life on which they were entering was full of responsibility, involving many delicate duties and much care. It was something to feel that by the blessing of God on their efforts they had redeemed a life from the grave, that they had grappled, they might say, hand to hand with the King of Terrors, and wrested his victim from his very jaws. He had said "a life of toil," but with what object? The Saviour of the World went about doing good. Such, let him say it with reverence, was the doctor's mission; the very reason of his existence, the end and aim of his life; to give health to the sick, feet to the lame, sight to the blind, to relieve suffering wherever he found it. From the cottage of the labourer to the home of the monarch, the doctor's word was law; in that house he was an autocrat. Surely that was a position of which none need be ashamed. Strive, then, to fit yourself to take an honourable position in such an honourable calling—a calling which has engaged the energies of some of the noblest men who have lived—men who have devoted their lives to elucidate the grandest problems and lay bare the deepest secrets of nature, but with no mere idle curiosity as their incentive, not regarding their discoveries as the goal at which they aimed, but rather looking upon the most brilliant achievements as mere stepping stones to yet nobler ends they had in view—to wage successful warfare against disease and death, to lengthen the span of human life, to add something to the sum of human happiness, to lessen the dreary sum of human suffering and sorrow.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

THE Introductory Address was delivered by Mr. W. M. BANKS, lecturer on anatomy. The new buildings in connection with the School, erected by public subscription, having just been opened, and some more money still being required for their completion, the address was not on any strictly medical subject, but resolved itself mainly into a history of the School, and an indirect appeal to the public for assistance, by shewing how intimate is the connection between trade and science.

Mr. Banks gave a notice of the changes in the staff which the last twelve months had produced, and then gave a *résumé* of the history of the School from its foundation in 1834, and alluding to the new buildings just erected by the generosity of the public of Liverpool, he endeavoured to shew how the possession of a scientific institution like a school of medicine was of the greatest value to a commercial community, and pointed out the intimate connections between trade and science. He concluded:—That the interests of men engaged in merchandise are totally distinct from those engaged in science, will be seen on very slight reflection to be a profound mistake. Why, there is hardly an act of any importance which a business man performs in the course of his day's work, which the scientific man has not helped to originate or facilitate for him. Almost the first thing he does on leaving his suburban villa is to step into a train or a steamboat; and having been transported, like the Prince on his carpet in the *Arabian Nights*, to his office, he there finds on his desk a letter from Bombay or San Francisco, which has found its way half round the globe since he went to bed on the previous night. Is it possible to conceive of greater triumphs of science and mechanics? And yet these things have been so common, that he thinks no more of them than he does of finding his breakfast waiting for him when he first comes down. If we look around Liverpool and its neighbourhood, we shall light on magnificent engineering establishments, on great gas works, on manufactories pouring out endless volumes of alkalies or other chemicals, on the most important glass works in the kingdom, on immense breweries, on mines of coal and iron without limit. Now let me ask the iron shipbuilder or the gas-maker, the alkali manufacturer or the glass worker, the brewer or the coal and iron master, to turn for a few

minutes from his ledger or his bank book, and take a brief retrospect of his art from its earliest infancy. If he do not then acknowledge that for almost every improvement that has been made in it he is indebted primarily to the scientific worker, then I shall hold him no reasonable or reasoning man. Why, at this minute, in certain of the businesses I have just mentioned the more extensive firms actually employ a thoroughly trained chemist as one of their working staff. Now who are these chemists and botanists, these mathematicians and natural philosophers, who have discovered so much and done so much for the improvements in trades and manufactures? I imagine I hear a reply from some ingenuous philosopher from Laputa—surely these men of science must derive great wealth from their discoveries; they must, no doubt, drive into their laboratories or studies of a morning in the most luxurious of carriages; and when they are tired out with figures and fumes, most likely they go off in their yachts to Norway, or to their moors in the Highlands, to recover their exhausted energies. Alas, simple-minded being! even old Virgil knew better than that when he said—*Sic vos non vobis mellificatis apes.* It is not the plodding chemist who finds out the materials for the new dye, nor the wandering botanist who shews the soil that will grow the quinine, or the cotton, or the coffee plant, that reaps the golden harvest of these discoveries; it is the man with the business head and the long breeches pocket who steps in and puts the thing into a practical form. Let him not then, when he is making his ten thousand a year, forget the men who first put him on the track which led him to wealth and position. *They* do not want money that they may retire and live lives of ease and comfort: they want it to improve the sciences to which they have devoted their lives, and keep ever burning the lamp of investigation which guides them in their search after the truths of nature.

But, gentlemen, putting aside entirely the question of what we may term pure science and its connections with trade, I think we are fairly entitled to ask the help of the public for this institution, were it merely a school for teaching medicine and nothing else. Some day or another every man requires the doctor. He may not have enough money to leave to induce our friends the lawyers to hover about his bedside, and his religious views may be so advanced as to enable him to do without the benefit of clergy, but physicked he must be ere he die. Is it not then a matter of the greatest interest to the public, that the best possible means of instruction be afforded to those men who are in future to be intrusted with that most important of all their possessions, their health; those men who are to bring them into the world; who in later years are to help them to pull through the assaults of acute illness, or detect and ward off the insidious creeping on of chronic disease; and who at last, when their appointed time has come, shall ease their racking pain, and smooth for them the pillow of death. But it has been said to us that medical men make their incomes (such as they are) out of the pockets of the public, and must therefore look after and provide for their own education. Why should the public take any more interest in their training than it does in that of civil engineers or architects? Such a comparison, I maintain, is hardly a fair one. The relation between a doctor and his patients can only be compared with those which exist, or ought to exist, between a clergyman and his flock. Picture to yourselves some conscience-stricken penitent summoning to his sick bed the minister of religion, to tell him once more the oft-repeated tale of salvation, and assure him again that for him there is hope left. Can you fancy him at the end of the interview slipping a couple of guineas into the hand of his spiritual adviser as the price of the ghostly consolation which has just been given him? Such a travesty is unheard of; and yet in a minor degree much the same sort of thing happens with the doctor. Can he put a price upon the sympathy which he feels with the agonised sufferer? Upon the gentleness with which he handles his aching wounds, or the patience with which he listens to his daily querulous complaints? Do the public take any notice of the readiness with which, when often ill and fatigued himself, he will respond at any hour to the call of duty, and present himself with a cheerful and collected manner amid the frightened relatives around the sick one's bed? Do they appreciate the demands which the sick poor make upon him? the calls to accidents and horrible scenes of all sorts, for which he knows as he puts on his hat to go to them, that he will never receive a penny, but for refusing to attend which his medical brethren would be the first to upbraid him? I say that, while there is much that a medical man does for his clients which can be directly valued at so much £ s. d., there is still a great deal for which he alone can have his reward in the gratitude of his patient, in the triumph of his art, or in the consciousness of duty well done. And for this the public is his debtor. If they cannot pay him in money, let them assist him in his education.

Before leaving this subject, let me make one further remark. In common life we are always the more willing to assist a man when we see that he is making every effort to improve himself. Now I do not think that it is sufficiently understood that the immense improvements in the teaching of students of medicine which have been made of late years, have been the result, not of pressure put on the profession by the public, but purely of the pressure put on the teaching and examining bodies by the doctors themselves. If, on the other hand, we turn to our great universities, we shall find that the freedom from those enthralling tests, which so long hampered the education of the youth of our land, and the increased breadth of feeling and more generous tone of education which our rising ministers of religion are now brought up in, was never due to the dons or the clergy, but due to the reiterated expression of the feelings of the people. And if we turn to the legal profession, we shall note that there too the increased facilities for the administration of justice, and the abolition of many of those fatal delays and absurd complications which surrounded the course of the simplest action at law, have been accomplished in obedience to the demands of what I may term an exasperated public. But the case as I have said is different with us: the screw has been put on by ourselves, and so effectually that I feel certain that there is no class of young men who are compelled to work harder, and who run greater risks to life and health in the course of their training, than the modern race of medical students. My argument then is, that the public are materially interested in the education of those who are to be their future confidential advisers, their scientific investigators, or their sanitary reformers; and that the efforts we have made to improve ourselves, shew that we are worthy of their support and encouragement in this matter.

In the evening the annual dinner took place at the Adelphi Hotel, about eighty members, students and guests, partaking of a well-served repast. Dr. Waters, President of the School of Medicine, occupied the chair.

The chairman toasted "Success to the Royal Infirmary School of Medicine," which was drunk in a bumper. Dr. Steele proposed, in a manner which gained applause, the past and present students, Mr. Pitts responding on behalf of the senior students, and Mr. Hayward for the present ones. The past and present lecturers were toasted by Mr. J. B. Stewart, the respondents being Dr. Grimsdale and Mr. Banks. The medical charities of Liverpool were toasted by Mr. Phillips, and responded to by Mr. Bickersteth; and the health of the president was proposed by Dr. Paget.

THE LONDON HOSPITAL MEDICAL COLLEGE.

Archbishop Manning presided at the annual distribution of prizes last week, which were awarded as follows:—Two Scholarships of £20 each in Clinical Medicine and Clinical Obstetrics, given jointly by the House Committee and the Medical Council, both awarded to Mr. W. L. Morgan. A similar Scholarship in Surgery was offered, but was not awarded. Three Dressers' Prizes of £15 each for zeal, efficiency, and knowledge of Minor Surgery, were awarded to Messrs. C. A. Low, W. Lang, and G. B. Sincock; and three £5 prizes to Messrs. H. G. Brown, W. Hurford Todd, and J. D. Watson. The Buxton Scholarships for proficiency in the subjects required for the Preliminary Examinations were awarded as follows:—£30 Scholarship to Mr. B. R. Rygate; £20 Scholarship to Mr. H. E. Price; and an Honorary Certificate to Mr. R. H. Fox. A £20 Scholarship in Human Anatomy, given by the Medical Council, was gained by Mr. R. H. Fox; and an Honorary Certificate by Mr. Burtonshaw. A £25 Scholarship in Anatomy, Physiology, and Chemistry, given by the Medical Council, was awarded to Mr. C. A. Mercier; and an Honorary Certificate to Mr. Hyde Walker. Special Certificates awarded to Medical Assistants for three months' service were gained by Messrs. A. Kebbell, C. W. Homested, C. A. Fox, R. Withers, G. Morgan, W. L. Morgan, J. H. Mitcheson, L. Mackenzie, C. J. Stocker, G. Widdas, and S. Welch.

Middlesex Hospital Entrance Scholarships.—These two Scholarships of the annual value of £25 and £20 respectively, and tenable for two years, have been gained by Mr. Reginald Paul (first) and Mr. Walter Scott Thompson (second).

General Hospital, Birmingham.—Prizes presented on the 4th instant: Senior Medical Clinical, Mr. G. V. Blake; Senior Surgical Clinical, Mr. Hands; Junior Surgical Clinical, Mr. Chavasse.

ASSOCIATION INTELLIGENCE.

SOUTH MIDLAND BRANCH.

THE sixteenth autumnal meeting of this Branch will be held at the Cottage Hospital, Stony Stratford, Bucks, at 2.30 P.M., on Tuesday, October 15th; A. D. MACKAY, M.B., President. Luncheon at 1 P.M. previously, kindly provided by Dr. Mackay at his house.

Gentlemen who intend to read papers are requested to forward their titles forthwith to Dr. Bryan, Northampton.

J. M. BRYAN, M.D.
WM. MOXON. } *Honorary Secretaries.*

Northampton, September 11th, 1872.

WEST SOMERSET BRANCH.

THE autumnal meeting of the above Branch will be held at Yeovil, on Thursday, October 17th. The following question has been settled by the Council as the one on which each member should be asked his opinion at the said meeting:—"What is your opinion as to the desirability of establishing the Provident System in connection with our Hospitals and Dispensaries, and as to the part which the profession should take in reference to this question."

The meeting, under the presidency of Dr. GARLAND, will open at the Hospital at Four o'clock, when papers and cases will be heard.

The dinner will take place at The Choughs Hotel at Six o'clock; after which, the question above-stated will be taken and discussed.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, September 14th, 1872.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEDICAL MEETINGS.

THE next meeting of the above Branch will be held at the White Hart Inn, Reigate, on Thursday, October 17th. The Chair will be taken at 4 P.M. by Mr. HALLOWES, of Redhill.

Papers, etc., are promised by Mr. Hallowes, Dr. Phillips, etc.

All members of the South Eastern Branch are entitled to attend.

The dinner will take place at 6 P.M.

HENRY T. LANCHESTER, M.D., *Honorary Secretary.*

Croydon, October 1st, 1872.

YORKSHIRE BRANCH.

THE autumnal meeting of this Branch will be held at Scarborough, on Tuesday, October 22nd.

Gentlemen who purpose attending the meeting, or bringing forward communications, are requested at once to communicate with the Local Secretary.

W. PROCTER, M.D., *Honorary Secretary.*

York, October 2nd, 1872.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE autumn meeting of this Branch will be held at Pontypool, on Friday, October 25th; T. J. DYKE, Esq., F.R.C.S., President, in the Chair.

Members who are desirous of reading papers, etc., are requested to communicate their intention to one of the Secretaries, without delay.

ANDREW DAVIES,
ALFRED SHEEN, M.D., } *Honorary Secretaries.*

September 25th, 1872.

CUMBERLAND AND WESTMORLAND BRANCH.

THE autumnal meeting of the above Branch will be held at Workington, on Wednesday, October 30th; T. S. CLOUSTON, M.D., President, in the Chair.

Gentlemen intending to read papers or cases, or be present at the dinner, are requested to give notice to the Secretary as early as possible. HENRY BARNES, M.D., *Honorary Secretary.*

Carlisle, October 9th, 1872.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEDICAL MEETINGS.

THE autumn meeting of the above district will take place at Arundel, about the 30th instant: Dr. TYACKE, of Chichester, in the Chair.

Members who are willing to read papers, or bring forward cases, are requested to communicate with the Honorary Secretary *at once*, in order that notice of the same may be inserted in the circular convening the meeting. WM. J. HARRIS, *Honorary Secretary.*

13, Marine Parade, Worthing, October 7th, 1872.

NORTHERN BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held in Bishop Cosin's Library, Durham, on Thursday, September 26th; CHARLES TROTTER, Esq., President, in the Chair. There were also present thirty-two members.

New Members.—The following were elected. Charles Carr, Esq., Newcastle; Smart Fothergill, Esq., South Hetton; James H. W. Ridley, Esq., Gateshead; Adam Robson, Esq., South Shields; and Hugh Russell, Esq., Trimdon.

Papers.—The following papers were read. 1. The Medical Profession in relation to Public Health. By J. EASTWOOD, M.D. Dr. Eastwood noticed briefly how prominent and extensive a subject that of public health had become, and said that it required the serious illness of the Prince of Wales to make the public believe in what had been thought to be the "crotchets" of medical men. It was only by constant "pegging away," on their part, that anything useful could be done, and too often their good efforts were not appreciated. On the subject of intemperance, also, some action had been taken in the direction of greater impediments to excessive drinking. The Public Health Act of 1872 is, however, the most important now to be considered, and Dr. Eastwood described how that Act had become law between two opposing forces. The battle had been fought, and the Association had not gained its object, which was to have larger areas for inspection on the part of medical inspectors, who were to act in concert with the Poor-law medical officers. Instead of this, the present divisions into unions and local government districts and boroughs were continued, and the inspectorship consisted of a number of non-medical men, whom the Poor-law medical officers in many instances appeared to prefer to their professional brethren. Inspectors of public health were thus appointed who had their duties to learn, and the medical profession was ignored.—After some discussion, in which the President, Mr. Leonard Armstrong, and Dr. Denham took part, Dr. EASTWOOD proposed, and Mr. LEONARD ARMSTRONG seconded, the following resolution, which was carried unanimously:—"That this meeting is of opinion that every endeavour should be made to carry out the Public Health Act in its integrity, and deeply regrets the appointment of non-medical inspectors."

2. Paracentesis Thoracis. By W. A. I'ANSON, Esq. Mr. I'Anson related the particulars of a case of acute pleurisy with effusion in a boy, in which he performed the operation of paracentesis thoracis with a successful result. Mr. I'Anson advocated the early performance of the operation in such cases.

3. Thermometric Observations in Typhoid Fever. By G. H. PHILIPSON, M.D. Dr. Philipson exhibited several thermometric charts of cases of typhoid fever, and specially directed the attention of the members to a case of typhoid fever in a boy, complicated with acute general bronchitis. The chief interest of the case was that the thermometric record agreed with the normal type until the middle of the sixth week, when a sudden elevation of temperature occurred, which, appearing as it did during the proper convalescence from the specific febrile condition, was regarded at the time of its occurrence either as a sign of a relapse, or the onset of a new disease; the subsequent appearance of the characteristic signs of general bronchitis as a complication proving the correctness of the latter conjecture. It was also of interest that, during the progress of the complication, when the evening temperature was as high as at the time of the fastigium of the fever, there was not more than 0.4 deg. Fahr., or 0.6 deg. Fahr. difference between the evening and the morning temperatures; while at the time of the fastigium, there was a difference of 2.0 deg. Fahr. between the evening and the morning temperatures.

Votes of Thanks.—A hearty vote of thanks was accorded to the readers of the papers.

On the motion of the PRESIDENT, and carried by acclamation, it was resolved—"That the best thanks of the meeting be given to the trustees of Bishop Cosin's Library, for their kindness in granting the use of the Library for the purposes of the meeting."

Dinner.—The members, to the number of twenty-eight, afterwards dined together at the County Hotel, the President in the Chair.

This was the first intermediate meeting of the Branch, and was more successful than had been anticipated. The spring meeting will be held at Sunderland in April 1873.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

VACCINATION RETURN.

MR. WYATT, the Vaccination-Officer of the Clifton Union, reports that of the 1,661 children whose births were registered between the 21st of August 1871 and 21st December 1871, 1,440 have been certified as successfully vaccinated, one has been certified as insusceptible of vaccination, and 159 have died unvaccinated. In eleven cases, vaccination has been postponed under certificate, one was removed to another district, and notice has been given to the Vaccination-Officer; thirty-six have removed to places unknown. The return leaves thirteen cases unaccounted for.

LUNATIC PAUPERS.

THE guardians of the St. George's Union have unanimously passed the following resolution:—"That the practice of handing over poor persons suffering from temporary insanity to the parish medical officer, with the understanding that he is to be paid if he fail and not to be paid if he succeed in restoring them, is opposed to common prudence, common sense, and common humanity." If the guardians intend it to be implied that medical officers may be induced to abstain from taking such measures as may be necessary for the proper treatment of insane persons in order that it may become requisite that they should be removed to an asylum, and the fee for certifying as to the lunacy may be secured, the imputation is a very grave one, and such as ought not to be lightly made, nor without good grounds for substantiating it. If, on the other hand, the guardians merely mean that they consider that the payment of a medical man for his services in examining and certifying as to the lunacy of a person is objectionable, their opinion on the subject might have been expressed in a less roundabout way.

PUBLIC HEALTH ACT.

SIR,—The Public Health Act will cause many medical men to direct their attention to the duties expected to be performed by the medical officer of health, and to ask themselves whether they are sufficiently "well up" in the subjects or duties to "go in" for one of the appointments? I think, therefore, a few hints from you, but especially upon the following points, would be considered of great assistance (at this period) by those who wish to be officers of health.

1. Where can a medical officer of health receive his instructions how to test gas, food, milk, water, air, etc.?

2. At whose cost is this special knowledge to be obtained?

3. Will the Board of Health provide a laboratory and the necessary testing apparatus?

4. What are the duties generally? and what is it necessary for the medical officer of health to be specially and thoroughly acquainted with?

Professor Longmore's and Dr. Parkes' books can be read with advantage; but it seems to me that the greatest difficulty will be in gaining a thorough *practical* knowledge of the details of the duties. Visiting the houses, closets, inspecting the general sanitary arrangements of the town, any well educated medical man will be able to do in a satisfactory manner. Indeed, the outdoor work, and making up his returns, and compiling his reports, will be got over easily enough; but it is the laboratory work in which the medical officer of health of the large provincial towns will feel himself at first a little green. Therefore I am of opinion that a few hints from competent sources on this subject will be received thankfully by your readers.

I am, etc., S. CARTWRIGHT REED, M.D.

Watford, Herts, September 9th, 1872.

OBITUARY.

ISAAC JOHN GILLAM, M.D.

DR. GILLAM died on September 21st, at South Lodge, Ham, from exhaustion, having suffered for six years after the rupture of a blood-vessel. He was parochial medical officer to the Crondale District of the Hartley Wintney Union for some years, but for the last two years of his life had relinquished the arduous duties of his profession on account of his failing health. His death is universally regretted. He leaves a widow and an adopted daughter. He was the second son of the late Rev. Isaac Gillam, Vicar of Northleigh, and Incumbent of St. Michael's, Liverpool. He was M.D. of Marischal College, Aberdeen, a Fellow of the Royal College of Surgeons of England, and a Licentiate of the Society of Apothecaries.

MEDICAL NEWS.

MEDICAL VACANCIES.

THE following vacancies are announced:—

BELFORD HOSPITAL, Fort William, Inverness-shire—Resident Surgeon: £150 per annum, board and lodging.
BETHLEM HOSPITAL—Two Resident Medical Students.
BIRMINGHAM GENERAL DISPENSARY—Resident Surgeon: salary £130 increasing to £150 per annum, residence, coals, gas, and attendance.
BIRMINGHAM HOSPITAL FOR WOMEN—Dispenser: £20 a year to commence.
BLACKBURN UNION, Lancashire—Medical Officer for the Billington District: £15 per annum.
CHARING CROSS HOSPITAL—Assistant-Surgeon.
CHELSEA, BROMPTON, and BELGRAVE DISPENSARY—Physician.
CLITHEROE UNION, Lancashire—Medical Officer for the Whalley District: £16 per annum.
CLIFDEN UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Rinvyle Dispensary District: £100 per ann., and fees.
DOWNPATRICK DISTRICT LUNATIC ASYLUM—Assistant Medical Officer.
GLASGOW ROYAL INFIRMARY—Extra Physician to the Dispensary.
HAVANT UNION—Medical Officer for District No. 3.
HENLEY UNION—Medical Officer and Public Vaccinator for the Nettlebed District: £80 per annum, and extra fees.
HOSPITAL FOR DISEASES OF THE THROAT—Assistant-Surgeon.
MANCHESTER ROYAL INFIRMARY—Two Assistant-Physicians.—Two Assistant-Surgeons.—Ophthalmic Surgeon.—Obstetric Surgeon.—Dental Surgeon.
MANORHAMILTON UNION, co. Leitrim—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Manorhamilton Dispensary District: £100 per annum, and fees.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Surgeon.
MIDDLESEX COUNTY LUNATIC ASYLUM, Hanwell—Apothecary: £120 per annum, furnished apartments, board, and washing.
NORFOLK AND NORWICH HOSPITAL—Surgeon.
ST. AUSTELL UNION, Cornwall—Medical Officer and Public Vaccinator for District No. 2: £25 per annum and fees.—Medical Officer and Public Vaccinator for District No. 7: £30 per annum and fees.
ST. GEORGE, Hanover Square—Medical Officer of Health: £350 per annum.
SALOP INFIRMARY, Shrewsbury—Two Physicians in Ordinary.
SUNDERLAND HOSPITAL for SICK CHILDREN—Three Medical Officers.
UCKFIELD UNION—Medical Officer and Public Vaccinator for the Maresfield District: £85 per annum, and extra fees.
UNIVERSITY COLLEGE HOSPITAL—Assistant-Physician.—Assistant Surgeon.—Assistant Medical Officer in the Skin Department.
WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon: £80 per annum, board, lodging, and washing.
WEST LONDON HOSPITAL, Hammersmith Road—Two Junior Physicians.
WEST SUSSEX PRISON, Petworth—Medical Officer: £100 per annum.
WESTMINSTER HOSPITAL—House-Surgeon.
WESTON-SUPER-MARE HOSPITAL and DISPENSARY—House-Surgeon: £60 per annum, board, lodging, and washing.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*JORDISON, Christopher, Esq., appointed Surgeon to the Whitchurch and Tattenhall Branch of the London and North-Western Railway.
*KENYON, J. Kilshaw, Esq., appointed Medical Officer and Public Vaccinator for the Billingborough District of the Bourne Union, *vice* Benjamin L. Powne, Esq., resigned; also, Acting Assistant Surgeon to the 18th Lincoln Rifle Volunteers.
*WILLIAMS, Evan, Esq., appointed Medical Officer and Public Vaccinator for the Llangefni District of the Anglesea Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

FOSTER. On October 7th, at Birmingham, the wife of *Balthazar Foster, M.D., of a daughter.

MARRIAGES.

*HINDS, James, M.D., of Halstead, Essex, to Lucy, second daughter of Thomas BUSBY, Esq., of Balsall Heath, Birmingham, at Edgbaston Old Parish Church, on October 2nd.—No cards.
*NICHOLSON, Emilius Rowley, M.D., of Oldham, to Cecilia, second daughter of Charles SIMPSON, Esq., Town Clerk of Lichfield, at St. Mary's, Lichfield, on September 19th.
SNOW, William V., M.D., of Bournemouth, to Charlotte Ivy, second daughter of the late James Whitelaw STRONGE, M.D., of Dublin, on August 8th.
YOUNG. Edward, Esq., of the Hall House, Hawkhurst, to Elizabeth, only daughter of *William HOAR, Esq., Surgeon, of Maidstone, at St. Peter's, Maidstone, on October 1st.

DEATHS.

DRY, Thomas, M.D., late of Walworth, at sea, aged 32, supposed in February 1872.
MACRAE, John, Esq., Surgeon, at Lewes. aged 60, on September 27th.
ROBERTSON, Wm. Campbell, Esq., Surgeon, at Strathmiglo, Fife, aged 63 years, on September 6th.
ROBINSON, John Craven, Esq., Surgeon, of Torquay, at Coxwold, aged 34, on September 1st.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. MACKINDER (Gainsborough) has omitted to observe an abstract of the report on page 391 of our last issue.

WE have received from Wrexham a note on the action of ergot, unsigned and unfinished.

DR. A. MACKINTOSH'S wish shall be attended to.

X.—A candidate for the Fellowship of the College of Surgeons can take the examination in two parts: viz., the Anatomy and Physiology in May, and the other portion in November.

WE again call the attention of the President of the Royal College of Surgeons to the pamphlet entitled *The Antiseptic Treatment*, by George Washington Evans, M.R.C.S.E., Fair View House, Reading, Berkshire, with its list of testimonials' puffing letters, etc.

THE GEOGRAPHY OF PULMONARY CONSUMPTION.

SIR,—Allow me a few words in reply to Mr. Armstrong, whose letter appears in the JOURNAL of September 21st. In a small union, like that of Great Ouseburn, with a population only of 11,851, but little practical benefit will result from the deduction, and there are other sources of fallacy, that I have pointed out. The deaths from phthisis, however, are for the most part so uniform, as to number, that I do not anticipate, when the returns of the next decennial period are published, that there will be, generally, any material difference. Mr. Armstrong commits a slight error in his figures; instead of 43, it should be nearly 47½. There is one important deduction from my statistics that I take credit to myself, for being the first to promulgate; viz., that phthisis, contrary to the general belief before entertained, is much more prevalent on the western coast of England and Wales than on the eastern seaboard.

I am, etc.,

29, Beaufort Street, Chelsea, September 24th, 1872. EDWARDS CRISP.

DEATH OF A LADY FROM THE STING OF A BEE.—A sad occurrence recently took place at Haltonshields, near Matfen, resulting in the death of Mrs. John Beattie, of that place. Mrs. Beattie was in her garden, between three and four o'clock in the afternoon, and, whilst adjusting a cloth which had been laid over a hive of bees, one of them stung her on the arm a little above the wrist. She returned to her house, but immediately complained of being unwell. A swelling of the bowels and throat set in with great severity, and in the course of half an hour from the occurrence she expired.

ACTION OF ERGOT ON THE MUSCULAR TISSUE OF THE HEART.

SIR,—In Dr. Thompson's paper on the above subject, published in the JOURNAL of September 21st, after describing a case where he believes death depended on the forcible contraction of the muscular tissue of the heart and large arteries, caused by the cumulative action of the ergot, he goes on to speculate as to the reason for such action; and, in doing so, seems to me to rest his case on a false basis, viz., the similarity of the muscular tissue of the uterus and heart. He says: "No doubt exists that ergot acts on unstriped muscular tissue in the uterus. Why should it not act on the same muscular fibres in the heart?" And, "It may be presumed that when the necessity for the use of contractile power in the uterus ceased, that the action was transferred to the same *unstriped muscular tissue in the heart*" (italics are mine). Now, if I understand Dr. Thompson aright, he means that the muscular tissue of the heart is of the unstriped variety, and therefore I must conclude that either Dr. Thompson is wrong, or that every observer and writer on the subject with whom I am acquainted are stating what is not a fact, when they say that the heart is composed of striped muscular fibre.

I am, etc., GEO. GRAY, M.D.

Castlewellan, September 24th, 1872.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

MIDWIFERY ENGAGEMENTS.

B. B. B. *Answer to Question* 1.—It is a specific contract entered into deliberately by the party. If the woman applied personally and made the contract, and a proper record of the fact entered by the doctor in his book in her presence at the time, and the woman afterwards breaks the contract and employs another doctor to attend her (without just cause), the doctor with whom she made her contract can recover.

Answer to Question 2.—There may be some just cause which made the County Court Judge set aside the contract, and decide that the doctor could not recover.

Answer to Question 3.—The answer to Question 1 applies in the same way to Question 3. No matter what warning a doctor may give, these warnings are not laws, and will not make the debt any more a recoverable one.

SIR,—In answer to B. B. B., I beg to inform him that I consider his right to recover his fee is undoubted. Exactly a similar case occurred to me in 1856, when in practice at Thorne in Yorkshire. The usual midwifery fee for attending women in the labouring class was then 10s. 6d. in the town, and it was also the custom to charge the journey extra in the country, as well at the confinement as all visits afterwards. In September 1856, I was engaged to attend a woman by the name of Fox. In the course of my rounds, I called and saw her. I ordered castor oil; and ordered her, when she required my attendance, to send for me. Some two or three months passed, and I heard nothing more. I then accidentally heard that she had been confined, and was attended by a surgeon residing at Snarth, to whom they had paid the fee. Snarth was two miles from their house. Thorne, my residence, was five miles distant. I applied for my fee, which they refused to pay; they had not even the civility to send to inform me that she was confined. So in February 1857, I summoned the husband to the Goole County Court for 10s. 6d., the amount of my fee, contending before the judge (W. Walker, Esq.) that I was retained; my fee was then due as a retainer from that moment; that I had held myself in readiness to attend; that I did not attend was no fault of mine. A lawyer was employed for the man. I conducted my own case. Judgment was given for me. On referring to my ledger of that date, I see the particulars of the order were: fee, 10s. 6d.; costs, 2s. 10d.; allowance for my attendance, 8s.; in all, £1 1s. 4d. The case was reported at the time in the Doncaster papers, and, I think, in the *Medical Times and Gazette*. I contested the case on principle, thinking that it was a most unfair thing to engage a medical man, and then not send for him. It was establishing a bad precedent; and I was determined to put a stop to it if possible. In this I succeeded. I thought it only right to give B. B. B. the particulars of my case, and the result of the action.

60, Clapham Road, S.W., September 21st, 1872. I am, etc., R. GILLARD.

P.S.—I can refer B. B. B. to another case, somewhat different, yet establishing the point that the fee was due as a *retainer*, not necessarily requiring attendance *if the non-attendance was not the fault of the medical man*. A woman resided two miles distant from me, at Slingsby in Yorkshire (I resided at Hovingham). Another medical man was engaged. He was absent at the time. I was sent for. My horse was put in my carriage, and I went about half a mile, and then met a messenger, saying that I was not wanted, as some one else had come. I demanded my fee; payment was refused. I took proceedings in the Malton County Court. The judge ordered payment of my fee, with costs. R. G.

A SUGGESTION.—In making a contract with a woman to attend her in her confinement, it is best to enter the full particulars in her presence.

First. Name, Mrs. Charles Brown (do not enter Mrs. *Sarah* Brown).
Secondly. Address in full.
Thirdly. Date of expected confinement.
Fourthly. Fee to be paid.

Then let the woman sign her name at the foot of this entry, and you hand her your card. This can be used as evidence of the contract, which a County Court Judge would find very difficult to set aside. It is best to call upon your patient about the time the confinement was expected to take place; the patient will consider it a mark of attention; but you make a record of it in your book, and it is a reminder to the woman of her contract.

QUARANTINE.

DR. SHRIMPTON writes:—I beg leave to correct that part of the report of my observations at Plymouth on Quarantine, in which you make me say, "Fear making cholera contagious, when it was not, in his opinion, really so." I said that though cholera is not a contagious disease, the fear of cholera is frightfully contagious; that quarantine legitimises fear, and produces cholera in time of epidemics. I said, moreover, that quarantines are foci of contagious diseases; that, instead of preventing they develope these diseases, and prevent us from looking for their true causes and origin, which are always to be found in the country in which these diseases are contagious. Diseases can be contagious in those places only, and under those circumstances in which the disease itself finds the elements of its origin. This is true in regard to the plague, typhus, yellow fever, small-pox, scarlet fever, etc.; the cattle-plague, foot-and-mouth disease, as well as all other contagious diseases. Quarantines should then be totally abolished, as an institution producing exactly the opposite effect to that intended, as thoroughly unworthy of the age in which we live, and contrary to the progress of science and humanity.

SURGICAL QUERIES.

A METROPOLITAN SURGEON asks:—1. Can any reader state, from his own personal knowledge, the circumstances of a case or cases of inguinal or femoral hernia (congenital or from other causes) cured permanently by the use of trusses? If cured, then in what manner: by closure of the "rings" or by obliteration of the canals in consequence of the pressure of the truss-pads?—2. Has any Demonstrator of Anatomy in the dissecting-room had the opportunity of dissecting the subject of a radical cure of hernia—radically cured by truss-pad pressure or by operation? I shall be very glad of any replies to these queries.

REIGATE AND REDHILL COTTAGE HOSPITAL.

MR. HEAD, Honorary Treasurer, writes:—On referring to the BRITISH MEDICAL JOURNAL, I observe in your allusion to this hospital, that the cost of treatment of seventy-seven cases during the past year was £600. Without explanation, this statement may mislead. The expenditure of £600 includes the cost of removal from the old to the new hospital; the payment of certain old outstanding bills of previous years; altogether reducing the amount expended during the past year to £450.

CLINICAL LECTURES
ON
MENTAL AND CEREBRAL DISEASES.

By J. CRICHTON BROWNE, M.D., F.R.S.E.,
Medical Director, West Riding Asylum; Lecturer on Mental Diseases to the Leeds School of Medicine; etc.

III.—Simple Melancholia.—(*Concluded.*)

Turning to the bodily symptoms of simple melancholia, I need scarcely tell you that these are infinitely varied. As the despondency may be but the outgrowth of some visceral or constitutional disease, it may have corresponding with it any of those groups of bodily symptoms which attend upon the visceral or constitutional diseases out of which it may arise. Thus in Emma B., in Ward 28, the bodily symptoms of simple melancholia are those which are recognised as characteristic of morbus Addisonii; while in Anne C., Ward 25, they are those of chronic rheumatism and valvular disease of the heart. The symptoms of cancer of the stomach, chronic diarrhœa, tumours of the uterus, hepatic degenerations, and a multiplicity of other maladies, may be those of simple melancholia. There are, however, certain departures from physical health, which are present in so great a proportion of cases of the disorder which we are discussing, that they may be considered as having a more special relation to it, and may, therefore, be enumerated here. 1. There are frequently painful feelings, such as a sense of weight, or vacancy, or throbbing, or actual pain in the head. These feelings may occupy the forehead or the coronal region—most frequently the latter—and are usually accompanied by giddiness, especially when any rapid movement is attempted, and by great insomnia. 2. There are frequently impairments of the special senses, which never, however, amount to hallucinations. The eyesight is dim; there are soundings in the ears; a constant bad taste is felt in the mouth; a numbness or hyperæsthesia is experienced in the hands and feet, or in some tract of skin. 3. There is frequently impairment of general nutrition, with impoverishment of the blood; the body becomes thin and wasted; the skin loses its softness, and is pale or of a dirty colour; and the muscles are feeble and relaxed. The pupils are dilated; the mucous membranes are exsanguine; and all the indications of anæmia are obvious. In extreme cases, a degree of leucocythæmia may be present, so that the blood under the microscope exhibits a distinct increase in the proportion of white cells. 4. There are frequently disturbances in the circulatory and respiratory systems; the heart's action is irregular or tumultuous; attacks of palpitation come on from time to time, especially at night; there is a soft blowing cardiac murmur, loudest at the base, and propagated along the great vessels; the pulse is feeble and compressible; the extremities are cold; the breathing is sighing in character. 5. The temperature is below the normal standard; it frequently falls as low as 96.8 deg., and rarely rises to 98.4 deg. 6. The digestive functions are frequently disordered; the tongue is loaded with a dirty white fur, or is red and irritable. There is complete anorexia, or a capricious appetite. There is vomiting, pyrosis, painful digestion, or dyspepsia, in some form; and the bowels are almost invariably constipated. 7. There is frequently derangement of the menstrual function, amenorrhœa, menorrhagia, or leucorrhœa.

With reference to the causes of simple melancholia, I may be very brief, as we have quite recently, in our systematic lectures, considered the etiology of insanity in general, and have dwelt at length upon those moral causes which are so productive of mental depression. Only upon one or two points is it desirable that I should make a few remarks. Hereditary tendency to insanity of course plays an influential part in the causation of melancholia, and so do diathetic tendencies. Persons of a melancholic or bilious temperament are apt to become morbidly depressed by a mere aggravation of their native disposition, and persons of nervous temperament by the irritation and exhaustion which their vivacity and susceptibility engender. A certain mental weakness or intense sensitiveness is perhaps necessary for development of melancholia, even when it is induced by moral causes. A truly courageous man will not become melancholic, for a substratum of fear is an essential condition of the disorder. A truly strong nature will never flinch, even when assailed by the fiercest calamities. We cannot imagine Jeanie Deans, even in the depth of her misfortune, wavering or sinking under despair. John Knox was never cast down when toiling as a galley-slave. Convicts go mad by dozens, but no martyr has ever been reprieved on the ground of insanity. But this mental weakness or sensitiveness, which is the condition of melancholia, is very prevalent amongst us, and is fostered by many of the circumstances of our modern life. In our haste to grow rich, we overstrain our strength and exhaust our energies. We rise up early and late take rest, and disquiet ourselves with doubts and rivalries and ambitions. There is none of the severe husbanding of strength, that nice adaptation of exerted energy to the thing to be accomplished, which genuine education ought above all things to teach. We do our best to induce a nervous habit and to sap our physical vigour. In our rich and complicated civilisation, we are constantly imposing new burdens upon, and calling for fresh efforts from, our minds and brains, and it is no wonder that the nervous centres become disordered and unhinged. And loaded as we are, in our bread-winning and social intercourse, with anxieties and perturbations formerly unknown, we are at the same time deprived of those supports which might have rendered such anxieties endurable. "A believing love", says Emmerson, "will relieve us of a load of care"; and it is just this believing love that we have lost or cast from us. A want of reverence is abroad; all authority is questioned; nothing exists but matter, force, and necessity; expediency is our only guide. At every step in life a man must ask himself not the simple question, whether the act is conformable to a known standard, but the infinitely complex and embarrassing question, which Omniscience alone can adequately answer, as to what will be its effects and results in a variety of contingent circumstances. At every bereavement in life a man is left desolate and inconsolable, and with no warm hope or spiritual comfort to which to turn. Doubt and infidelity have been sown everywhere. A dreary and appalling prospect has been spread out before our race.

I have endeavoured to satisfy you, gentlemen, that insanity is increasing amongst us; and I have now to express to you my firm conviction, founded upon my professional experience, that much of that increase is to be attributed to the miserable materialistic philosophy which is now so assiduously disseminated. With just enough reason in it to captivate a shallow soul in the hour of its complacency and vanity, it cannot sustain it in the time of trial and adversity. He who has got rid of the supernatural has not cast out fear. Faith is necessary to mental health; and much of the mental infirmity and despondency which we see around us is due to a want of faith. Illustrations of what I have just said are of course most frequently found amongst the more refined and cultivated classes; but even in pauper asylums they are to be met with. We have here now a youth named Addison B., 22 years of age, a coal-dealer from Halifax, who is labouring under melancholia, which was undoubtedly brought on by the reading of atheistical books. He was converted to atheism, his mind became bewildered and oppressed, and he is now under treatment in this asylum.

In no form of insanity will you find moral treatment more efficacious than in simple melancholia. Being but a functional derangement, it is accessible to functional modifications. Then the comparative integrity of the powers of the mind, which are not directly involved in the disorder, affords facilities for counteracting the predominant morbid feelings. The great object is to break up the monopoly of grief and fear which has obtained possession of the mind; and if a new interest can be awakened, or a hope insinuated, this object is in great part attained. If we can once fix the attention upon any relief or happiness which is capable of attainment, we have made much way towards recovery. If we can inspire, by our assurances, any uncertain glimmering hope of restoration, we have ministered powerfully to composure and serenity of mind. Thus it is that the words and bearing of a physician are sometimes more consoling and healing than the medicines which he prescribes. If, however, confidence cannot be communicated, attention can at least be diverted. Novel impressions may be made to attract it. Change of scene acts often like a tonic to the depressed and jaded powers; and those who have become worn out and dejected by overwork and anxiety return from a tour in Switzerland or Italy in exuberant spirits. The rich have this remedy always within their reach, and should be induced to avail themselves of it; and the poor, too, in these days of cheap travelling, may to some extent profit by it. Permit me, however, to give you one caution, and that is, that where there is great restlessness and feverish perturbation, travelling and change of scene should not be resorted to in simple melancholia. They are chiefly beneficial where the disorder is of recent origin, is due to nervous exhaustion, and is characterised rather by languor than agitation.

Whether change of scene be had recourse to or not—and in many cases it is out of the question—solitary brooding and idleness must not be permitted. The tendency of the patient to retire from society and mourn in secret must not be encouraged. Cheerful companionship

should be, if possible, secured, as it is frequently as restorative to the melancholic as the air of Italy is to the victim of the degenerative diathesis. Sanguine, light-hearted, buoyant associates, who live in a sort of jocund atmosphere; who not only look at everything through a *couleur de rose* medium, but reflect a *couleur de rose* complexion upon all around them—whose gaiety is contagious—may exert the happiest influence upon melancholics. Occupation of some kind must be insisted on; and the work done should be real, and not a mere simulacrum. Amusement, too, must be provided, and persevered in, even should it seem for a time to have no effect. I find, in the letters of Charles Lamb, a striking illustration of the value of this kind of moral treatment. "Lloyd," he says, "owed a debt of gratitude to Macready, which exemplified the true uses of the acted drama with a force which it would take many sermons of its stoutest opponents to reason away. A deep gloom had gradually overcast his mind, and threatened wholly to encircle it, when he was induced to look in at Covent Garden Theatre, and witness the performance of *Rob Roy*. The picture which he then beheld of the generous outlaw—the frank, gallant, noble bearing; the air and movements, as of one free of mountain solitudes; the touches of manly pathos and irresistible cordiality—delighted and melted him, won him from his painful introspections, and brought to him the unwonted relief of tears. He went home a gayer and a wiser man, returned again to the theatre whenever his healing enjoyments could be renewed there, and sought the acquaintance of the actor who had broken the melancholy spell in which he was enthralled, and had restored the pulses of his nature to their healthful beating." In your visits to the wards, I shall be able to point out to you several cases in which moral impressions of this kind have induced or expedited convalescence. I am constantly receiving assurances from patients who have recovered, of the immense value of the occupation and amusement which are provided in this hospital in relieving and dissipating melancholy, as well as of the potent influence of outward circumstances upon the emotional tone. It is impossible for a callous obdurate mind to conceive how deeply other more sensitive minds are affected by the character of the scene which surrounds them. "Many a suicide", says a subtle analyst of human nature, "that hung dubiously in the balance, has been ratified and carried into summary effect through the forlorn soul-revolting aspect of a crazy dilapidated home. Oftentimes, without extravagance, the whole difference between a mind that spurns life and the same mind reconciled to life, turns upon the outside features of that particular domestic scenery which hourly besieges the eye."

A single impression made upon the mind, a single hopeful idea introduced into it, may sometimes, I believe, suddenly change the whole current of feeling, and divert it from a morbid into a healthy channel. Nor is there anything contrary to analogy in this belief. In Sir Thomas Watson's *Practice of Physic*, you will find recorded the case of a girl who, having recovered from chorea and suffered a relapse, was on her way to Guy's Hospital for the purpose of seeking readmission there. As she passed over London Bridge, she was terrified by seeing a person knocked down and run over. Before she reached the waiting room of the hospital, her malady was gone. From my own experience, I could repeat to you cases of recovery from simple melancholia as rapid and remarkable as this, and as obviously due to a strong moral impression. I prefer, however, to advert to what I may term a classical case: that of Christopher Columbus, who was plunged into a lethargy that deprived him of sense and reason, and nearly proved fatal to his life, by the unremitting fatigue of mind and body which he had to undergo; and who recovered at once under the sudden emotion of joy which he felt on meeting with his brother, Bartholomew at Isabella.

But however efficacious moral treatment may be in the treatment of simple melancholia, you would not be justified in trusting to it alone, unless the case was of the mildest description, and presented no bodily indications for treatment whatever. In all cases of this disease in the West Riding Asylum, you see medical combined with moral treatment; and in most you see the course of medical treatment shaped in accordance with the indications of the physical symptoms present. When the melancholia is but an expression of a bodily disease, its therapeutics are clearly those of the disease which it expresses. Upon this aspect of its medical treatment it is not my province to enter. All that I can do is to impress upon you, firstly, the importance of seeking out and treating visceral or blood diseases when simple melancholia comes under your professional care; and, secondly, the value of certain drugs in operating more directly and immediately upon the nervous and cerebral derangement in which simple melancholia essentially consists. When a case of that form of mental ailment is admitted here, if it is mild in character, and especially if, as is so frequently the case, it is associated with anæmia, weakness, and exhaustion, some preparation of iron—the ammonio-citrate or the tincture of the muriate—is first tried, while nourishing food and fresh air are freely administered. If great prostration is present, wine is ordered in quantities varying from three to twelve ounces in the twenty-four hours. Under such treatment, steady improvement and speedy recovery often take place, as you have yourselves witnessed in the case of Mary Ann H., who was admitted in a state of great mental depression and bodily weakness and emaciation, on the 7th of March of this year, who was treated with good food, and fifteen minims of steel wine three times a day, and who went home quite well on the 15th of May. Should impulsive tendencies be manifested along with the despondency, I generally add bromide of potassium in thirty or forty grain doses to the iron mixture. That seems to control the incontinent discharges of energy, and to allow time for the building up of that bodily stamina which is the best protection against impulsive outbreaks. Under its use, I have seen muscular twitchings quieted, while, at the same time, the patient has experienced a sense of greater mental tranquillity and self-command. If, on the other hand, the melancholia tends not towards impulsive effusions, but rather towards atonic lethargy, in which every movement and exertion is eschewed, in which the same attitude is preserved for hours, and in which coldness and blueness of the extremities become apparent, I resort to large doses of quinine or small doses of strychnia along with the iron. Under such circumstances, Easton's syrup of iron and quina and strychnia is an admirable preparation. Some of you will remember Gill, F., in Ward 2, admitted on the 27th of July, 1871. He was a married man, a nailmaker from Skipton, and had suffered from depression of spirits for two years, but had become much worse, subsequently to a severe attack of bronchitis in the previous December. He was intensely wretched, and had thought of suicide, but could assign no reason for his misery, except that he feared his wife was disappointed in him. He was slow in his movements, disinclined for any effort, and had cold hands and feet. He exhibited, also, that singular modification of the cutaneous vascularity which is known as the cerebral macula. When the finger was pressed upon any part of his neck or chest, a deep red blush at once appeared, and spread itself widely around. When the point of a pencil was drawn across the skin, a broad red line instantly started out; and on this, in the course of a few seconds, a long, narrow, white elevation or weal, like whipcord, grew in the line traversed by the pencil point. Well, this man was ordered Easton's syrup in one-drachm doses three times a day, and commenced his progress towards recovery with the second or third doses. He improved rapidly, and was discharged on the 24th of November last, a stouter, stronger, and more cheerful man than he had been for three years previously.

In one form of simple melancholia, dependent upon profound anæmia, hæmorrhages, or hyperlactation, in which, along with great general weakness, there is decided feebleness and deficiency in the propelling power of the heart, and perhaps a slight degree of dropsy of the feet and legs, small stimulating doses of digitalis given along with iron are invariably most beneficial. In another form, in which the melancholic temperament is well marked, in which the skin is dry, harsh, or furfuraceous, or in which rheumatic complications appear, a course of Turkish baths, extending over a month or six weeks, will often dissipate the gloom and restore health. In a third form, in which nervous exhaustion is predominant, and in which gastralgia and other neuroses of the stomach are present, arsenic, in small doses, may be of incalculable service.

When the remedies which we have just enumerated do not, after a fair trial, secure relief—when the despondency does not yield, in some degree, in a brief period to those of them which have been appropriately selected—then it is desirable to have recourse to other means. We must not leave our patients too long with their sufferings unalleviated; we must not allow the nervous centres to take on a habit of melancholy. Because this disorder is slow in its progress, is long drawn out, and does not in some cases present very obtrusive symptoms, we must not imagine that prompt and vigorous treatment is not necessary. When the case is of a severe type from the first, or when, being of a mild type, it is not amenable to those kinds of treatment which have been already mentioned, then, after a period of a few weeks at most, drugs acting more powerfully upon nerve-centres ought to be employed. Of those, I shall at present name two—the muriate of ammonia and the tincture of opium. The first of these I have employed in many cases, especially those in which the depression was tolerably intense and paroxysmal in character, with marked advantage; and the second I look upon as the most valuable instrument at our disposal in the treatment of melancholia. Given in moderate doses of from ten to twenty-five minims, it acts as a cerebral tonic, relieves depression, promotes sleep, raises the temperature, improves the appetite, and regulates the bowels. The patient at once recognises in it a balm and a restorative of superlative excellence. The soothing psychical influence is accompanied by an increase of bodily vigour, and entails no subsequent penalty in impaired nutrition, or digestion, or in the formation of a pernicious appetite. There is what I can only call

a tolerance of opium in simple melancholia. While the depression lasts, it is taken with benefit to every function; and when the depression terminates, its use can be abandoned without inconvenience. Its great value has, I venture to think, been demonstrated to you during your studies here. Out of a number of cases that have passed under your observation in which opium has been obviously advantageous, let me recall only one, that of Hannah T., admitted on the 20th of last March. This woman was thirty years of age, married, and the mother of five children, the youngest of whom was two years old. She became insane from the fright occasioned by her house being set on fire, and had been low-spirited for six months prior to her reception here. She had become gradually worse, and a fortnight before her admission had cut her throat, inflicting a severe wound, which she afterwards attempted to tear open. When she came under our care, she was deeply and vaguely despondent, and was weak, emaciated, and bloodless, with a wound on the throat opening into the trachea, a soft systolic murmur at the base of the heart, and menorrhagia, which had been going on for fourteen days. She was at once ordered wine, extra diet, and the citrate of iron and quinine. This treatment was continued until April 9th, when, no improvement being perceptible, tincture of opium was prescribed in ten-minim doses three times a day. From that hour, improvement was inaugurated, composure was obtained, appetite returned, the tongue cleaned, and weight increased. She was convalescent in three weeks, and was discharged recovered on the 22nd of May.

CASES OF INTERMENSTRUAL OR INTERMEDIATE DYSMENORRHŒA.*

By WILLIAM O. PRIESTLEY, M.D.,
Consulting-Physician to King's College Hospital.

The subject of dysmenorrhœa has received much attention from those who study and write concerning the diseases of women, and several varieties of painful menstruation have been described in accordance with the pathological views which have been taken of the causes. Thus, in the various text-books, we find descriptions of *congestive* dysmenorrhœa, of *membranous* dysmenorrhœa, *mechanical*, *ovarian*, and *neuralgic* dysmenorrhœa.

In women who are the subjects of difficult and painful menstruation, the suffering is commonly experienced at the time of the catamenial period, and the description of the symptoms of dysmenorrhœa is ordinarily limited to the duration of the menstrual flow, including the day or two which may precede or follow its advent. From time to time, however, I have met with cases of a more obscure kind, where the chief suffering is remote from the actual menstrual period—coming on, nevertheless, with almost the same regularity as the catamenial discharge, and depending, as I believe, on organic changes associated with derangement of the menstrual function.

My experience leads me to infer that such cases as I am about to describe are not uncommon, and probably other practitioners have observed like instances. Hitherto, however, I have seen no record of precisely similar symptoms, and I therefore present the cases to the Society, as a fragmentary contribution to the study of some of the more obscure forms of pain experienced by women in connection with derangements in the sexual organs. The following are selected from others as typical cases, and yet as possessing some diversities both as to the symptoms, and as to the anatomical conditions as ascertained by examination.

Case I (from notes taken by Mr. Vachell, Resident-Accoucheur).—E. W., aged 33, was admitted into King's College Hospital on January 6th, 1870. The woman had been married eighteen years, but had borne no children. For nine months previous to admission, she noticed that the catamenial discharge had become scanty, and in the intervals she had leucorrhœa. Some time previously to this, she began to suffer pain in the intermediate period of menstruation. The pain had been but slight at first, but had gradually grown more severe, and at length she was compelled to keep her bed two or three days in each successive month. She described the pain as invariably coming on ten days before the regular monthly period. It often came on suddenly, beginning in the back, and, shooting round the right iliac fossa to the groin, it passed down the right thigh. The attacks were commonly paroxysmal, exacerbations of acute pain alternating with irregular intervals of less suffering. At no time during the seizure, however, was there complete absence of discomfort, and the patient referred the centre of greatest pain to a point above the right groin, and midway between the symphysis pubis and the anterior superior spine of the ilium. Three or four days before the commencement of the catamenial flow, the pain habitually passed away, and during the period there was no inconvenience. On the day of her admission, which was a week before she expected her usual attack of pain, it was remarked that there was tenderness on pressure in the right ovarian region, but no swelling could be felt by external examination. By the vagina, however, a hardish elastic tumour, of the size of a large walnut, could be felt in the direction of the right broad ligament. It could be palpated between one hand placed externally and the finger of the other in the vagina, and was smooth in outline, but apparently adherent to the right border of the womb. The patient remained fairly well until January 14th, when the old pain came on as usual. During the night, she had three sharp paroxysms; and on the 15th, the pain was so considerable, that a sixth of a grain of morphia was given by hypodermic injection. This gave speedy relief to the more acute pain, but entire freedom from suffering did not occur until the 19th, five days after its commencement; and in the meantime, belladonna liniment, chloroform, and other soothing measures were employed. The period came on on the 24th, and passed over painlessly. Subsequently, small doses of perchloride of mercury with bark were given, in the hope of lessening the swelling, which, from its position, was believed to be a small ovarian tumour adherent to the uterus. The patient left the hospital "somewhat improved."

Case II.—February 16th, 1871: Mrs. C. A., aged 38, has been a widow six years, and had one child eight years ago. She states that she had an operation for some form of fistula in the vagina before her marriage, but since then she has had no serious illness. She seeks advice for violent pain which comes on habitually about fourteen days before the menstrual period, and disappears as soon as the catamenia begin to flow. The pain comes on in spasms, and begins above the right groin, but extends eventually across the hypogastrium to the other side. The catamenial discharge is habitually scanty, but the periods are regular. When the pain is present, the bladder is irritable, and there is much flatulence in the intestines. She is doubtful when she first experienced this discomfort, but the pain has notably increased during the last few months, and she is quite invalided when it is present. During the three or four days of the period, and for a week or ten days after its cessation, she is quite free from pain; but at the end of this time, "it begins to gather up again," as she expresses it, and now the antecedent attack of suffering comes as regularly as the period.

No information is gained by external palpation, but by the vagina a nodular swelling is found on the right border of the uterus, which seems as large as a Tangierine orange, and extends somewhat behind the womb. It seems, indeed, to lap round the womb, and to be inseparable from it. There is a deep groove or sulcus between the two at the lower margin, which suggests the possibility of the tumour being a retroflexed uterus, but the sound passes the normal length forward, and thus away from the swelling. It is not possible to say absolutely whether the tumour be of ovarian or uterine origin, but a certain elasticity on pressure suggests that it is a large adherent ovary.

Case III.—July 21st, 1871: Mrs. B., aged 29, had been married eight years and a half, and had two children. The last child was born six years ago, and she had not since been pregnant. After her last confinement, she was seriously ill, and had, she says, "puerperal peritonitis and blood-poisoning." After this attack of illness, the catamenia were irregular in their occurrence for a time. Now the periods were regular, but anticipated the termination of the lunar month by about three days. She complained of pain which came on causelessly, and in severe paroxysms, about a fortnight before each menstrual period. She first began to suffer in this way about a year after her confinement, and she had continued to do so more or less since. There were two severe attacks in December and the early part of January. There was a degree of uncertainty in the occurrence of the attacks, and sometimes a month passed over without one. The pain came on above the left groin, and was followed by pain and tenderness over the whole abdomen. When the attack was severe, she could not bear the least pressure on the hypogastrium; and although she had sometimes tried to obtain relief by lying on her face in bed, she had soon found the position intolerable. The less severe attacks had seemed to be relieved by a purge. The pain was described as paroxysmal, coming on in fits, and alternating with intervals of comparative ease. There was a notable increase in the severity of the paroxysms the nearer the approach of the period, but generally the day before the catamenia appeared her suffering ceased. Last time, however, the pain continued into the period, and was relieved by the discharge. When the sanguineous discharge was fully established, the relief was very marked, but there was a sense of soreness over the abdomen long after the pain had subsided. The

* Read before the Royal Medical and Chirurgical Society.

quantity of the catamenial discharge was commonly about normal, and no shreds or membranes have been observed to come away with it.

On making a vaginal examination, the fundus uteri was found somewhat heavier than usual, and partially retroflexed. In the direction of the left broad ligament there were traces of old thickening and density of tissue, such as are frequently found after attacks of local peritonitis or cellulitis in the pelvis. There was no indication of ovarian enlargement or other morbid growth.

This patient was partially relieved by taking sulphuric ether with compound tincture of camphor, and using warm hip-baths during the occurrence of the pain. At other times, she took the iodide of iron, and applied tincture of iodine externally. The most notable improvement was produced by a course of baths at Kreuznach during the summer. After this, she expressed herself better than for years; two intervals were passed entirely free from the old pain, and the thickening in the left broad ligament had all but disappeared.

CASE IV.—The subject of Case IV was the wife of a medical friend, who had been married some years, and had borne no children. She complained of severe pain in the left ovarian region, which came on every month, and invariably midway in the interval of the menstrual periods. The pain continued for four or five days, and then subsided spontaneously. The pain had been present some years—certainly since she was eighteen years of age, and was of a dull, aching character, producing much disquiet from the fear engendered of uterine disease. The catamenial discharge was habitually somewhat scanty, but regular in its recurrence, and the period itself was not generally painful. A curious point observed was, that when abroad, menstruation was suspended, and the pain then was always worse than when the catamenia were regular. In this case there was no appreciable change in the structure of the uterus, but there was slight tenderness in the position of the left ovary, and some indistinct thickening about it, as ascertained by vaginal examination. There was no history of a previous inflammatory attack.

Here iron and quinine were given, because the pain was regarded as neuralgic in character, and a course of chalybeate waters at Spa in Belgium produced for a time considerable improvement.

It will be observed that the prominent feature in all these cases was the supervention of severe pain in the intermenstrual period, the pain bearing a definite relation to the occurrence of the catamenial flow. It will be further observed that the anatomical conditions, as ascertained by external and internal examination, were not always the same; for, while in two some form of tumour or swelling was present, probably formed by enlargement of the ovary, in the other two there was nothing beyond some thickening to be detected in the ovarian region. The position of the pain and the regularity of its recurrence evidently point to some disturbance in the process of ovulation going on in the ovary. I have, however, looked over the recorded researches of Bischoff, Coste, and Pouchet, without finding anything very distinctly to account for the occurrence of the pain at this period. What can be offered in the way of explanation must, therefore, be mainly conjecture, but a study of the functional changes, so far as they are known in connexion with the pathological condition, tends to throw some light on the subject.

It is sufficiently well-established that the function of menstruation is associated with, and dependent upon, what is termed "spontaneous ovulation." The commencement of the monthly discharge is coincident with the maturation of one or more ovules in the ovaries. Whether there is an emission of ova, corresponding *always*, and *precisely* with the time of the period, is not yet determined. Various observers have, nevertheless, pointed out that towards the end of the menstrual interval a considerable amount of turgescence takes place in one or both ovaries, and a distinct prominence at one point, indicates the approaching dehiscence of the ovisac. This turgescence further continues throughout the menstrual period, lasts for a few days after its cessation, and then the vascular excitement subsides, leaving the organ for a limited time in comparative quiescence. In the *Philosophical Transactions*, Dr. Oldham has recorded the case of a woman whose ovaries had descended the inguinal canal, and were permanently lodged in the external labia. At intervals of about three weeks, one or both ovaries were observed to become painful and tumid; the swelling augmented for four days, remained stationary three days, and then gradually declined, the whole process occupying generally from ten to twelve days.

Unfortunately, we have no very accurate record of observations concerning the condition and progress of the Graafian vesicles during the menstrual intervals. There can be no doubt that follicles in various stages of maturity are present at this time in the stroma of the ovary, but at what date, in relation to menstruation, those which are to take part in the next period begin to shew special activity, or how early they approach the indusium of the ovary with the object of passing through its structures, has not been ascertained.

In the lack of more accurate information, it is not unreasonable to suppose that the preparation for an approaching period may commence in the ovary as early as ten or fourteen days before the period becomes due. The effect of the stimulus of the preceding ovulation having passed by, and a short interval of quietude having followed, new ovules in their turn take up the chain of development, and in the fresh impetus to growth initiate a recurrence of vascular excitement.

The occurrence of such instances as those which I have described gives a strong colour to such a supposition. Under normal conditions, this commencement of a series of new ovular changes is not attended by any appreciable signs, but it may readily be surmised how special irritability or disease in the ovary may make this early stage just as difficult and painful as the later ones associated with the common forms of dysmenorrhœa. Hypertrophy of the substance of the ovary, or thickening of its coverings, will so interfere with the necessary physiological changes as to produce undue hyperæmia; or, perhaps, oppose resistance to the passage of ova towards the peritoneal surface, and so give pain. The obstacles being finally overcome, and the follicles having bored their way to the free surface of the ovary, the tension is relaxed, and hence the subsidence of pain before the appearance of the catamenia.

It is further probable that, without any very noticeable structural change, the mere performance of function at its commencement may produce suffering, the pain in these cases partaking of a neuralgic character. The reason why there is immunity from pain during some of the menstrual intervals probably is, that the other ovary is performing duty at those times, leaving the side affected at rest for one or more consecutive months. These reflections have suggested themselves to me in studying the class of cases I have detailed, and I shall be glad to hear further opinions on the subject.

The *treatment* of intermediate dysmenorrhœa would necessarily vary in accordance with the local condition as ascertained by examination.

In the cases of hypertrophy, or enlargement from any cause, and in patients where inflammatory exudation has bound down the ovary and thickened its coverings, occasional local depletion, a course of perchloride of mercury with bark; or the preparations of iodine and bromine may be useful, aided by a Kreuznach bath. Where there is an absence of such organic changes, and the case assumes rather the aspects of a neuralgic affection, the preparations of iron, quinine, zinc, and arsenic, aided in appropriate cases by chalybeate baths, and whatever else is indicated to improve the general health, afford most promise of curing the patient.

SANITARY IMPROVEMENT IN INDIA.*

BY A. C. C. DE RENZY, Surgeon-Major, late Sanitary Commissioner in the Punjab.

THE progress of sanitary improvement in India is a subject which cannot fail ere long to attract much attention in this country. India has been brought, by recent improvements in locomotion, into practical contact with Europe; and the danger of the contagion current in India becoming current in this country has already assumed a tangible shape. No reasonable man can entertain a doubt that the existence of cholera in Europe is due to importation from India; and there is every reason to fear that, with further increased facilities of communication with the East, this unwelcome visitor will appear here more frequently than it has done hitherto. The progress of sanitary improvement is a question of vital importance for the Government and people of India. It would be impossible to give, within the short limits of a paper adapted to the present occasion, an adequate conception of the misery caused in India by the terrible pestilences to which the country is subject. Fever, small-pox, cholera, and dysentery and diarrhœa, are the great scourges of the country. Indian towns are unhealthy at all seasons, but at times pestilence appears with awfully terrible force, and literally slays the people by thousands. Owing to the absence of an accurate system of mortuary registration, it is impossible to give the death-rate with more than approximate correctness. It is certain that a large number of deaths are not registered at all. But the rates calculated on those registered present a melancholy picture of waste of human life. Thus, in the Punjab, the healthiest province in India, the mean death-rate of the towns having a population of 5,000 and upwards, calculated on the deaths actually registered, was 35 per 1,000 in 1869; in many towns it ranged from 40 to 70 per 1,000. The actual rates were, no doubt, much in excess of those figures. In the great city of Delhi,

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the mean death-rate for the four years ending in 1869 was 43 per 1,000; the rate for 1865 was 50; and that for 1869, 46 per 1,000.

Such being the *death*-rate, this Association will have no difficulty in understanding that the *sickness*-rate must have been enormous. There are no precise data for determining its amount. The drain caused by sickness on the industry of the townspeople is so great, that they are everywhere sunk in the deepest poverty. It is stated, in the Report of the Amritsar Cholera Commission, that fully 50,000 of the population of that mercantile city live in mud-huts 9 × 9 × 7 feet, four in a family, the monthly earnings of whose head average about eight shillings a month—an amount sufficient to purchase, at the rates prevailing in 1869, only 96 lbs. of inferior grain. 1869 was a year of scarcity and high prices, but there can be no doubt that even in good years the town populations live in a state of semi-starvation; and from this cause, as well as from other insanitary conditions, to be noticed afterwards, they are very noticeably inferior in physical development to the rural population. There is no saying more true than that health is wealth, and the converse is equally true that sickness is poverty. The pestilences to which the country is subject repel capital and capitalists; and so its great resources are suffered to lie unfruitful, and the increase of the public revenue continues unsteady and slow. I have said enough to show how deeply the sanitary improvement of India concerns the Government and people of India and the nations of Europe, whose commercial relations with the last are every year becoming more intimate and important.

I shall now proceed to give a very brief account of the principal sanitary evils of that portion of India with which I am more familiarly acquainted—namely, the Punjab—in relation to (1) the native population, and (2) the European troops; showing what has been done, and what remains to be done, for their abatement.

Native cities suffer from most of the sanitary defects exhibited by English towns, with others peculiar to themselves. The population are packed very closely together. Thus, in Amritsar, the *average* density of the population per acre is 158. The most densely inhabited portion has a population of 520 to the acre. Many of the streets are so narrow and tortuous, that even in hot dry weather they look dark and gloomy. The great mass of the population live in small mud-huts set down higgledy-piggledy, without any regard to order or arrangement. The better classes live in well built brick houses, often four or five storeys high, and very defective in ventilation. The badness and closeness of the streets and houses is to a great extent compensated for by the practice of the people in sleeping out of doors at night for five or six months in the year. The beds are placed *sub dio* on the flat roofs of the houses, or even in the streets. But for this advantage, afforded by the mild, warm, dry climate, Punjab towns could not exist very long. The Punjab being a great alluvial plain, the sites of the towns are usually very flat, a condition which has led, in many cases, to disastrous consequences. I know of no town that has any town-sewerage in the sense in which the term is understood in this country. There is nothing but open surface sewer-drains; and there being, in many cases, no sufficient fall to carry off waste water, liquid excreta, etc., the people resort to the simple expedient of digging huge holes for the reception of the sewage. The holes were in most cases ready to hand, having been formed by the removal of the soil to make the bricks of which the houses were built. In almost all Punjab towns there are holes for the reception of the sewage. In Amritsar there are several huge holes many acres in area, and besides this the whole city used to be surrounded by a ditch filled with sewage. The extent of the ditch has been greatly reduced of late years, its place being supplied by an intercepting sewer. The absence of a proper system of sewerage has everywhere resulted in great impurity of the water-supply, which is obtained from very numerous surface-wells. There is not a single town in the Punjab whose water-supply is not contaminated by sewage. There are wells in Amritsar which yield water containing one hundred and eighty grains of chlorides per gallon. This water is, of course, undrinkable; but the waters ordinarily in use contain from ten to fifteen grains per gallon. The presence of chlorides, in conjunction with nitrates, nitrites, and ammonia, clearly indicates sewage contamination. The holes I have spoken of often extend in depth to within a few feet of the water-level. Thus, the sewage is disposed of partly by filtration into the wells, and partly by evaporation, which goes on very rapidly in that hot dry climate. In Delhi there are a few underground sewers; but, as there is no regular water-service, and water is scarce, the sewage stagnates in the drains, and oozes out of them. Certain it is, that there is hardly any discharge from them. Under ordinary circumstances, all the fluid excretion of the population sinks into the soil on which they live; and it has continued to be disposed of in this manner from time immemorial. This fact illustrates, in a very striking manner, the wonderful capacity of the soil for deodorising excreta. European and American travellers who have visited Delhi of late years have expressed their astonishment at finding an oriental city so clean and free from offensive smell, and this though the soil has been used for some thousands of years for receiving the liquid excreta of 150,000 souls. The system, be it remembered, too, is not one of intermittent filtration; it has been going on continuously for ages. But the practice has told with ruinous effect on the water-supply. The water of the Delhi wells is undrinkable, except when well diluted with canal-water, owing to the presence of salts manifestly derived from urine and other animal matters, such as nitrates, nitrites, ammonia, chlorides, and sulphates.

One of the well-waters examined contained one hundred and seventy-three grains of solid matter per gallon, of which forty were chlorides and twenty-five sulphates. The wells of the towns are very numerous. To sink a well is regarded as an act of devotion and merit, which brings its reward in this life as well as the future. There is no general or systematic distribution of water. The water is lifted by means of a vessel suspended by a rope, and pulled up hand over hand. Every water-carrier brings his own vessel and rope; and persons, when convalescent from any sickness, usually go to the wells to wash their persons and clothes—a custom which affords great facilities for the dissemination of the virus diffusible through water; and the wells are so constructed as greatly to facilitate the introduction of such virus. In many cases their mouths are flush with the surface of the ground. In nearly all cases there is a hole near them in which waste water collects and ultimately disappears, either by percolation into the well, or by evaporation. In the city of Amritsar there are upwards of 1,200 wells, or one for every 100 of the population; and other towns are provided for at about the same rate.

Careful people have these wells cleaned out at intervals of two or three years, but in Amritsar I found that the great majority had not been cleaned out within living memory. In many cases they had gone dry from accumulation of filth. After a certain stage of pollution is reached, a well gets a bad name and falls gradually into disuse, and some devout and public-spirited individual sinks a new one. Water is carried, in most cases, in goat-skin leather bags for Mussulmans, and in brass or earthen vessels for Hindoos. The skin is never cleaned from the day it is first used, and, indeed, from its construction, cannot be cleaned. Pure water is frequently tainted with contagion in passing through a contaminated skin, which is called a "munack." The water-vessel, whether of skin, or brass, or clay, is carried on men's or bullocks' backs. Such being the system of water-supply in all Indian towns, with the recent exceptions of Bombay and Calcutta, water is, of course, a very costly article, and poor people must take the water brought to them, whether good or bad. Indian epidemics are often spoken of as matters of impenetrable mystery; but, surely, the wonder rather is that, with the existing sanitary conditions, epidemics are so little destructive of human life.

Great efforts have been made of late years to improve the larger towns. A conservancy establishment has been organised for each town, and vast quantities of filth are removed daily. In Delhi, they have an admirable system of scavenging-carts, which remove solid filth; but, in most, places, filth is removed on donkeys' or bullocks' backs. Considering the rudeness of the means, it is surprising with what success the towns are cleansed. The dryness of the climate greatly facilitates the cleansing. The European district officers have always given great attention to this matter; and the towns under their immediate supervision are quite as clean, to all outward appearance, as any English towns I have seen. Much excellent work has been done in the way of paving and metalling the streets, opening out new roads, filling holes, planting trees, and last, but not least, establishing dispensaries—a measure which goes straight to the hearts of the people, and fills them with gratitude to the Government. In the eyes of the poor, the dispensary is the most characteristic feature of British rule. The native rulers administered justice, made canals and tanks; but to the British Government alone belongs the merit of taking measures to relieve the pain and suffering of the sick.

But notwithstanding all that has been done, the towns continue terribly unhealthy; and this is only what might be expected from English experience. "It will be understood," says Mr. Simon, "that works of sewerage, house-drainage, and water-supply, properly executed, give to town populations an almost absolute security; that cholera, if introduced, can have no means of spreading its infection; and equally it will be understood that, in the absence of those permanent safeguards, no approach to such security can be got without incessant cleansings and disinfections, or without extreme vigilance against every possible contamination of the water-supply." What is true of cholera, applies equally in the case of typhoid, diarrhœa, and other contagia.

And now let me briefly refer to the sanitary condition of the Euro-

pean troops. For the last twenty-five years, the anxious attention of the Government has been given to this subject, with this result, that a very striking reduction has been effected in the death-rate. The Royal Commission on the Health of the Indian Army gave 69 per 1000 as the average death-rate for the period previous to their report. In the ten years ending in 1870, the average death-rate was only 27 per 1000 in the Presidency of Bengal, where the mortality had always been greatest. In one year of the ten it fell as low as 20 per 1000. It would not be fair, however, to attribute the whole of the reduction to sanitary improvement, as the two periods are not strictly comparable, because of late years, owing to the establishment of railways and other facilities for communication with England, many invalids are now removed for change of air to England, who, under the former arrangements, would have remained in India, and in many cases died there. The ratio of invaliding has more than doubled in the last ten years. Moreover, in the early part of the century, in fact up to the mutiny in 1857, the army was almost incessantly engaged in war, and the limits of the empire were steadily advancing. On the first occupation of a province, there was of course no proper barrack-accommodation. Native buildings had to be used as shelter for the troops, and in many cases great overcrowding was unavoidable. A large amount of sickness and mortality necessarily followed these conditions. On the other hand, the decade closed in 1870 was a period of profound peace. No fresh acquisitions of territory were made, and before the first two years of the decade had closed, the troops were everywhere well provided with barracks. Every man was allowed 90 superficial and 1200 cubic feet of barrack space, an allowance enjoyed by no other troops in the world. With the provision of sufficient barrack-accommodation, there was an immediate improvement in the health of the troops, the death-rate falling to 21 per 1000 in 1863. The Bengal Sanitary Commission was established in 1864, under the able direction of Mr., now Sir John Strachey, and many important reforms were at once commenced. Great attention was given to conservancy. Excreta, solid and liquid, used previously to be deposited in deep cesspits near the barracks, a practice which caused one of the most terrible epidemics of cholera at Mianmir in 1861, when one-fourth of the garrison of 1700 men were killed in a few days. Cesspits were universally abolished by the Commission, and arrangements were made for carting excreta, solid and liquid, a mile or more out of each station. The latrines have been for some years on the dry-earth system, which answers admirably in preventing offensive smell. Military cantonments are now models of cleanliness. The conservancy establishment is very costly, but there is no doubt it is thoroughly effective. The clothing and diet of the troops were greatly improved, and great attention given to prevent duty being carried on in a manner injurious to health. Surface-drainage was looked to, and made so effective, that little remains to be done in the matter. The subsoil being perfectly dry already, there was no occasion for subsoil-drainage. A code of regulations to be observed on occasions of cholera was prepared and published, the main principle being that, on the appearance of the disease, the troops were to quit their barracks and go into camp. Obedience to the rules has, on some occasions, subjected the troops to heavy losses from sunstroke; but, on the whole, the balance of advantage is decidedly in favour of the rules. Another valuable reform made by Sir John Strachey was the establishment of an admirable system of statistical returns, which throw a most instructive light on the nature of the sickness which prevails at each station. Previously to the appearance of these returns, it was impossible for any one to obtain definite information upon the health-history of any place. Epidemics appeared and disappeared without any connected account of their progress being recorded. The history of the earlier epidemics of cholera in the Punjab subsequent to annexation is involved in almost as much obscurity as if they had occurred in a prehistoric age. The statistical reports established by Sir John Strachey, and very ably continued by Dr. Cuningham, his successor, have given a marked impulse to sanitary progress.

There was one step taken by the Sanitary Commission, of which I regret that I am compelled to speak with disapproval. I refer to the building of the new barracks, at an estimated cost of ten millions sterling. Excellent barracks, well suited to the climate and affording ample accommodation, existed at stations where, under the advice of the Commission, the Government now ordered new barracks to be erected according to plans approved by high sanitary authorities in England. I admit that a few of the Indian barracks of earlier construction were bad and required removal; but in the Punjab, at least, most of the barracks ordered to be replaced and ultimately demolished were of recent construction, and, having reference to differences of climate, vastly superior to the accommodation provided for the troops in this country. Later experience, too, has shown that troops quartered in the new barracks are not a bit healthier than their comrades at the same station quartered in the old barracks. Cholera knocks impartially at the barracks, old and new. I have no serious fault to find with the plan of the new barracks; they are really splendid mansions. My objection to them is that they were not wanted; that they were built where good and sufficient barrack accommodation existed already; and that they were wastefully costly.

The annexed table shows the annual death-rate of the British troops in Bengal, for the eleven years ended in 1870, at every station of the army. It will be observed that not only does the death-rate of the army, as a whole, fluctuate greatly from year to year; but that of the stations taken individually. Thus, at Jalundhur, for six years, the average death-rate was under 8 per 1000.; but in 1868 and 1869 it shot up to upwards of 30 per 1000. Stations ordinarily healthy are subject to fatal epidemic outbursts; and, conversely, stations ordinarily unhealthy have short intervals of freedom from epidemic sickness. It will be further observed that some of the worst explosions of pestilence occurred so late as 1867 and 1869. In Peshawur, in 1867, the troops lost 12 per cent. of their strength, and 14 per cent. in 1869. Morar lost 11 per cent., Saugor 8 per cent., and Allahabad 15 per cent., in 1869. These losses were mostly due to cholera. In the same year, Mianmir and Jalundhur lost heavily from typhoid fever. Facts like these show that, as yet, there is no effectual security, in Indian cantonments, against the recurrence of pestilence. That a station remains free from epidemic sickness is due rather to good fortune than to permanent safeguards. The high rate of sickness and mortality still prevailing among soldiers' wives and children is a further proof that some of the most fruitful causes of disease remain to be removed. The death-rate of soldiers' wives, usually young healthy women, and either little addicted to intemperance, or having small means of indulging the vice, ranges, according to the most recent reports, from 25 to 54 per 1000; and that of soldiers' children from 75 to 145 per 1000. It is, moreover, an undoubted fact, that cholera epidemics in the Punjab are becoming much more frequent. Under native rule, the province enjoyed long periods of rest from the disease; but, owing to the improvements effected in locomotion under English rule, an interval of two or three years' immunity is the longest that can be hoped for. In the Peshawur valley, cholera was unknown in the long interval between 1805 and 1858; since the latter date, there have been four terrible outbreaks.

Mr. Chadwick states that the principles of sanitary science are so well established, that it would be safe to contract for a reduction of the death-rate of English towns by at least one-third. I quite agree with Mr. Chadwick; but, as regards India, I think it would be safe to contract for a much greater reduction. I have a firm hope that ere long the Punjab will be almost, if not quite, as healthy a station for British troops as England. The comparative immunity enjoyed there from scrofula and phthisis will go far to compensate for the deterioration of health due to the heat of the climate for a few months. The climate of the Punjab in winter is unrivalled.

The diseases which mostly kill European soldiers in India are the five following, viz., fever, hepatitis, cholera, apoplexy, and dysentery. These five diseases in many years cause three out of every four deaths: they never cause less than one in two; so that the sanitary regeneration of India depends mainly on our ability to prevent these five diseases. A full discussion of the causes of these diseases, and the best mode of preventing them, could not be compressed within the limits of a paper suitable for the present occasion. I can only very briefly state the conclusions at which I have arrived on the subject. I believe that the fever, hepatitis, cholera, and dysentery, are almost certainly due to bad water. The grounds of my opinion are mainly two: 1. Because these diseases prevail at stations where no other recognised cause of them than bad water is found in operation; and 2. Because at Colaba the disuse of bad water was followed by an immediate reduction in the prevalence of the diseases in question, and generally, because the degree in which the troops suffer from them is proportional to the purity of the water-supply. In illustration of the first reason, I would point to Mianmir, where, after repeated examinations by inspectors and deputy-inspectors of hospitals, sanitary commissioners, and others, no other tangible source of the diseases in question has been discovered. Nothing can surpass the cleanliness of the station; the barracks are good; the troops have plenty of room; the soil and subsoil are perfectly dry; there are no marshes in the neighbourhood; the food and clothing are excellent; duty is light. The station is upwards of three miles from any native town, and there is nothing like crowding of buildings in any part of it. Some of the streets of the bazaar are 70 feet wide, and none of them less than 40 feet. After a thorough examination of the station by the Sanitary Commissioner in 1867, the only fault found was that the cook-houses smoked; and in a few weeks afterwards the troops there suffered severely from cholera; later they suffered severely from typhoid and intermittent fever. Hepatitis and

diarrhœa are always more or less present. The water-supply is unquestionably bad, and exposed to dangerous pollution.

The history of Colaba illustrates my second reason. This station is a suburb of Bombay, and for many years it had the reputation of being one of the most unhealthy stations in India; in consequence of which the Government were advised to abandon it altogether as a post for troops. Cholera, fever, and dysentery were the prevailing diseases. The unhealthiness of the troops was supposed to be due to the bad position of the barracks, to the proximity of the place to a great native city, to crowding, malaria, etc. But, in 1855, the Vehar water-pipes were laid on to the barracks, and since then the station has been healthy. With the disuse of the tainted well-water, there was a sudden change in the character of the climate. But, speaking generally, the degree of prevalence of the diseases under consideration is proportional to the security of the water-supply against pollution. Peshawur obtains a large portion of its water-supply from the filthy gutters which flow along the roadside; there we find the maximum prevalence of fevers and cholera. Dugshai, a hill-station, obtains its supply from a spring so situated that it cannot readily become contaminated. There the troops are quite as healthy as they would be in England. At Murree, another hill-station, 7000 feet above the sea-level, the supply is taken from springs much exposed to pollution; there the troops lost 12 per cent. of their strength from cholera in 1858, and in 1867 the place was again visited by a severe epidemic. Malarious fever is always present. At Simla, a beautiful hill-station, 7500 feet high, there have been several epidemics of cholera. Good water is procurable at all stations, but the system of distribution in goats'-skins, carried mostly on men's backs, is thoroughly bad; and in many cases the sources are not secured by any structural arrangements against pollution. In some cases, a sentry is posted to prevent the natives from washing their clothes or persons in the tank or well that supplies drinking-water. Persons in this country can hardly appreciate the great variety of the sources of danger to health from the use of water in India. Thus, I once saw a man washing radishes in the sewage of the Amritsar ditch, and I was told that the milk used there is largely diluted from the same source. Milk is greatly adulterated with water in India, and I believe it is a very common medium for the distribution of cholera. The better class of natives would not touch milk taken from the milk-dealer's shop. They send their own servants to have the milk taken from the cow or goat in their own presence.

European soldiers are exposed to some special dangers owing to the mode in which their water-supply is stored. In so hot a climate, thirst being very urgent, the supply of drinking-water must be convenient for use. In a barrack for fifty or sixty men there are usually four earthen vessels for holding drinking-water, placed in the verandahs of the barracks; the vessels hold about three gallons each, and are very commonly uncovered. To get water from one of these vessels the man has to incline it, and, in doing so, his head comes more or less into contact with the contents. Now, when it is remembered that thirst is a very common premonitory symptom of cholera, and that a person suffering from it would naturally make many calls on the water-jar; also, that the private soldier in India is frequently without paper for latrine use, and that he is far from particular about washing his hands after visiting the latrine, the danger of the present mode of supply will, I think, be generally admitted. One individual suffering from the premonitory diarrhœa of cholera would be very likely to taint the water-supply of his comrades in the same barrack. This is, I believe, the most generally applicable explanation of the curiously isolated outbursts of cholera that are of such frequent occurrence in Indian barracks and hospitals. But there is another source of danger: it has been thought necessary to have the drinking-water of the troops filtered, and the arrangements for filtering are as follows. A wooden tripod is supplied, so arranged as to support three of the water-jars already described one above the other. In the topmost vessel is placed the water to be filtered; in the middle are the filtering materials, consisting of wood, charcoal, and sand; and the lowest jar holds the filtered water. Now chemical analysis has shown that water filtered in this way is much more impure than the original unfiltered water, the reason being that the sand taken from the dry bed of the nearest stream contained various impurities. In my own regimental hospital I once found the filtering sand grossly impure, and the water that had filtered through it was of course the same. In a regiment there are some fifty or sixty filters in operation; the sand being supplied by natives, whom it is exceedingly difficult to convince of the importance of obtaining the article from a pure source, as they never drink filtered water themselves. They are apt to take whatever sand they can get with the least trouble to themselves. In one instance within my own knowledge the sand for a public institution was brought from a hole which was used as an outdoor privy by the people of a village infected with cholera. I doubt whether any conceivable amount of vigilance could render the retail system of filtration I have described free from danger.

The last of the diseases attended with much mortality to which I have to refer, is apoplexy. It kills about one hundred men a year: three-fourths of these deaths are due to the effects of heat. It is very remarkable that the great majority of them occur at night; very few of them occur as the result of direct exposure to the sun, or at the time of maximum diurnal temperature. The circumstances under which that apoplexy becomes epidemic are as follow. The temperature is very high; the air still; the sky clouded all over; and the heat radiated from the walls of the barracks, which become baked in the sun's rays in the day time, makes the atmosphere indescribably oppressive. On such occasions one feels the greatest relief on going out of the house into the open air. What makes the troops so prone to suffer from heat-apoplexy is, that on nights such as I have described they have to sleep in barracks, so that they have to endure not only great heat, but an atmosphere in which, owing to its intense stillness, the emanations from the men's bodies accumulate to a dangerous degree. It is difficult to convey an idea of the extraordinary stillness of the nights when heat-apoplexy prevails.

The obvious plan of preventing the mortality from this disease is, to let the men adopt the custom of the natives, and sleep out in the open air. I adopted this plan myself for years, with the best effect. My children all slept out for several months in the year, and I never had the smallest reason for supposing that they suffered the slightest injury from doing so; but, on the contrary, they were able to enjoy sweet refreshing sleep when it would have been impossible inside. In 1865, one of the hottest years ever known in India, my commanding officer, at my request, insisted upon every man sleeping outside. Another precaution was, that the men were not allowed to assemble in the canteen; they drank their liquor in the open air. I had not a single case of heat-apoplexy that year, although the regiment quartered at the same station with us suffered severely. With a plentiful supply of water under pressure, I believe it would be quite possible to cool the barracks by giving them a good washing with the jet after sunset, and so reduce the risks from heat-apoplexy within very moderate limits.

Having said so much about the sanitary defects of native towns and cantonments, it remains for me to describe in a few words the difficulties that stand in the way of reform. The great obstacle to the improvement of towns is, that the native population of all classes, high and low, rich and poor, are profoundly indifferent in the matter. They are perfectly content to let things go on as they are; indeed, they greatly dislike any interference or inquiries on the part of the Government into the state of their towns. The native governments never inquired into such matters, and the people do not understand why the English government should do so. Moreover, there is an universal belief that it is quite useless, if not impious, to attempt to prevent epidemics, which are regarded as God's chastisements of sin and vice.

There can be no doubt that the Sanitary Department, or, as the natives call it, the Safai (cleanliness), is heartily detested. Sanitary reform is found to be very difficult in England, where there is at least a large and very influential minority convinced of its value and importance. How difficult must it be in India, where all classes of natives are either indifferent or actively opposed to it—its only friends being the alien rulers! Under such circumstances, it behoves the Government to proceed with caution and prudence. Undue haste in forcing on improvements would only postpone the object we have in view. With regard to cantonments, however, the case is altogether different; they are entirely under the control of the Government. They are in every case the creation of the Government, and they exist solely for the convenience of the troops. Moreover, the cost of making them healthy must be borne exclusively by the Government. Cantonments afford an admirable field for demonstrating by practical experiment that the prevention of epidemics is not, as the natives suppose, a vain imagination—an idea in which they have been strongly confirmed by the failure of our efforts to abate the ravages of cholera among the troops. The recent epidemics of cholera are a scandal and a reproach to sanitary science, and a recurrence of them must be rendered an impossibility before it can hope to have any influential body of supporters among the native population. Half a dozen of the bad stations made healthy would be invaluable as a practical proof that man is as fully capable of defending himself against epidemics as against cold and hunger.

The great want of Indian stations is a good supply of water—water taken from a pure source, and so distributed as to be incapable of receiving contamination while in transit. There can be no permanent safety under the present system of innumerable open wells and goat-skin munacks. It is not the fault of the Government that this want has not been recognised long before this. For some years the Govern-

ment have taken a lively interest in sanitary improvement, and money was given without stint to carry out the various measures recommended for adoption; but, as the recognition of the importance of water as an agent in the distribution of zymotic contagia is of very recent date in this country, it need occasion no surprise that, under the difficulties attending the study of the causation of disease in India, Dr. Snow's great and pregnant discovery was little appreciated by Indian physicians. Facts, however, are rapidly accumulating, which show that water is perhaps the most important factor in the propagation of Indian epidemics.

ON THE REMOVAL OF PORTIONS OF THE DISEASED TISSUES IN CASES OF CARCINOMA UTERI.*

By ALEXANDER R. SIMPSON, M.D.,
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"The grounds," says Mr. Moore, "on which an operation in cancer may be performed, should be distinctly understood. They are—first, the hope of entirely and finally eradicating the disease; second, that of obtaining some interval of health and useful life in its course; third, that of, on the whole, lengthening life; fourth, that of diminishing the total amount of suffering." (Holmes's *System of Surgery*, vol. i, p. 557.)

Gynæcologists are now-a-days nearly unanimous in recommending and having recourse to amputation of the cervix uteri in cases of malignant disease limited to the vaginal portion. Where the disease is of recent origin, and still restricted to a part which can be so easily removed, every one would see that the first of the grounds stated by Mr. Moore was present in its simplest form, and he would operate as speedily as possible, with "the hope of entirely and finally eradicating the disease." There are successful cases on record enough to warrant any man in repeating it. The instances are rare, however, where we find matters so favourably situated; for the disease has usually invaded the structures too deeply before the patient applies for relief to allow us to interfere with any hope so sanguine. Now, in this most common run of cases, I fear that, in spite of the encouraging results obtained and recorded by Dr. Braxton Hicks (*Guy's Hospital Reports*) and others, the opinion generally entertained regarding them by the profession is, that they must be allowed to run their gloomy course unmodified, and with only a half-hearted attempt to mitigate the symptoms. But it is well worth while considering whether we may not, by removal of portions of the affected organ, succeed in fulfilling one or other of the minor indications of procuring an interval of comparative health, or lengthening somewhat the patient's life, or diminishing her distress, in some of those cases where the great extent of the disease has cut from beneath our feet the first ground of interference.

Dangers of Operative Interference.—It is not, certainly, an inviting field for operation. There is no room for brilliant display; and one cannot help being influenced by the hopelessness that overhangs the final issue of the malady. But, further, many are deterred from interfering in consequence of various apprehended risks.

1. *Hæmorrhage.*—The ordinary digital examination of a case of carcinoma uteri is apt to be attended with a certain amount of hæmorrhage, so that the practitioner dislikes touching it further than will be sufficient to make him sure of his diagnosis. But the bleeding is all from the vascular surface. If he had bruised the surface more deeply with his nail, instead of brushing it with the pulp of the finger, the discharge would probably not have been any greater. And, if such an encephaloid mass be broken into and dug out, and resolutely removed, the only hæmorrhage of any extent that takes place—and that is usually not great—occurs when the surface is being broken through, and it becomes less when healthier tissues are reached.

Case I.—A. A., aged 40, single, from Berwick, had an excellent previous history, both personal and family. The present affection dated from May 1871, when the patient was suddenly attacked with a copious sanguineous discharge from the vagina—intermenstrual—unaccompanied by pain. These hæmorrhages returned at varying intervals of two and three weeks. For this condition she sought advice on October 28th, 1871 (six months after the first bleeding). She never had any pain. There was a copious offensive muco-purulent discharge. On examination *per vaginam*, a large, irregular, nodulated, soft, pulpy mass was felt, involving the os and cervix, and at some points, more especially posteriorly, extending to the body of the uterus. The tumour bled freely on the slightest touch. A small portion, which was removed with the finger-nail without causing further loss during an examination, was found, under the microscope, to contain characteristic cancer-cells. On November 1st, with the uterine scraper applied to the more prominent parts, six or seven pieces, each about the size of an ordinary hazel-nut, were removed. The bleeding was very slight; and a saturated solution of perchloride of iron in glycerine, applied to the surface, arrested it completely. On November 22nd, the patient had continued well since the operation. She had had no pain nor hæmorrhage. The cancerous mass had not recurred to any appreciable extent. The outline of the os and cervix uteri was more defined and regular. The surface was less spongy and harder than on the first examination. The leucorrhœal discharge was diminished. She was discharged relieved.

2. *Pain.*—Some may shrink from interfering from the fear of causing pain to the patient; but, apart from the possibility of keeping the suffering in abeyance by the use of anæsthetics, it will be found that, though these patients suffer commonly enough to a degree peculiar to their disease, yet operations for the removal of the diseased mass are not attended with much suffering; so that they may be had recourse to, although the patient has not been anæsthetised.

3. *Aggravation of Disease.*—Nor need we fear that the progress of the disease will be hastened by this kind of interference; for the result of experiment shows that the more thoroughly the disease is removed, the longer it is of returning; and, when it does return, its progress is not more rapid than where it was left to itself.

Case II.—Mrs. W., aged 25, married, the mother of four children, with three miscarriages, having good family and personal history, dated her present illness from a fall from a swing twenty months previous to July 1871. This fall was followed by a smart hæmorrhage from the vagina. Since then she had had constant pain, with frequent floodings, offensive discharge, and increasing weakness. In July 1871, on examination *per vaginam*, the os and canal of the cervix uteri were found sufficiently patent to admit an ordinary full-sized catheter. The cervix was transformed into a soft friable mass of about the size of a crown, readily bleeding when touched. The body of the uterus and vagina felt healthy. On August 2nd, the entire cervix was removed with the chain-*écraseur*, close to the roof of the vagina. Saturated solution of perchloride of iron in glycerine was applied. The patient did well.—July 1872. The patient had had, on three occasions since the operation, a slight intermenstrual discharge. She had enjoyed good health; had been free from pain and offensive discharge. *Per vaginam*, the stump of the cervix was felt, still thickened and enlarged, but hard and smooth, not bleeding on pressure. The disease had not advanced since the operation.

4. *Risk to Life.*—Again, the operation is not dangerous to life. I have amputated the vaginal portion of the cervix, or otherwise removed parts of the uterus affected with cancer, in twelve cases, and have assisted Sir James Simpson at a great many more, without witnessing any bad result. The only fatal case of which I saw anything was that related by Sir James in his clinical lectures (*On the Diseases of Women*, p. 174), where the patient sank and died suddenly a few hours after the operation, and where I assisted as a student at the *post mortem* examination, when no morbid change was discoverable in any organ that could be looked upon as the cause of death; and it was concluded that the patient died of collapse.

Advantages to be derived.—But, even if the risk of operative interference be small, one may ask, What good results are to be expected from it?

1. *Arrest of Hæmorrhage.*—First of all, you remove the soft expanded vascular surface, which readily becomes the seat of extensive hæmorrhages. In many cases of carcinoma uteri, the profuse bleeding doubtless comes in part from the mucous membrane, which becomes hypertrophied as a result of the excitement in the whole organ attendant on the presence of morbid growth in it; but, whatever the source of the bleedings, menorrhagic or metrorrhagic, they are always lessened, and sometimes altogether arrested, by the removal of the accessible portions of cancerous tissue. This is more notably the case where we have to do with the so-called cauliflower-excrescence, or with the expanded epitheliomatous os uteri; and it is so even with encephaloid disease in the form of large irregular protuberances, and invading more deeply the substance of the cervix.

2. *Arrest of the Leucorrhœa.*—Hardly less detrimental to the health of the patient than these frequent hæmorrhages, is the incessant discharge of a fluid sometimes almost watery in its appearance and very profuse, sometimes less abundant, but of an acrid character, and in the greater proportion of instances possessed of a fœtor which of itself may suffice to declare to an experienced practitioner the nature of the malady. The persistent loss of so much fluid would of itself impair the health, and its deleterious influence is increased by its offensive character; and

* Read before the Midwifery Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

this drain is, for a time at least, arrested when the morbid parts are removed, and a sore with a healthy non-malignant surface is left instead.

3. *Relief of Pain.*—In the case of cancer affecting the cervix uteri, pain is not necessarily a prominent symptom until the disease has made great progress, and is often so trifling as not to attract attention; nor is it greatly modified by efforts at the removal of portions of the diseased mass. But where the disease is seated in the interior of the uterus, pain is an early, most distressing, and almost constant symptom; and the relief afforded to the patient's suffering by ablation of even a portion only of the diseased tissue is immediate and striking. Let me cite two cases in illustration.

CASE III.—Mrs. M., aged 59, a widow and childless, after having ceased for some years to menstruate, began to be troubled with occasional slight discharges of blood and fits of pain in the pelvis. The hæmorrhage was not great in quantity, but, becoming pretty constant, the health began to give way. The attacks of acute pain, beginning in the back and passing round to the pubes, became frequent, and assumed a periodic character, coming on usually at bedtime, and preventing sleep. There was but slight and inoffensive leucorrhœa. The uterus was found retroflected, enlarged by half an inch, with the cervix healthy. The position of the uterus was rectified, and various sedatives employed, without any marked benefit resulting. Suspecting, from the peculiarity of the symptoms and the result of examination with the sound, that there was malignant disease in the interior of the uterus, I introduced a series of tents; and, when the cervical canal was dilated, could feel a series of indurated nodules just within the os internum. They were partially scraped away; and fragments, which were examined with the microscope, showed many double-nucleated cells in a fibrous stroma. The patient was greatly relieved for a time from her periodic pain, and the hæmorrhage abated. But I had found the uterus opened, and operated at a time when I had not satisfactory assistance; and, as I found her symptoms return, two months subsequently (November 1871), I again dilated the cervix, scraped away the cancerous nodules more completely, and applied powdered persulphate of iron to the raw surface. The patient had a threatening of pelvic peritonitis afterwards; but she rallied, and has since greatly recovered her strength, being relieved of the wearing-out pains, and free from the persistent hæmorrhage.

CASE IV.—J. F., farm-servant, aged 58, single, was admitted into the Royal Infirmary on December 14th, 1871. The patient, who was a stout plethoric woman, with a ruddy complexion, weighing about nineteen stones, had enjoyed good health until six months ago, when she was attacked by pains in the back and in the right and left iliac regions, accompanied by a red discharge. The pain, which she described as of an acute stinging character, recurred periodically between 12 noon and 4 P.M. every second or third day. Latterly it had recurred at the same time with increased severity. There was a thin watery leucorrhœal discharge, without any odour. She had always enjoyed good health till her present illness. The catamenia occurred at fifteen, and ceased five years ago. Her relations were long-lived and healthy. On examination, the vagina was found to be narrow and short. The hymen was persistent, and with difficulty admitted the forefinger. The os uteri was in its normal position, not shorter nor harder than usual. On combined internal and external examination, the uterus was felt enlarged; and this was confirmed by the introduction of a sound to the extent of half an inch further than normal. I ordered the patient to have a sponge-tent introduced. Owing to the narrowness of the os uteri, but a very small tent could be passed. This caused a great deal of fever and general irritation, and it was found impossible on that account to introduce a larger one for some days. On December 24th, a large-sized tent was inserted; and on the following day the os was found so dilated as to admit the passage of the forefinger into the cavity of the uterus. The mucous membrane of the uterus was found thickened, especially posteriorly and to the left at the fundus, where there were distinct fungating excrescences, varying in size from a pea to a French bean. These masses were scraped away by means of the intrauterine scraper. There was a smart hæmorrhage. A solution of equal parts of the saturated solution of perchloride of iron in glycerine, and water, was injected into the uterus, which stayed the bleeding. The masses removed were examined by the microscope, and found to contain characteristic cancerous cells. On December 26th, the patient complained of pain over the abdomen, Pulse full, 90. The pain over the abdomen was constant, but not acute. There was no bleeding. Half a grain of opium was given at bedtime. From December 26th to January 15th, the patient had on two occasions slight attacks of local pain, which lasted each time for about forty-eight hours; but these were attributable to indiscretions in getting up too soon, and to over-exertion. They were of an inflammatory character. The pain in the uterus had ceased to return periodically, and there was no sanguineous discharge. On January 20th the patient was sent home, feeling greatly relieved.

4. *Prolongation of Life.*—It would require a more extended series of cases than I am able to present to enable us to determine positively how far the longevity of patients is influenced by surgical interference. But I have seen no case where the operation seemed to have any damaging effect, and cannot doubt that the relief from suffering and the arrest of the exhausting hæmorrhages and leucorrhœal discharges must have a directly beneficial influence on the patient's life. Let me cite one case which presents some features of interest; and this, amongst others, that for seven years subsequently to the removal of a cancerous excrescence, the patient has remained free from any symptom of her disease.

CASE V.—Mrs. C., a widow, about 40 years of age, in humble circumstances, mother of one child, was left under my care in May 1865, by my friend Dr. Drummond, on his removal from Glasgow. She had suffered for many months from profuse watery discharges, not always offensive in character, interrupted by occasional hæmorrhages, and attended with frequent fits of pain. The uterine neck had been partially dilated by the unaided efforts of nature, so that Dr. Drummond could feel a foreign growth within the cavity; and, on dilating it further by means of tents, he succeeded in removing a soft friable mass, which he regarded as cancerous; and his opinion was confirmed by Professor Gairdner, who examined a portion of the tissue microscopically.*

The patient had rallied for a time, but when she came under my care her symptoms had all returned, and she was reduced to a state of extreme debility. She was so weak that at first I felt disinclined to interfere, lest she should sink under an operation. In July, however, finding that the growth was becoming more accessible, in consequence of a fresh dilatation of the os, and under a fresh and painful effort of the uterus to free itself of its contents, I dilated the canal with a large sponge-tent, and, partly with a wire *écraseur*, partly by means of a pair of polypus forceps, I broke down and removed, with the assistance of Dr. W. P. Mackay, now of Hull, all the diseased structure. The amount of hæmorrhage was not great, although the operation lasted a considerable time; and there was no bleeding subsequently, in consequence of a free application of perchloride of iron and glycerine, which I made to the whole interior of the organ. She was greatly exhausted, and remained long in delicate health; but her pains never recurred, and her health became so far restored that, when I last saw her some two years ago, she was able to support herself by her own labour. I should add that my own examination of the morbid growth entirely corroborated the opinion that had already been formed regarding it. It very closely resembled, in appearance and structure, the ordinary cauliflower excrescence of the cervix.

CASES SUITABLE FOR OPERATIVE INTERFERENCE.—Such being the risks and such the happier results of removal of portions of the uterus affected with cancer, you will see that the field for operative interference is very wide. Not only in cases where we have to do with a cauliflower excrescence, or with a mushroom-like epithelioma of the os uteri where the cervix is healthy, but also in encephaloid cases where there is a projecting fungating mass with a hyperæmic surface; and even in the scirrhous and other varieties, which present an excavated surface, and where the ulceration has not yet perforated the uterine and vaginal walls—in all these we put the patient in a better condition by removing all removable portions of affected tissue.

METHODS OF OPERATING.—When we have to do with an epithelial cancer of the lips which does not extend to the vaginal wall, and there is a healthy portion of the cervix like a neck to the tumour, or in any case where we have to amputate a projecting mass, by far the most satisfactory instrument is the galvano-cauter. Nothing can exceed the facility and precision of the application of the wire, and the certainty

* The symptoms of intrauterine cancer have been thus summed up by Sir James Simpson (*Selected Obstetrical and Gynæcological Memoirs*, edited by Dr. Watt Black, p. 769): "1. The presence of an extensive and disagreeable discharge; 2. Frequent, profuse, and intractable menorrhagia; 3. The presence of a foreign body in the cavity of the uterus, detected by the uterine sound, and felt by the finger after the dilatation of the cervix, hard, rough, and irregular, or more soft, fungoid, and friable; 4. Pieces of the morbid texture peeled off or scraped off for microscopical examination; 5. The periodic recurrence of pains, slight and intermittent, perhaps, at first, but soon reaching a high pitch of intensity, at which it continues for an hour or two, and then gradually subsides." This tableau of the symptoms of malignant disease in the mucous membrane of the body of the uterus is the most perfect with which I am acquainted, and has been adopted by others, as by Dr. Fordyce Barker, in his admirable *Clinical Observations on the Malignant Diseases of the Uterus* (reproduced in Braithwaite's *Retrospect of Medicine*, vol. lxiii, p. 301, from the *American Journal of Obstetrics*, Nov. 1870, p. 519). But, according to my experience, it would be improved by placing the intense periodic pain in the first line, and noting that the discharge is not always profuse, and not often offensive. I believe that until the os uteri has been opened up, either under the natural efforts of the uterus at the expulsion of the new growth, or by the surgeon for the purposes of diagnosis and treatment, any discharge that does occur is inoffensive and nearly inodorous,

with which portions can be cut off, or more deep-seated parts subsequently cauterised. But it is troublesome to have the battery kept in order and carried about in ordinary practice; so that, whilst I have experienced the advantages of it, and have wished at every new case that I could have the apparatus at hand, I have had to content myself in most instances with the wire *écraseur* in cases of removal of softer tissues, and the original chain *écraseur* of Chassaignac for the amputations through the neck. I prefer the chain *écraseur* to the wire, because when a single strong wire was used and a rope of several strands, I have found it give way before the dense tissues of the cervix were cut through.

Where the disease is more sessile, having a broad base, and extending deeply into the substance of the cervix, it must be dug or scraped out by means of the finger-nail, or with a Recamier's *curette*. Simon of Heidelberg has advocated this plan of treatment in an admirable paper (*Beiträge zur Geburtshülfe und Gynækologie*, i, 17), where he has related some very encouraging cases, and has figured the scoops which he uses of different sizes. I have had the instruments made after his model, of the largest and one of the smaller sizes, and found them very serviceable.

AFTER-TREATMENT.—As has been shown in the cases which I have cited, I have usually followed the removal of the morbid masses by the application of a powerful astringent—most frequently the saturated solution of perchloride of iron in glycerine, or the powdered persulphate of iron. These salts of iron serve not only as an effective styptic, preventing any immediate hæmorrhage from the injured surface, but they have a slight escharotic action, and help to destroy any of the affected tissue that may have been left. Latterly, I have made frequent use of a saturated solution of chlorate of potash, applied on pledgets of cotton-wool, to cancerous surfaces. I was induced to do so in consequence of the good results which have followed its use in this way in the hands of the younger Fabbri of Bologna, who has published the history of a case of cancroid disease of the cervix, in which, under the subsequent application of chlorate of potash, the disease has been kept in abeyance for nearly three years. (*Uno Caso di Cancro Epiteliale del Collo uterino trattato coll' Amputazione della porzione intravaginale e quindi col clorato di Potassa.* Storia del Dott. Ercole-Federico Fabbri).

REMOVAL OF BOTH ASTRAGALI IN A CASE OF SEVERE DOUBLE TALIPES.*

BY EDWARD LUND, F.R.C.S.,
Lecturer on Anatomy in the Royal School of Medicine, and Surgeon to the Royal Infirmary, Manchester.

"FINIS coronat opus" is a motto which may be well applied where the operation we have to describe is novel in character, and therefore one in which it is needful to show cause why it should be performed at all. These remarks are applicable to the details I am about to relate of the removal of both astragali in a case of severe double talipes.

H. W., aged 7 years, a native of Whitchurch, Shropshire, was admitted into the Manchester Royal Infirmary, under my care, for double talipes equino-varus, on January 22nd, 1872. From the history, I learned that he had been born with the deformity; that, when six months old, he had been placed under the care of an orthopædic surgeon in London, the tendons had been divided, and he remained under treatment four months. He then had an apparatus for the feet, which he wore until he was thirteen months old; and after this he was provided with boots with irons attached, which he used until very shortly before the time when he first came under my observation. He could at one time move about pretty well; but, as he lived in the country, no farther attention was given to the case; no alteration was made in the size or strength of the apparatus, and it no longer controlled the vicious direction of the feet. The child walked upon the external border of each foot; the toes were turned inwards, almost to the transverse degree; the heels ceased to touch the ground; and, very rapidly, whatever improvement in the form of the feet might have resulted from the division of the tendons was entirely lost.

It was very apparent, on an inspection of the deformity, that the bones of each foot had become so crumpled up and faultily placed that the articular surfaces were changed in form, so as to interfere with their intrinsic movements, irrespectively of any limits to these from contraction of the tendons.

I made several attempts to diminish the distortion. The patient was placed under chloroform; and I endeavoured, by manipulation, to break down any adhesions which might exist in the tarsal joints, and restore the position of the bones. But in this I could not succeed to the least degree. I next tried what could be done by long-continued pressure and traction, by using, first, a Scarpa's shoe with screw-action, and then Mr. Tufnell's tinned splint, with leg plaister straps; but in neither plan would the delicate skin of the edges and soles of the feet tolerate the necessary amount of pressure; and I was compelled reluctantly to stay all similar proceedings. It then occurred to me that, one great impediment to the replacement of the tarsal bones being due to a partial dislocation of the head of the astragalus from the cup of the scaphoid, by which an undue adduction of the portion of the foot in front of the medio-tarsal joint had been effected, if I could remove the astragalus, most, if not all, of these obstacles would vanish. And I did not hesitate to indulge in the possibility of such a result, seeing that I had known of cases in which, from injury and compound fracture near the ankle-joint, the astragalus had been completely dislocated and the bone removed—the patient, after a slow recovery, enjoying the use of a very serviceable foot. Such cases are well known to the profession; some of our most distinguished surgeons having specially referred to the urgent propriety of trying to save a foot under such circumstances, rather than condemning it to amputation.

Having duly considered the probable difficulties of the operation, and studied carefully what seemed to me the best mode of performing it, I proceeded to remove the astragalus from each foot by the following method.

On the 17th May last, the little patient being under chloroform, I commenced with the left foot, which was the more deformed. I made a longitudinal incision just over the most projecting part of the head of the astragalus, parallel to the antero-posterior axis of the foot, guiding it between the line of the outermost tendon of the extensor longus digitorum muscle and the tendon of the peroneus tertius. The incision being of sufficient depth, and about an inch and a half in length, I expected at once to come down to the cartilaginous surface of the head of the astragalus; but here I was met by an unexpected difficulty. The dorsal astragalo-scaphoid ligaments which I had divided were so much thickened, so white and firm in structure, and so closely pressed upon the bone, that it was nearly impossible to be certain whether or not all the fibres were divided and the head of the bone fully exposed; this, however, being done, I tried with a gouge to raise the bone, while the scaphoid and the front part of the foot were bent backwards; and, in doing this, I cut off a thin piece of the edge of the cup of the scaphoid—there was so little space between the bones for the passage of the instrument, that it cut into the soft young bone. The same accident occurred when I used the gouge between the external malleolus and the side of the astragalus; for here, again, from want of space, I detached unwittingly a slice of the inner side of the malleolus, as the preparation will show. Fortunately, I had provided myself with a little instrument, which I here found very useful. It is a small, strong, curved hook, fixed in a stout handle (Fig. E); and it has on its concavity a cutting edge, while the edge of the hook is round and blunt.* This hook I used as a lever to raise up the astragalus, and lift it from the bed or socket formed for it by the scaphoid, upper surface of the calcaneo-scaphoid ligament, and the os calcis; and, passing it round one end of the calcaneo-astragaloid ligament between the bones, by simple traction, I cut through the interosseous band in its whole length. This proved to be the key of the operation; for, after its division, I could dislodge the astragalus, and, holding it firmly with Sir William Fergusson's lion-forceps, made a few touches with the cutting hook, used first as a wedge between each side of the astragalus and corresponding malleolus to separate the bones, and then as a cutter to divide the bands of the lateral ligaments; the bone was thus set free and drawn out easily. There was little, if any, impediment from fibres at the back of the astragalus, and none at all, as I had anticipated, from adhesions of the tendon of the flexor longus pollicis to the sheathed groove in the bone; for, in fact, the groove itself was very shallow, and but poorly developed.

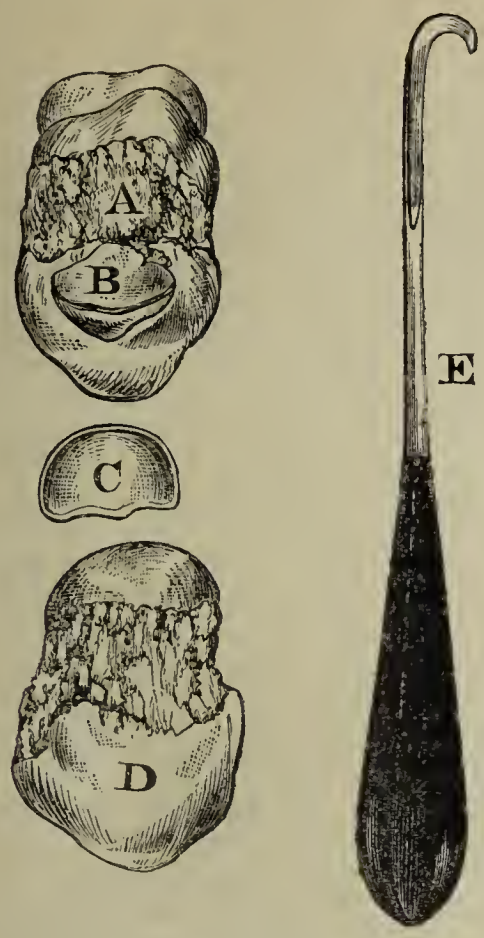
I need not say that, in operating on the right foot, I used only the cutting hook, and not the gouge or chisel, to detach the astragalus from its ligaments; so that, in this foot, I did not injure the neighbouring bones nor remove any portions of them.

The operation on each foot was conducted, from first to last, in strict accordance with those principles of antiseptic surgery which are well known as Mr. Lister's method. Catgut ligatures were used on two small arteries which were tied—the carbolised wax and resin sutures to close the wounds; these were enveloped in carbolised gauze, and the feet placed on rectangular splints. It could soon be seen what were

* Read in the Surgical Section at the Annual Meeting of the British Medical Association at Birmingham, August 1872.

* It is very similar to the guarded cutting hooked knife which I show in the museum collection as useful for the division of internal blind fistulæ.

likely to be the results of the operations. Each foot could be placed immediately, without difficulty, with the plantar surface at a right angle with the back of the leg. The internal border of the foot still presented, although to a far less degree than before the operation, a certain



A, is the Left Astragalus, with a piece of the external Malleolus, B, loosely attached to it; C, the portion of the Scaphoid of the same side; while D represents the Astragalus of the right side, which was removed entire, and without injury.

concavity, more in the left than the right foot, suggesting the possibility that this might be caused by some alteration in form or new deposit in or about the calcaneo-cuboid joint, which would not yield sufficiently. This was, as I have said, much less conspicuous in the right foot, where the internal border could be brought to nearly a straight line from the ball of the great toe to the heel. The same principle of dressing, the same precautions and general treatment, were rigidly pursued throughout the whole progress of the case. No pus was formed; the deep cavity in which the astragalus had rested was slowly filled up by new tissue. The sutures caused no irritation, and held well until the twelfth day, when three were removed from each foot, and, on the fourteenth day, the remaining two. On the thirty-eighth day, it was reported that the wounds were perfectly healed. No constitutional irritation had existed; the child had seemed to be cheerful, slept well, and taken its food naturally. No tendency to inflammation was observed along the line of the tendinous sheaths in the front of the leg, as might have been expected; and the only pain of which the patient complained was in the immediate neighbourhood of the wound during the dressings, when it was necessary to remove the feet from the splints.

On the sixty-first day (July 17th), I began to apply to each foot Mr. Barwell's system of treating talipes; and, by means of elastic bands carefully adjusted, I have sought to imitate the action of the peroneus longus and peroneus brevis muscles, and very slowly and cautiously to abduct the foot and keep the external border well raised. There is at the present time (August 1st) considerable flexing movement in the ankles. The boy can bear just to rest his weight on the feet when slightly assisted, and he slides and creeps about the ward in a half sitting posture very happily. I intend very shortly to have him supplied with a pair of Dr. Sayre's club-foot shoes, which will allow him to walk about, while the same action of the elastic bands can be preserved. This has been done (September 30th). The boy has worn the shoes for nearly a month, and he walks very well without any help.

The only case which I have found recorded in which any of the tarsal bones have been removed so as to assist in correcting the malposition which exists in talipes, is one performed by the late Mr. Solly, and referred to in Mr. Adams's work on *Club-Foot*, in which Mr. Solly removed the cuboid bone, under the idea that this was the key-stone of the arch of which the deformity consisted, and, that being removed, the curled foot might be, as it were, unfolded into a more natural form. But, I believe, the result was not satisfactory; and I hardly think the plan adopted attacked the true centre of the deformity; for talipes varus is, in its very nature, an exaggerated condition of adduction and excessive rotation inwards and upwards of that portion of the foot which is anterior to the medio-tarsal joints. At this articulation, a partial dislocation occurs, which, when all other efforts to correct it have failed, may be got rid of, in exceptional cases like the present, by excision of the astragalus, as a justifiable operation.

I have had two objects in view in relating this case to day: the one has been to obtain the opinion and sanction of so distinguished a surgical tribunal, as I now address, to the procedure itself, under certain limited conditions; and the other has been to place on record another instance of the triumphs of antiseptic surgery in the management of operations in the neighbourhood of joints. For I am convinced that whoever will watch, without prejudice, the progress of such a case as this, from the date of the operation until the healing process be fully completed—the entire absence of suppuration, the freedom from constitutional distress, the perfect closure of deep wounds in the most satisfactory manner—must admit that by no other method than by the absolute avoidance of septicity dare we attempt to treat so formidable an operation.

THE EMPLOYMENT OF THE LICHEN CINEREUS TERRESTRIS (OF RAY) AS A PREVENTIVE AGAINST HYDROPHOBIA AND RABIES.

By C. LEESON PRINCE, M.R.C.S., Uckfield.

A PERUSAL of the five fatal cases of hydrophobia, reported some time ago by Dr. Elder of Nottingham, in the BRITISH MEDICAL JOURNAL, determined me to make more strict inquiries than hitherto respecting a secret remedy for hydrophobia and rabies, which has for several generations been in the possession of the family of a person formerly living in this neighbourhood. I accordingly paid a visit to the present incumbent (whom I will call C.), in the hope of eliciting something which might lead to a discovery of the name of the plant employed. The result of my visit was, that I might buy the receipt for £100. In the *Daily Telegraph* of December 25th, appeared a letter from Mr. Pryce of Peithyll, in which he mentioned a remedy; and I entertain very little doubt of its being the identical medicine which has been administered in such cases in this neighbourhood for many years, with perfect success, Mr. Pryce's receipt is as follows (the quantity to be given to a dog): "℞ Turpeth mineral (hydrargyri oxydum sulphuricum) ten grains, to be given (as an emetic) for three mornings running between slices of bread and butter. ℞ Ground liverwort, a handful; garlic and rice, of each one drachm; to be boiled for an hour in half a pint of water, then strained, and add of Venice treacle two drachms. It may be given in the dog's food or in half a pint of milk, etc." Having thus obtained a clue to the name of the plants, I referred to an old botanical dictionary, for the purpose of ascertaining whether any such valuable medical property had ever been ascribed to the aforesaid plants. In Dodoen's *Herbal*, it says of rue, that "That the juyce of rue is good against the bitings and stingings of scorpions, bees, wasps, hornets, and mad dogs". Of garlic, it says, "It is laid with great profit to the bitings of mad dogs, and upon the bitings and stings of venemous beasts". With regard to the lichen, no mention is made of its efficacy in the cure or prevention of hydrophobia. In Miller's *Dictionary*, published in 1759, I ascertained that the lichen was in great repute nearly two hundred years ago, as a preventive against this disease; and reference was made, for an account of its success, to vol. xx of the *Transactions* of the Royal Society. As I have these volumes in my library, I at once found Mr. George Dampier's communication (about the year 1685). He says that the herb "is a sort of Jew's ear, which grows on the ground as close as may be to it, being flat on it: the moss and grass groweth up about and amongst it. To use it, you must dry it in an oven, by the fire, or in the sun, then powder it and pass it through a fine sieve; the which, mixed with the like quantity of fine beaten and powdered pepper, is the composition. When given to a dog, the dog must first be blooded and then washt well all over, the dog being kept from meat a convenient while before; then mix it well in a convenient

quantity of milk or broth, warm. If it be for cattel, it must also be blooded and well washed, and given with a drenching-horn ; and the dose may be proportioned to the bigness or strength of the creature that is to take it. To a man or woman, it must be given after blood-letting, and well washing the face and hands, or place that may be bitten. A man or woman may take it in warm milk, beer, ale, broth, or how he best likes it, fasting two or three several mornings to make sure. Therefore, when you know anything to be bitten, or suspect it to be so, use the remedy as soon as may be after, and then, when given in time, it prevents all signs of madness at all, which hath made some indiscreet people say, *it did no good ; they believe it would have done well enough without it ;* but my uncle hath fully confuted that mistake several times, by not drenching a dog of small worth, in a gentleman's cry of dogs, which hath died mad, and not one of the rest sick, but have followed their master's game rather better than before ; and, indeed, being ingeniously given, 'tis a most *Noble* and *Infallible* medicine".

At the conclusion of Mr. Dampier's letter is the following remark by Dr. Hans Sloane. "The simple or herb mentioned is not jew's-ear, but the *Lichen Cinereus Terrestris*, described by Mr. Ray. It grows commonly in barren places all over England. The weight of one single dose of this simple and the pepper mixed, communicated to me by Mr. Southwell, with Mr. Dampier's leave, is near four scruples." Dampier's powder was afterwards, on the proposal of Sir Hans Sloane, when he was president of the Royal College of Physicians, introduced into the *London Pharmacopœia* of 1720, under the name of Pulvis Antilyssus.

The directions given for the administration of the above medicine correspond very closely with those given by C. Moreover, when application is made for the remedy, the messenger is usually detained two hours, in order to give C. time to go into the fields to procure the herb and prepare the dose. Under these circumstances, I am desirous of calling the attention of the profession to this probable remedy, which must have been neglected or forgotten by them for several generations. The invariable charge for the bottle of mixture has been thirty shillings, which, I think, clearly proves that the public are satisfied with their *quid pro quo*. It may, perhaps, be interesting to append brief notes of the following cases illustrative of the success of the medicine supplied by C. All these persons were bitten by dogs undoubtedly mad. Eight of these cases occurred to my personal knowledge, and I can vouch for the correctness of the facts connected with the others.

CASE I.—Two men servants of Mr. F. at Uckfield were bitten by a mad dog which came in the stable where they were at work.

CASE II.—Two men were bitten by a mad dog which came into the inn where they were drinking.

CASE III.—Two servants of Mr. H. were bitten by his dog, which was supposed to have been bitten by the dog who bit the men in Case II.

CASE IV.—Three children, and my own dog, were bitten at Uckfield, and by the same dog on the same day three more persons were bitten at Maresfield. I attended these six cases, and made a *post mortem* examination of the mad dog, when the usual appearances presented themselves. I was not aware that my dog had been bitten until symptoms of rabies commenced, when he was immediately killed.

CASE V.—Mr. K. of Buxted was bitten by his own dog, which immediately afterwards ran off, and, four miles from his home, bit a Mr. G., who was shooting in the neighbourhood of Mayfield. The dog was killed near Tunbridge Wells the same evening.

CASE VI.—In a farmyard, a woman and boy were milking cows ; a mad dog came up to them and bit the boy in the hand and the woman in the arm.

CASE VII.—A Mr. H., of Beddington Park Lodge, Surrey, was bitten by a mad dog, and a short time afterwards became very unwell and melancholy ; he was persuaded to take the medicine, and he immediately recovered his usual health and spirits.

CASE VIII.—Two men were bitten by a mad dog at the Derby Arms, at Croydon, and one after having a paroxysm took the medicine and was cured. The other refused to take it, and died of hydrophobia.

All the above persons took the mixture from C., and no harm came to them, with the exception of the woman in Case VI and one man in Case VIII. Both these persons died from hydrophobia, both having refused to take the mixture.

CASE IX.—A dog was found to be unwell, and, during the administration of some medicine, a man was severely bitten in his hand, and the wound, to all appearance, soon healed. As the dog, some time afterwards, became the subject of rabies, the person procured some medicine from C., which had a very remarkable effect; for the wounds, which had healed, began to smart very much about two hours after taking the medicine, and to discharge a purulent matter for two or three hours, and then healed again. This person never felt any ill effects from the bite, and is now alive.

THE UTILISATION OF SEWAGE AND THE PREVENTION OF RIVER POLLUTION.

By J. N. STEVENS, Esq., Plymouth.

SEWAGE and the best means of utilising it still form the vexed and anxious questions of the day, and demand a speedy solution of the enigma. How may sewage best be rendered harmless to the public whilst passing from their habitations through the sewers to the outfalls? whether this take place into rivers (which cannot by law be polluted), into the sea, or into tanks for precipitation, settlement, and drying, or whether it be used for the purposes of irrigation. 1. My paper, read before the Health Section of the Social Science Congress, at Plymouth, went to show that the careful construction of the house and main sewers, in reference to their material, size, shape, levels, trapping, and ventilation, with the use of disinfectants and deodorisers, was, in my opinion, calculated to prevent sewer-poisoning. 2. As regards sewage being allowed to run into rivers, the organic and solid matters must be removed by previous subsidence and precipitation, or by downward intermittent filtration through the soil, properly prepared for it, as at Merthyr Tydfil. This, being repeated several times, is sufficient of itself to disinfect and deodorise the sewage, whilst the ground receives the fertilising animal and organic matter as it passes through it, and it is retained for the growth of grass, or other cereal crops ; and should any small amount of organic matters remain in solution, they will be oxidised in the running water and further taken up and absorbed by aquatic plants. Whenever sewage is employed for the irrigation of farms in the ordinary way, it is incumbent on those using it to deliver the effluent water in such a purified state as the law demands. When it is discharged into the sea, it should be carried into deep water; the mouths of the sewers should never be seen at low water, and any reflux of their contents should be carefully guarded against by valves. When it is received into tanks or reservoirs, it should be conveyed by closed circular pipes, or, if in open conduits, the sewage should be deodorised and disinfected by carbolate of lime, chloride of calcium, or any other cheap disinfectant. When it has reached the tank, the solid organic matters should be precipitated and allowed to subside for the purpose of being thoroughly dried and sold for manure as human guano. The chemicals used for this purpose are numerous, as lime, clay, blood, alum, coal-tar, iron, zinc, and many others. Cream of lime answers the purpose very well if used in sufficient quantity. The A B C process of Siliar, and that of my distinguished townsman, Major-General Scott, are also good precipitants and purifiers of sewage. If all or any of these means be resorted to and carefully applied, and the effluent water be thus deodorised and rendered pure before it passes into rivers, how can these be said to be polluted? and if no stench arise, and the fish be not killed by this admixture, these are still further proofs that the water is rendered innocuous to the community. In conclusion, there can be no doubt that the proper destination of all animal excretion is the soil, from which it will be returned to us as food ; but the question here arises, how can this be best accomplished without creating a nuisance, which has often happened by the indiscriminate use of such enormous quantities of sewage that the land has been converted into a loathsome morass, reeking with filth and ordure, thus poisoning the surrounding atmosphere and producing enteric fever and other zymotic diseases. The fact is, the agriculturist who rents the sewage of a large town should take it on his own terms ; *i. e.*, he should be allowed to use it only at the proper seasons, and in such quantities as may be required for the adequate fertilisation of the soil and the growth of his crops. Then, when the land is properly levelled and drained, and otherwise prepared for the reception of the sewage, as by the method in use at Merthyr Tydfil already alluded to, I am of opinion that it can be utilised in this way to the great advantage of the farmer and without creating a public nuisance, inasmuch as this plan is a kind of subterranean irrigation, carrying the fertilising elements at once to the roots of the crops for immediate absorption, and at the same time being deodorised and disinfected by the constituents of the soil in its passage through it by slow percolation. The particular means by which this intermittent downward filtration of sewage through the soil is effected, was given in a recent number of our JOURNAL, and to which I must refer any of our readers who may take as lively an interest in this important matter as I do myself. By this process the effluent water may also be considered purified and rendered fit to pass into streams ; as, in all ages of the world's history, the great deodorising and disinfecting properties of the earth have been recognised in the burial of the dead.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

THE MIDDLESEX HOSPITAL.

DEATH DURING THE ADMINISTRATION OF BICHLORIDE OF METHYLENE.

(Under the care of Mr. CAMPBELL DE MORGAN.)

We are indebted to the courtesy of Mr. G. Everitt Norton for the notes of the following case.

J. D., aged 48, brewer's drayman, was admitted into the hospital about the middle of September 1872, suffering from an abscess in the ischio-rectal fossa, which burst, leaving a fistula. For the purpose of relieving the patient by operation, the man was brought into the operating-theatre on October 9th, and was put under the influence of the bichloride of methylene by Mr. G. Everitt Norton, chloroformist to the hospital. This anæsthetic has for the past year been always used in small operations at the Middlesex Hospital. The patient, on the morning of the operation, felt very nervous about taking chloroform, feeling sure, he said, that he would die under its administration; but he refused to have the operation done without it. The usual dose of two drachms of bichloride of methylene was poured into the cone-shaped and perforated leather inhaler, which was then applied over the patient's mouth and nose. After a few inhalations, he became very much excited, and his body very rigid, with complete opisthotonos. He was only restrained sufficiently to prevent his falling off the table; the administration of the methylene being continued, as he was not at all livid. In about two minutes he was fully under its influence, and the inhaler was removed, he having inhaled only the two drachms. He was now turned on his left side, preparatory to the operation, when he suddenly became very livid, respiration ceased, and his pulse became almost imperceptible. He was immediately placed on his back, and Silvester's method of artificial respiration was resorted to, galvanism was applied over the diaphragm and phrenic nerve, and brandy was injected into the rectum; but all without avail. His pupils were contracted when he first became asphyxiated; but in about three minutes they became dilated, and remained so.

NECROPSY, made by Mr. Andrew Clark twenty-six hours after death.—The body was very livid; it was well nourished, and *post mortem* rigidity was well marked. The brain was healthy, but slightly congested. The lungs were very much congested. The lining membrane of the trachea and bronchi was studded with ecchymoses. The right pleura was adherent to the ribs; the left not so. The heart was very large and flabby, and the surface was covered with a quantity of fat; the valves were all healthy and competent. Under the microscope, some of the fibres of the heart showed commencing degeneration; but there were no distinct fat-globules in the fibres. The heart was empty, and all the blood was fluid and very dark. There were some patches of atheroma on the aorta. The liver was large, weighing 82 ounces, and fatty. The kidneys were very much congested, but healthy; as was also the spleen.

ST. GEORGE'S HOSPITAL.

CASES UNDER THE CARE OF DR. FULLER: WITH CLINICAL REMARKS.

NOTHING impresses upon one more strongly the shortness of the ordinary medical student's curriculum than the unanimity with which all the more active clinical teachers confine themselves to the reiteration of first principles. It must be somewhat wearisome work, thus going over the "rudiments" to a constantly changing class, which apparently never advances; and it can only be persisted in from a firm conviction amongst those who take an interest in medical teaching that, considering the time at their disposal, it pays best to keep for the most part to general principles, and to a few of the most important and practical points of diagnosis treatment.

We were led to this reflection—by no means for the first time—by hearing Dr. Fuller illustrate by two very *à propos* cases the rule that "one should treat the patient rather than the disease".

Subacute Capillary Bronchitis.—One of these cases was that of a woman aged 43, who had been admitted with general capillary bronchitis of a very subacute character. There were no phthisical history, no dulness at the apices, and no emaciation. The sputa, however, after a few days, presented a somewhat nummular appearance. She was ordered a mixture containing carbonate of ammonia and senega, but without any benefit. This was changed for another expectorant mixture, containing small doses of antimonial wine and squills, but the patient seemed rather worse. Dr. Fuller then ordered quinine and cod-liver oil; this was followed by rapid and marked improvement.

Treatment of Chronic Bronchitis.—Referring to a stout phlegmatic woman of middle ago, who had been admitted for chronic bronchitis, Dr. Fuller remarked that in these cases, also, treatment by expectorants alone is often useless. The catarrhal state of the bronchi is frequently merely a symptom of systemic plethora, or of an unhealthy state of the secretions generally; the bronchitic irritation being of a reflex character. The so-called "asthmatical" patient usually suffers from more or less dyspepsia, accompanied by a torpid liver and sluggish or irregular bowels. In such cases, no impression can be made on the chronic bronchitis until the diet has been carefully regulated, the allowance of stimulants restricted, and the abdominal organs relieved by some alterative aperient; indeed, in many cases these means are sufficient, without any special treatment of the local ailment, for which alone the patient sought advice.

Latent Acute Pneumonia (?).—In the new wing was a somewhat strumous-looking boy, whose case presented several points of interest. He had been sent in by the Royal Humane Society, under the following circumstances. He lived in Pentonville, and walked thence one morning to the Serpentine for a swim. He declared that he was quite well before his bath; but while in the water he had first a shivering, and then a sudden attack of pain in the side—probably muscular cramp; at all events, he fainted while swimming, and was only saved from drowning by the Society's boatmen. He was taken to the receiving-house, when he rallied to some extent, but seemed still so ill that, in the course of the afternoon, he was sent to the hospital. On his admission there, it was found that there was complete consolidation of the upper two-thirds of the right lung. After a most severe illness, he recovered, but with an utterly disorganised lung. The explanation of the case is difficult. On the one hand, one can scarcely believe that such extensive pulmonary mischief can have been developed in nine or ten hours; on the other hand, it is almost equally incredible that the boy should have been free from any inconvenience and able to walk four or five miles while suffering from acute pneumonia.

Erysipelas.—Although erysipelas of the head and face is generally included amongst the acute specific diseases, it is, in respect of duration, one of the most variable of the class. It is seldom, however, that one attack lasts without the smallest intermission for over a month. One of the hospital nurses, who had been out of health for some little time, was admitted under Dr. Fuller on June 6th for the above disease. Between June 6th and July 6th, her temperature varied between 100 and 104 deg.; the inflammation meanwhile travelling slowly over the head, down the back, and over the buttocks and thighs—in fact, over the whole body—notwithstanding the use of nitrate of silver locally to arrest its progress. After July 6th, the temperature gradually fell; but at the end of the month the patient was only just convalescent.

Aphasia: Slight Paralysis.—In the same ward was an interesting case of complete aphasia, accompanied by but little paralysis. The patient was a rather delicate-looking girl, aged 24, a servant. Her illness began three days before admission with nausea and vomiting. On the third day, she was found insensible (? syncope). On her recovery, she was able to talk, and no paralysis was noticed. She was at once sent to the hospital; and, on her arrival there, she was quite sensible, but completely aphasic, and had also very partial right hemiplegia. Her previous health had been good, and there was no heart-disease. When we saw her, about a fortnight after admission, the paralysis and aphasia had nearly passed off, though she still made use now and then of the most ridiculously inappropriate words. It is curious that, in most of these cases, the power to say "yes" returns before they are able to say "no". This patient, after a few days, answered "yes" to everything—adding a word when she really meant it, and a shake of the head when she meant "no". Dr. Fuller remarked, in reference to this and some other cases, that he thought the occurrence of cerebral lesions in young people was decidedly more common than it used to be; and that, by inspection after death, he had satisfied himself that the mischief, especially when of short duration, is often caused by the giving way of a minute capillary vessel, and the formation of a clot not large enough to break up the cerebral structure, but sufficient to produce temporary pressure, with its attendant loss of brain-function.

"Dropped Wrist" following the Use of Crutches, simulating Lead Palsy.—A very respectable-looking woman, aged 39, was admitted

with paralysis of the extensors of both hands—in fact, with double "dropped wrist"; more marked, however, on the right arm than on the left. It had come on rapidly ten days before. Her husband was a gas-fitter, and she was accustomed to help him in bronzing, etc. She had been subject to abdominal spasms, but there was no blue line on the gums. Dr. Fuller remarked that this sign was occasionally absent in cases of lead-poisoning amongst well-to-do people, especially in those who, like this patient, had a good set of teeth and carefully cleaned them. It was always most distinct when the teeth were carious or neglected. The patient had, however, some numbness of the fingers; and, on further inquiry, it appeared that in May she was admitted into the hospital with a broken leg, and discharged, wearing a starched bandage, in June. After that, she had attended once a week as an out-patient. Although crutches had been given her, she had been afraid to use them, and had always ridden to and from the hospital. On the day of the attack, the bandage having been removed, she attempted, with the aid of the crutches, to walk part of the way home. On arriving there, she found that her wrists dropped. There was little doubt, then, that what was at first sight a very good imitation of lead palsy, had really been due to her own clumsiness.

KING'S COLLEGE HOSPITAL.

Operations, Saturday, September 28th, 1872.

Amputation near the Hip.—This was the case of a young man, aged 18, whose knee had been excised eight years ago by Mr. Smith, for scrofulous disease about the joint. A good union had taken place, and the lad had the use of his limb until last summer, when inflammation appeared in the hip and along the femur. Necrosis of four or five inches of the upper end of that bone was the result, leading to abscesses along the limb and perfect uselessness. Mr. Smith removed the necrosed bone a month ago, leaving a hiatus in the femur, and the limb necessarily as useless as ever; but the lad's health improved very much in consequence of the operation. A month ago, Mr. Smith would have amputated at the hip, but the patient was in such a deplorable state of health that the certain result of such an operation would have been death: now, however, his health having improved, Mr. Smith amputated by two flaps, anterior and posterior. As the bone had been removed nearly up to its head by the former operation, there was nothing to saw through; but a quantity of diseased tissue had to be taken away by the scissors: indeed, nearly the whole of the tissues about the hip seemed to have degenerated to fat. Mr. Smith, however, did not think there was any disease in the capsule or in the head of the bone, which remained undisturbed.

During the operation, chloroform was administered sparingly and cautiously; the lad several times appeared moribund, and brandy was given him repeatedly. Mr. Smith, at its close, justified the operation on the ground that frequently, when much irritation existed about a part, operative interference was better borne than if the part were in perfect health; not only so, but this patient might have lain in bed for many months before he ever could have any use in his limb, and would then beg to have it removed as an incumbrance rather than a benefit. Union would be fibrous between the ends of the femur, if it took place at all, and the limb would be perfectly mobile. The boy himself judged it the wisest and best course to submit at once to this operation, in full view of its danger to his life; and Mr. Smith thought him now in the most favourable condition for ultimate recovery and usefulness. About ten ounces of blood were lost during the operation.

GUY'S HOSPITAL.

Operations, Tuesday, October 8th, 1872.

Lithotomy.—This patient was a man named Richard Purkis, aged 68, a gardener by trade. His family history was good, and he had had no previous disease, save occasionally gravel. Three years ago, he first had pain in passing urine, and was obliged to lay himself up. The sound was passed by a surgeon, but no stone could be detected. Since then, he had been attending the dispensary at Clapham and getting medicine, but with little alleviation of his symptoms. He came to Guy's Hospital, and on the 20th September last Mr. Howse distinctly felt a stone. The stream of urine stopped suddenly, and then dribbled away until all had passed, with much pain. His bowels were constipated on admission, and he was ordered an ounce of compound rhubarb mixture three times daily. On October 2nd, after great pain in the night, he was again sounded and the stone felt. He was ordered 15 minims of tincture of belladonna, and a drachm of citrate of potash, in an ounce of peppermint-water, three times daily. The urine contained quantities of urates, phosphates, and some albuminous epithelial matter, but no pus.

Mr. Durham, in proceeding to operate on this case, said that he thought it most advisable to extract the stone altogether rather than to crush it, because—first, the man was old and extremely irritable; secondly, he had enlarged prostate; thirdly, he had an extremely sensitive urethra, with false passages, which allowed the sound to pass into them more readily than into the proper channel; and, fourthly, he had a good chance of a fair recovery after the cutting operation. This was also the opinion of several of his colleagues. Two incisions only were necessary to reach the bladder, when the stone was readily grasped and extracted. The bleeding was very free, but torsion only was necessary to stop it, with a sponge. The stone proved to be a mulberry one, extremely hard, though not very large. It would have been difficult to pass if it had been broken up, in consequence of hard angular points. Mr. Durham also found the large rounded intumescence of the prostate projecting over the urethra and hindering the passage of urine. Altogether, he thought the patient had the best chance with cutting.

Scrotal Fistula from a Fall: Complete Occlusion of Urethra.—A boy aged 3½ years fell on his perinæum and cut the scrotum. Blood passed freely at first through the urethra, indicating laceration of the canal, and traumatic stricture was the result. The whole of the boy's urine now passed through the wound in the scrotum. Mr. Durham cut down upon the two ends of the urethra at the occluded portion, and, dividing the stricture, brought the two patent ends together. The wound in the scrotum is to be kept quite closed, and the urine drawn off through the urethra only until this again becomes permeable.

Amputation at the Thigh for Disease above the Knee.—This was a man named John Bryan, aged 42, a mason, whose family history was good. Eight years ago, he fell over a stool and injured his knee. He was nursed at home for five months and then brought to the hospital, where he remained three months; the only operations undergone being the lancing of four abscesses about the knee as they approached the surface. He then went to work, without great inconvenience from his leg, until July last year, when he had typhus fever. He then went to the Islington Fever Hospital, and made a good recovery; his leg, however, again giving him great pain, and abscesses breaking. He then went for relief to two infirmaries, and latterly he came to Guy's Hospital. Mr. Birkett now found it absolutely necessary to amputate at the thigh, to give the man any chance of life and usefulness; and this he did in the ordinary way, but making side-flaps.

ST. BARTHOLOMEW'S HOSPITAL.

Operations, Saturday, October 12th, 1872.

Amputation of the Foot at the Ankle.—Mr. Savory performed Syme's operation for rapidly destructive disease about the ankle-joint. The patient had only observed the disease five months before, and since then it had rapidly increased, and was now a very large suppurating swelling. The ends of the tibia and fibula, and the astragalus, seemed most involved, but all the bones of the tarsus partook of the disease. On examining the amputated foot, it was found that there were total destruction of the synovial membranes, and corrosion of the articulations over the greater part of their surfaces, extending into the bone. Mr. Savory thought that in all probability the disease had not spread from one part to another in this case, but had been simultaneously set up in all the tarsus.

Rapid Malignant Infiltration of the Muscles of the Thigh.—The patient was a girl aged 17, who had been operated upon on the 21st of August last by Mr. Baker, for a malignant tumour, diffused in the lower part of the rectus femoris muscle. Not a trace of a capsule could be found. The disease was medullary sarcoma. At that time the parents had been strongly recommended to allow amputation to be performed, but would not consent. Since then, the limb had gone on swelling, and no healing had taken place, or but very little; and now it was immensely swollen to the buttock and groin, and the girl was certain rapidly to sink unless amputation arrested the disease. Mr. Savory then amputated at the thigh in the ordinary way, making anterior and posterior flaps. The fœtor from the diseased limb during the operation was very great. Much blood was not lost; but a great number of arteries had to be tied. The pulsation of the femoral artery was very marked in the anterior flap.

Cancer of the Breast.—Mr. Callender removed a scirrhous nodule of the size of a walnut from the left breast of a woman, who had been operated upon before and a portion of the breast removed. The tumour was movable and easily extracted. Mr. Callender thought it best to remove it at once, before it had grown to any dimension.

REVIEWS AND NOTICES.

AIDS TO THE DIAGNOSIS OF DISEASES OF THE KIDNEYS. By W. R. BASHAM, M.D., Fellow of the Royal College of Physicians, etc. Pp. 48. London: 1872.

THIS thin octavo volume contains ten plates illustrative of various forms of urinary sediment, mostly casts of the uriniferous tubes, to which is appended a brief report of each patient from whom the specimens were taken. The author hopes that these figures will serve as standards of comparison, by the aid of which the student and the young practitioner may be enabled to form an accurate diagnosis and prognosis in any case of renal disease that may come under their observation. After a careful study of the drawings and of the appended brief reports of the cases, we are constrained to say that, in our opinion, they will very imperfectly serve the purpose for which they were intended; and we will briefly set forth the grounds of our judgment.

Numerous as are the illustrations of urinary tube-casts, there is a great general resemblance between the various groups of casts, and an absence of such characteristic features as may serve the purpose of distinguishing one form or stage of disease from another. For instance, Figs. 1 and 5 in Plate III represent casts from two cases which were incurable and fatal, while Fig. 4 in the same plate is from a case of acute renal disease which recovered; yet the figures illustrative of each of these cases represent essentially the same form of tube-casts—namely, small hyaline casts, entangling oil-globules. Again, Fig. 3 in Plate III, represents granular casts from a fatal case; while Fig. 4 in Plate IV is a representation of similar granular casts from a case that recovered. How, then, is the student or the young practitioner, who sees only oily or granular casts, to form an opinion as to the nature, stage, and probable result of the disease?

It would seem, from a comparison of these drawings, that the microscopic appearances alone will not serve to distinguish a curable from an incurable form of disease; and the history here given of each case is far too brief to render any material aid in arriving at a correct diagnosis. The termination of each case, whether in death or recovery, is recorded; but in only one case does the author give the result of a *post mortem* examination; so that the book really affords no assistance to those who are striving to ascertain the relationship between the microscopic appearances in the urine and the special morbid conditions of the kidney.

While there is in these plates an unnecessary repetition of tube-casts closely resembling each other, some of the most striking and significant forms of casts are "conspicuous by their absence". For instance, there is no example of the large hyaline cast. This form of cast, with its sharply defined margins and a diameter equal to that of a convoluted uriniferous tube, indicates that the tube in which it was moulded has been deprived of its lining of gland-cells. A form of tube-cast so significant of advanced disease should surely have found a place amongst these illustrations.

Dr. BASHAM refers to the fact that some small hyaline casts have a remarkable fissured outline, which, he says, "constitutes their special character;" and he is at a loss to explain this fissured appearance. We venture to suggest an explanation. The casts, as a rule, are formed within the convoluted tubes of the cortex; and of course they are as tortuous as the tubes within which they are moulded. But, in their passage through the straight tubes of the cones, they are forced from a curved into a rectilinear form; and, during this process, some are broken into fragments of variable length, while others are only partially severed, and thus appear with fissured margins. It scarcely need be added that no diagnostic or prognostic indication can be obtained from this simple physical fact.

In the first of the series of plates, there are some good illustrations of oily casts and cells; and, commenting upon the oil-containing cells, which he calls "compound granule-cells", Dr. Basham says they "are invariably indicative of a low vital force, and, when very numerous, are expressive of a rapidly approaching fatal termination." We confess to a feeling of considerable surprise at this statement. Without doubt, the appearance of numerous oily casts and cells is significant of serious structural changes within the kidney; but that these appearances do not, as a rule, indicate a speedily fatal termination, is proved by the undoubted fact that, in chronic cases, they may be constantly present for many months and even for years; and in some acute cases the appearance of oil-containing casts and cells in vast numbers has been followed by complete recovery.

A microscopical examination of the urine is of great practical value as an aid to diagnosis and prognosis; but it requires, as a rule, to be supplemented by all the assistance obtainable from the entire clinical history of each case. The notes of the cases from which Dr. Basham's illustrations are taken are too brief and incomplete to have any clinical value.

SEWER-GAS, AND HOW TO KEEP IT OUT OF HOUSES. By OSBORNE REYNOLDS, M.A. Second edition. London: Macmillan and Co., 1872.

MR. REYNOLDS'S cure for the entrance of sewer-gas into the house is to lead all the closet, bath, sink, and cellar wastes into one main pipe, and, where this joins the main sewer, the branch sewer, or the main drain leading to the cesspool—which junction should be as close to the exterior wall of the house as possible—to interpose either a square man-hole constructed of brick, with a syphon-trap at the bottom, or a syphon-pipe with an inlet reaching to the ground line; both of these upright passages above the syphon-trap, which are intended for convenience of cleansing, being left open at the top. Where this system is properly carried out, he considers that all other traps may safely be dispensed with. Many householders have lately busied themselves with disconnecting their houses from the sewers in this very manner, and have also dispensed with all traps in the basement floors; but few, we venture to say, have removed the syphon-traps from the baths, or the bell-traps from their sinks; nor, it is but just to say, does Mr. Reynolds describe this as absolutely necessary, unless there be a persistent annoyance from the cut-off drains. There is in this pamphlet sufficient reason mentioned why the house should be disconnected from the sewer, and a method is also given by which an interposed well-hole can be so constructed as to carry off the refuse without necessarily offering a passage back to the gas. The evils consequent upon the withdrawal of the sewer-gas from the drains by the action of the house-fires, which will always result when the house-drain is connected with the sewer; the dangers resulting from drains made of porous materials or pipes badly laid and jointed, or of too large a diameter; the mischief which follows an inefficient flushing—all these and other failings are plainly set forth in the most nervous of Saxon. We recommend the work to all those who have not time to wade into the depth of the matter for themselves, or to study the history of drainage in the light of experiences, and who must necessarily rely upon tendered advice. We consider, however, that the necessity of a due ventilation of the house-drains has not received a sufficient acknowledgment at the author's hands, possibly from a desire to be brief. For instance, when it is admitted that a smell arises from the stagnant water in the trap beneath the closet-pan, why not ventilate the trap and withdraw the effluvium? Referring to the proposed man-hole, also, it would not be always proper to lead the rain-water downspout into the inlet-pipe of the disconnecting syphon-trap. Such a plan would afford extra flushing water to keep the trapping liquid purer; but where a row of dormer-windows overlooked the eaves-gutters, some of the light and not innocuous gas which escapes up the man-hole would be certain to find its way into the bedrooms. We heartily welcome the book into the fold of hygienic literature.

NOTES ON BOOKS.

MACNAMARA'S *Manual of the Diseases of the Eye* (London, Churchill) appears in a well deserved second edition. It is a very clear, succinct, and satisfactory handbook, incorporating a large amount of special Indian experience, and particularly adapted to the use of surgeons practising in that empire, but interesting in many places and respects to all surgeons, and well abreast of modern experience. The least satisfactory chapters are those on Cataract, in which the necessary manipulations are imperfectly described, and that on Diseases of the Lacrymal Passages. The mode of division of the ducts and sac by Weber's tenotome, with subsequent dilatation by Liebreich's conical probe, which we have found the most satisfactory in practice, is not described.

PROFESSOR EVERETT'S admirable translation of DESCHANEL'S *Elementary Treatise on Natural Philosophy* is completed by the publication of the fourth part (Sound and Light), illustrated by a coloured plate illustrative of the spectra of various sources of light, and copiously illustrated by one hundred and eighty-seven engravings. This is the favoured text-book of the French higher schools, and is unsurpassed for clearness of exposition and methodical arrangement. The editor has greatly improved the original text, and has rewritten the chapters on Consonance, Dissonance, Colour, the Undulatory Theory, and Polarisation. The book, as a whole, will now take its place as the best guide which can be chosen for complete initiation into the subjects of which it treats, and will be found better adapted than any other with which we are acquainted for preparation for university examinations.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 19TH, 1872.

MEDICAL OFFICERS OF HEALTH.

THE *Times* of Thursday contains an article under this heading, which bears evident traces of an official inspiration, and to which considerable importance must be attached. It proposes to give clear notions of the duties which the office entails, of their nature and limitations, and of the circumstances under which union medical officers will be called upon to fulfil them. It starts with the assumption that the elections under the Public Health Act will take place under circumstances which will almost of necessity require the selection of the present medical officers of the Poor-law service. It points out that their duties will include all the circumstances which affect the health of any locality, whether referable to natural or to artificial conditions. Soil, climate, situation, and water-supply, fall under the first heading; under the second, rank the character and construction of workshops and habitations, overcrowding, disposition of refuse, domestic water-supply, and the peculiarities of local industries; and to these must be added the prevention of infectious diseases and of the importation of epidemic zymoses, and a general watchfulness over the sanitary wants of growing populations. In each case, the health-officer will be required not only to acquaint himself with all the facts generally belonging to these categories, and to deduce from them, according to the laws of sanitary science, the practice of sanitary art, and the limitations of sanitary law, the proper modes of proceeding; but he must personally, or through his inspector, and then by verifying the work of his inspector, proceed to ascertain all the individual cases in which, for the purposes of public health, alterations are required in factories, workshops, and habitations, which are the property of private persons; and to move for the abolition of all nuisances, the removal of overcrowding, the wholesome disposal of sewage, the purification of water, healthy ventilation, the reconstruction of unwholesome habitations, the arrest of industrial or civic pollution of streams, the isolation of infectious cases of disease, and generally for the restraint of all private proceedings injurious to public health. This long category of duties concluded, and numerous as are the heads, it will be found, in application, that the subdivisions are yet more numerous and complicated; it of course remains to be stated what facilities will be afforded for the fulfilment of these duties, what are the qualifications required for them, what the remuneration which shall be offered, and what protection will be afforded those who undertake them, if they encounter difficulties in their task. It is admitted that that which our Association has so strongly urged, and which the union surgeons throughout the country have almost unanimously concurred in representing to the framers of the Public Health Act, is not "without some show of reason". It is allowed "that the surgeons to union districts will often be placed in very difficult positions with regard to matters of this kind; and that they will be unable to discharge their duties to the State without imperilling their friendly relations with patients and neighbours." But "it is to be hoped that this view of the case is, at least, exaggerated; and that the national respect for the law will afford to medical officers of health an adequate support from public opinion." It is further intimated that, "should it not do so, it is manifest that the conditions of the office will require to be modified in such a way as to produce the required efficiency."

It is, however, much to be feared, that considerations of this sort will not be very available for the protection of the medical officer in the discharge of his difficult functions. The difficulties are real, obvious, immediate, and pressing; the counterbalancing considerations offered are vague, general, and sentimental. The union medical officer, in exercising his functions as a public health-officer, "will find himself called upon," we are told, "to separate entirely his personal from his official relations with his neighbours, as well as to make this separation fully apparent to them." It is true that he will very frequently find himself at once the servant of those upon whom he is imposing costs, penalties, and expenses, and their medical attendant as well as the medical officer of the district; but he is to abstract himself from these collateral considerations. He probably may and will do so; but if he do, it is by no means probable that his neighbours will fail to use their opportunities of private and family intercourse with him, to resent this interference with their traditional habits and customs, with their disposal of what they consider their own. His task, it is said, "will require much discretion, taste, and firmness"; and "it will be easy for a man wanting in these qualities to blunder into quarrels, to his own serious injury." As to remuneration, no standard is laid down; for it is observed that many men have been found eminently qualified for the work who have not been restrained by inadequate remuneration from accepting the place, and considerable stipends have often only produced the appointment of gentlemen possessing local influence rather than any special fitness arising either from knowledge or from enthusiasm. It is added that "it is not probable that stipends will anywhere rise above a standard that is tolerably certain not to err in the direction of excess." Thus it appears that the experiment is now seriously contemplated, but not apparently without some official qualms, of making a great series of appointments in which medical men are to be called upon to fulfil momentous and "exceptionally difficult public functions" for small stipends; and, in compensation for the losses, obloquy, and opposition with which they will meet, they are to rely upon the moral support of a distant public opinion and of influential residents. We are not disposed to undervalue either agency; and the public spirit, intelligence, and courage of the medical profession have never been appealed to in vain.

But we affirm that they are now gratuitously placed in a position of unjust and invidious peril by the want of moral courage of ministers, and their reluctance to accept at their full value, and follow out to their just conclusions, the experience, advice, suggestions, and arguments, which the British Medical Association repeatedly placed at their service. That which is now admitted is that which the State Medicine Committee clearly and repeatedly demonstrated to Mr. Stansfeld and his advisers. Had their advice been followed, the wished-for improvements in the public health would not have been left, as they now are, in immediate danger of failure. It is quite certain that all the difficult and clashing conditions now necessary for success would not have been necessary. Adequate areas, adequate sources of stipend, adequate protection, adequate knowledge, time, and experience would have been secured. Now they will rarely concur, and for this the Government has only itself to thank. It has, at the very outset, to put forth a foreboding, apologetic, sentimental plea; a cry for help rather than a statesmanlike programme of administrative work. It is manifest, indeed, "that the Act will require amendment," but it is little creditable to its framers that they should have failed in the insight and courage necessary to make it more complete. The fault has not been ours, and the blame of failures must lie with the authors of the Act, and with those who encouraged them with vague and interested assurances

that they might safely disregard the warnings which they received from men of life-long labour, of tried disinterestedness, of eminent sagacity, and of incomparable knowledge of sanitary questions ; and such men were not wanting in the meetings and deputations of the Joint Committee on State Medicine.

REGISTRATION OF SICKNESS.

We have before discussed the plans of Mr. James Lewis, the accomplished officer of the Registrar-General's staff, who has made active and instructed exertions in favour of the elucidation of the best available methods of procuring registration of sickness. Mr. Lewis has now once more published, at an opportune moment, an exposition of his views, in the columns of the *Times*, in which, incidentally, a review is given of the present state of this matter.

It was because many years' experience of the value, from a public health point of view, of the death-returns published by the Registrar-General, had convinced him of the importance of carrying the work "one step further back," that he ventured to lay before the Royal Sanitary Commission a proposition for obtaining, in the simplest way that occurred to him at the time, returns at frequent intervals, from all parts of the country, of the number of new cases of certain diseases coming under treatment by the medical practitioners of the Poor Law and of public institutions. He was quite aware that the method of procedure which he had suggested would not satisfy those who, from a highly scientific standpoint, desired to see an elaborate system of disease-registration established. All that he concerned himself with—all, in fact, that seemed to lie within his province—was how most readily to provide "the means of sounding an early note of warning" to which all will attach much importance. It appeared to him, then, and so it does still, that upon whatever grounds a return of deaths, such as is published weekly for London and other large towns, had been deemed necessary, far stronger reasons exist for the publication of a similar return of the first appearances of epidemic disease.

No doubt the existence of such diseases in any locality is primarily a matter of importance to its authorities and to its inhabitants. But he has ventured to think that it is also the concern of the public generally, and that in these days of rapid and constant intercommunication it is most desirable that the Londoner should know of the prevalence of infectious disease in any of our large manufacturing towns or pleasure resorts, and *vice versâ*. Further, he does not see how the Central Public Health authority can keep an effectual watch over the local authorities in the matter of disease-prevention without some such returns as he has suggested. The Royal Sanitary Commissioners evidently were of the same way of thinking, and they did him the honour to refer in their report to the plan which he had suggested as a practical mode of dealing with the matter (Report pp. 58-61).

Supported by so high an authority, it might, he thinks, be supposed that means would be taken to test this plan, at any rate experimentally. He is not aware that up to the present time anything of the kind has been attempted, and is not very sanguine of soon seeing it tried. Nobody seems willing to undertake it. Some publicists are evidently under the impression that the Registrar-General's Department will eventually collect and publish sickness-returns, as it has for years collected and published death-returns ; but they lose sight of a very important point in the case—namely, the expressed unwillingness of the Registrar General to have anything to do with sickness-returns, which he has publicly stated ought, in his opinion, to be under the superintendence of the medical officer of the Local Government Board.

Under these circumstances, he would not be justified in persisting in connecting the returns of sickness with the department in which he has served for twenty years. For some reasons, the Local Government Board could more advantageously than any other department collect the returns : it has control over a majority of the sources whence the facts would be derived. Unfortunately, however, there is reason to suppose that Mr. Simon, the medical officer of the Board, is in favour of a quarterly return of pauper sickness, and an annual return of sickness in public institutions. A quarterly return cannot be considered sufficient for the end that has been advocated—namely, to give timely warning of the outbreak of disease. It would surely be an anomalous state of things that the public should be able to learn how many persons were killed every week from scarlet fever in any one of our large towns ; whereas they must wait until the expiration of three months before they could know how many persons the disease had attacked, or be able to estimate the extent of infection to be provided against.

It may be judged from what has thus been said, that returns of sickness, such as are advocated, can hardly be looked upon as yet within our grasp. It is possible, Mr. Lewis thinks, that more elaborate schemes than his may have found favour in the eyes of the ruling powers ; but he is satisfied that the simpler the plan adopted, and the oftener the results are made public, the better will the national interests be served in all the respects in which the earliest knowledge of the existence of disease can lead to the adoption of measures for preventing its diffusion.

Mr. Lewis's publication may probably lead to some active progress from the stage of general to practical consideration, and thence to that of execution. The question was never surrounded by a warmer atmosphere of actuality than at this moment of sanitary organisation.

SUPERANNUATION ALLOWANCES.

We have again to notice the unsatisfactory course pursued by a board of guardians towards their retiring medical officer in respect to superannuation. A correspondent writes to us, under date September 18th:

"It was agreed, at a meeting in April last, that Mr. Cooke, Medical Officer of the Newent Guardians, should have £20 *per annum*; but, when the resolution was presented to the London Board, it was discovered that the guardians had not had sufficient notice given them, and that, therefore, the Local Board could not ratify the proposed allowance. Consequently the question was postponed until the proper notice had been given, and the meeting convened according to law. At this meeting, which took place last week, the subject was again discussed, and two-thirds of the guardians who were present objected to grant any allowance, saying, as their only reason, that the *principle* was a bad one. The principle is acknowledged by the Act of Parliament, and the Newent guardians have on two previous occasions also acknowledged it by granting superannuation allowances to one master of the workhouse and to one relieving officer. Is this justice towards the medical officer, who has served between thirty-nine and forty years, and who has now broken down in health, and in consequence has been compelled to resign?"

There can, we fear, be little doubt that boards of guardians have the legal right to grant or refuse the allowance to medical officers; and no doubt the case of medical officers stands usually upon a different footing, as is often urged, from that of either the master or the relieving officer of a workhouse, who are wholly occupied in performing duties under the guardians, and solely dependent upon the salaries for these duties. But it runs on all fours with the case of the clerk, who has commonly, like the medical officer, other occupations and sources of income. The question of general expediency has been fully discussed on many occasions; and the preamble of the Act expressly declares that it is expedient to encourage deserving medical officers of long service by granting them suitable retiring allowances, not to exceed two-thirds of their official income. The object is at once to increase efficiency, to hold out the prospect of reward for faithful and zealous service, and to leave with the worn-out servant of the public a beneficial testimony of the gratitude and acknowledgment of his public masters. To refuse to grant such an allowance to officers of long and faithful service, as the Act indicates, is a very mean, shabby, and unwise act. It discourages zeal, breaks the ties of good-will and earnest devotion which should link public boards and their officers, and denies to those officers the reward which their record justifies, and of which the law holds out the promise. It offers a premium to perfunctory work, and to clinging to office long after it should be abandoned. To act thus on the ground that "it is undesirable to create a precedent," is to cover a mean action by a false excuse, which is opposed to the fact that such precedents exist in sufficient numbers;

and they only illustrate rights and privileges accorded by an express and explicit Act of Parliament.

We shall be glad to receive communications relating to the working of the Superannuation Acts in Ireland and England, for the information of our Poor-law Committee, which is about to communicate with the President of the Local Government Board on the subject.

THE ALCOHOL QUESTION.

THE effect of the famous Declaration concerning alcohol has, we believe, been little, if at all, less beneficial than its authors could have desired. In one way, it was perhaps unfortunate that the wording of the first sentence was such as to convey an ambiguous meaning capable of conveying a vague reproach upon a large class of physicians; but the discussion that arose upon this part of the question served only to emphasise and drive into the sluggish minds of men the principles of the declaration, which commanded a nearly unanimous assent. The public mind was undeceived in respect of one of its most prevalent and fashionable delusions—that medical men have any reason to regard alcohol as a strengthening or nourishing food, as a necessary article of diet for the healthy, or as a medicine which may properly be prescribed without fear or measure, and within the limits dictated by the taste of the consumer. It was a most wise, necessary, and beneficent protest against the excesses in medical practice and in popular opinion which had followed the teachings of Todd. There is room, however, for building upon this Declaration a further and more practical course of action. It is certainly time to endeavour to ascertain upon what principles alcohol is administered in disease, and in what quantities, in our great public institutions; and what are the results. Dr. Eastwood told us last week that, at St. Thomas's Hospital, the patients cost annually £826, or 1s. 7½d. per head weekly; at the Sheffield Infirmary, 1s. 4½d.; at Leeds, Newcastle-on-Tyne, and Manchester, 1s. 1d.; at Glasgow, 8¾d.; at Edinburgh, 8d.; and at Birmingham, 5½d. At the Newcastle Infirmary the amount has been diminished to the extent of £90 during the last year. In the county asylums for the insane poor there is a great diversity in the amount of wine, spirits, and porter consumed, beer being included amongst provisions. At the asylums for Lancaster, Dorset, Notts, and Warwick, the weekly cost is ½d. per head, at Worcester 4½d., at Durham 6d.; whilst at the borough asylums at Leicester and Norwich it is 7d. and 9¾d. respectively. The total cost for the maintenance of each patient varies only from 6s. 10d. in Dorset, to 10s. 6d. in Surrey, per week, but it is more in the borough asylums. From the official reports it cannot be found that the recoveries or the deaths bear any reference to these expenses. At the Cumberland Asylum no beer is given as an article of diet, and the patients appear as well off as those in other asylums. To invalids, however. stimulants are given in the usual manner, as the cost per head appears to be 2⅜d. weekly. At the various workhouses the same irregularity prevails. The 825 inmates of the Whitechapel Workhouse cost £503, or 2¾d. per head weekly; Shoreditch and Bethnal Green pay 3½d. each, the City of London 6d., Camberwell 7½d., whilst Paddington pays 9d. The comparison of the number of deaths with the supply of alcoholics affords no correct information as to their value, but it certainly does not prove anything in their favour. On what principle is there this difference in practice amongst the hospitals, asylums, and workhouses of this country? Surely none; and yet hundreds of pounds are spent every year, and no one can say to what good, if we look at the results. Almost every man will say that he is guided by experience; but when so many different experiences exist, who shall decide which is best? Surely some attempt might be made, by committee or otherwise, to give a systematic and plausible answer to Dr. Eastwood's question.

DR. CYON has been appointed Professor of Physiology in the Medico-Chirurgical Academy of St Petersburgh.

THE Cæsarean section was recently performed at the Hospital for Women, in a case of extrauterine fœtation, but with a fatal result.

IT will not be possible to issue a complete return of the students entered at the Metropolitan Schools this week. We shall publish it in our next impression.

THE Sanitary Committee of the Corporation of Bradford, Yorkshire, have recommended the appointment of a Medical Officer of Health, at a salary of £500 *per annum*.

THE National Orthopædic Hospital and the Infirmary for Epilepsy and Paralysis have each received donations of £1,000 during the past week, the former from "E. D.," and the latter from "G. S."

A NEW University is to be opened on November 1, at Klausenburg, the capital of Transylvania. The town already possesses a Medico-Chirurgical School, the teachers in which are to be the professors in their respective subjects in the faculty of Medicine.

DR. GOWERS and Dr. Vivian Poore are candidates for the assistant-physicianship, and Mr. Marcus Beck for the assistant-surgeoncy, at University College Hospital. No candidate has, we believe, as yet come forward for the assistant appointment in the skin department.

AT the last meeting of the Board of Management of the Bradford Infirmary, the following resolution was passed: "That this Board, referring to the expiration of Mr. Miall's ten years' term of office as Honorary Surgeon to the Bradford Infirmary, desires to record its high sense of the very valuable services which Mr. Miall has rendered to the institution, and gratefully recognises the great assiduity and professional skill which have been shown in the discharge of the important duties of his office."

ENORMOUS BRAIN IN A BOY.

A BOY, thirteen years of age, died in the Middlesex Hospital, a few days since, from injuries caused by a fall from an omnibus. His brain after death was found to be very large and to weigh fifty-eight ounces, about eight ounces above the weight of the average male adult brain. He had been a particularly healthy lad, without any evidence of rachitis, and very intelligent.

INFECTED WATER.

A REMARKABLE and impressive confirmation of what we had to say last week, as to the sewage contamination of the Lambeth and Southwark water, comes to us from an unexpected source, and in a form which has its own special interest. The endeavours to stock and maintain a series of tanks for fresh-water animals at the Crystal Palace had, until now, been defeated by the fact that the water was found to be so unfit for such animals, that they speedily died from a cause not ascertained. It has, however, since been found that the cause of the great mortality was the contamination of the water with organic matter, in quantities sufficient to destroy delicate gill-breathing animals. It is not at all pleasant to reflect that a large part of the population are at present condemned to rely upon this as their source of drinking-water. Means will be taken at the Crystal Palace to purify this water for the sake of the fishes, and it seems hard that similar consideration is not extended to poor humanity.

THE CLINICAL SOCIETY.

TWO cases of rheumatism treated by the cold bath, but proving fatal, formed the subject of a most interesting and instructive discussion at the opening meeting of the Clinical Society on Friday of last week. The reports were by Dr. Southey and Dr. Greenhow; and Sir William Gull, the President, Dr. Wilson Fox, Dr. Hermann Weber, and others, who have had numerous opportunities of observing the results of the cold bath in hyperpyrexia, joined in the discussion. There was a rather thin attendance of members of the Society, considering the importance of the subject, but the discussion was of rare clinical value. Nowhere can time be spent with greater satisfaction and advantage than at the Clinical Society, on a good evening, when the sub-

jects of the papers are well chosen; and the debates there are commonly marked by a vigour, freshness, and directly practical value, which makes this Society one of the most valuable aids to scientific practice, and one of the most instructive and agreeable of the metropolitan medical *réunions*. Sir William Gull has not been well supported by the officers, and the Society has been feebly administered of late; but the skill, clinical tact, felicity of thought and expression with which he has conducted and enriched the discussions, will long be remembered, as having contributed to make the meetings a source of high intellectual pleasure, and to relieve the episodes of solemn dulness and portentous nullity under which this in common with other societies sometimes suffers.

THE PATHOLOGICAL SOCIETY.

THE vigour of this useful Society was represented on Tuesday, the opening night of the session, by a large attendance. Some good specimens were shown: a case of melanotic cancer of the liver, by Mr. George Lawson; a specimen of hydatid of the heart, by Dr. Peacock; organs and drawings from two cases of general xanthelasma, by Drs. Hilton Fagge and Pye-Smith; fibro-cartilaginous tumours of the heart, by Dr. Kelly; and other specimens. The principal subject of the evening was that of xanthelasma. The authors of the two papers agreed in ascribing the affection to chronic jaundice. Dr. Peacock's specimen of hydatid of the heart raised an interesting discussion, in which Drs. Murchison, Duffin, and others joined, on the question of the connexion of hydatid of the heart with the same affection in the liver. A large number of new members were proposed. An admirable volume of *Transactions* for the past year was presented to the Society; and it was stated that it would be issued to members in a few days.

JAPANESE STUDENTS.

AT the last examination in anatomy which was held at the University of Berlin, two candidates alone, amongst the thirteen who presented themselves, obtained the notice "good". One of these was a Japanese medical student called Sasumi Satoo. The intellectual labour and the amount of perseverance necessary to gain this success will be appreciated, when it is known that in November 1869, the time when Sasumi Satoo was sent by his father to Berlin, he did not even know the German characters. The first five months he applied himself exclusively to the study of German; and he acquired in the remaining six months the knowledge of all the subjects, including Latin, which were required for the first examination. The father of Sasumi is the principal physician to the Mikado, and enjoys in Japan great celebrity as an operator.

THE EAST LONDON HOSPITAL FOR CHILDREN.

THE East London Hospital for Children, which is much in need of funds to enable the Governors to complete the new hospital buildings, has received a most opportune and anonymous donation of £1,000, from "H. G." This munificent donor has, on three previous occasions, come to the rescue of this hospital with a like sum when the funds had sunk to a very low ebb.

EPSOM COLLEGE.

ON Friday of last week, an interesting ceremony was witnessed at the Medical College at Epsom, when the foundation stone of a house for boarders was laid by Mr. Erasmus Wilson, who himself pays the whole cost of the building—more than £5,000. So handsome a gift would always command attention; but special circumstances add importance to the present case. The laws of the College are such as almost to preclude the admission of boys who are not sons of medical men. Not only is a preference secured for medical men's sons over other boys on the occurrence of vacancies in the College, but vacant places must be left open till the last moment, and lay boys kept in suspense, uncertain whether they can be admitted or not, because some boys of the privileged class may still turn up and demand admission. This uncertainty of entering has operated more than the higher fees (which, however, are increased in their case from £45 to £70) in keeping lay boys out of the College; very naturally, therefore, the present roll of the College contains but two or three names of boys whose fathers are not of the profession. Now, this has long been thought a disadvantage, not only to those who are excluded but, in a greater degree, to the boys who are admitted. For, as experience has shown at Marlborough and Rossall, that it is good for the sons of clergymen to have schoolfellows whose homes are not clerical, and who bring with them a different set of memories, widening the world in which their minds are formed, so must it be desirable for the boys who are collected at Epsom from homes which, however various in other respects, are all medical in their associations, to have an infusion of new ideas from other sources. The rule, however, has stood in the way, and it has not yet been found possible to abrogate or evade it. Therefore, when Mr. Wilson intervened as a *deus ex machinâ*, and with open hand provided the cost of a house to which no such restriction would attach, he must be felicitated on having chosen a very effective mode of benefiting the College. The house is planned to receive forty boys and a master's family. It will thus introduce another new feature in the construction of the College. The hostel system will be modified by an admixture of the separate house system; and we indulge the hope that its success will be so marked as to induce others to follow Mr. Wilson's example, until the numbers of the school are double of what they are now. Mr. Wilson and many members of the Council assembled in the Head Master's house, at four o'clock on Friday last, and went thence to the Chapel of the College, where evening prayer was read by Dr. West; a special lesson, 1 Chron. xxix, 6-20, was read by Mr. Bannister, the head pupil, and Psalm xlv, was nicely chanted by the choir. After the service, the congregation proceeded to the building where, with suitable accompaniments of psalm and hymn and prayer, the memorial stone was solemnly laid by Mr. Wilson, who delivered an address on the occasion, setting forth his purpose in the gift he had made, and concluding with a word of advice to the boys, that if they would find the philosopher's stone or Aladdin's lamp, they might do so by the diligent pursuit of knowledge. It is almost needless to add that flags were flying, that the boys gave ringing cheers, that Mr. Wilson was heartily thanked by all present, and that the day was a white day in the annals of Epsom College

GEOGRAPHY OF CONSUMPTION.

MR. LEONARD ARMSTRONG of Scarborough writes to us:

My object in calling attention to published statements on the geography of consumption was, if possible, to utilise the information we possess on the subject in combating this fatal disorder. I fear, however, this information is, as yet, too vague and unreliable to be of much practical use in the preventive treatment of phthisis. In such an inquiry, we must descend from the general to the particular; and, in searching for a sanatorium for consumption, it would be most desirable to have its reputation guaranteed by sound statistical data. Dr. Crisp's discovery, that consumption has been less frequent on the north-east coast of England than on the west, is very remarkable and important. If confirmed by subsequent returns, it will do much to correct a medical and (as old Browne would say) vulgar error of long standing. I look forward with great interest to the time when we may be able to compare his tables for the decade,* or decenniad, just passed, with those for the ten years immediately preceding it. I am surprised that Dr. Crisp should now write of the "little practical benefit" that will result from deductions in small unions, when a few years ago, in the *St. Andrew's Transactions*, he drew special attention to this union, stating that "Great Ouseburn, in the West Riding of Yorkshire, is one of the places in England where phthisis is least prevalent"; and added, moreover, a special notice of its geological position, soil, dampness, etc. I may say that in extracting the number of deaths from consumption in the decade 1861 to 1871, I did not include *eleven* years. As I stated in my letter, "I found the total number for the last ten years was 251". In quoting the deaths of that period as 1 in 43 of the population, I find I have inadvertently given the mortality of the central district, which

* Notwithstanding the critical query of Mr. Haviland, I have ventured again to use the good old word "decade", believing it to be as correct and expressive as the more new-fangled decenniad. I understand the term to mean *a series of ten*; and whether it applies to a decade of years, or a decade of schoolboys, ought, I think, to be learnt from the context.

was the highest, instead of that of the whole union. As Dr. Crisp remarks, my figures show the recent rate in this union to be 1 in 47, which is a considerable contrast to 88—Dr. Crisp's first published number—and even to 57, which should have been the estimated proportion, according to Mr. Haviland's explanation. Now that this discussion has arisen, it would be very interesting if some of our Associates would extract the number of deaths from consumption in the past ten years, in Ongar (81), Braintree (26), or Keighley (25). We should then see whether these places retain the good or bad character they have acquired, and also whether the local death-rates from phthisis are so nearly uniform and constant as Dr. Crisp anticipates. In the matter of maps, I can readily understand why Mr. Haviland, like a partial parent, should look favourably on his own offspring; but for purposes of comparison I fail to see what advantage an annual map could have over a simple tabular statement: indeed, to my mind, a table of figures, correctly made out, gives the information we desire with much more precision and exactness. Take, for instance, a decennial period in one district which first attracted my notice. The yearly number of deaths registered from consumption runs thus: 11, 13, 8, 8, 10, 10, 9, 15, 7, 6. The colouring of the maps must be based on these figures; and I would ask whether these fluctuations in the death-rate could be more quickly or accurately comprehended by a glance at these numbers, or by a comparison of ten maps, variously shaded and tinted, in the endeavour to represent these fluctuations in colour? Nor can these fluctuations be generally or safely attributed to the sanitary neglect or exceptional weather of the year, as Mr. Haviland suggests. The harvest of consumption is not usually reaped in the year of its seed-time. The foundation of the malady may be laid by the meteorological peculiarities of one year, but the completion of its course may not be discerned in the death-register till many years afterwards. With all deference to Mr. Haviland's great labours in this direction, I conceive that his geographical maps are chiefly useful in giving a general idea of the distribution of phthisis, and that this general idea will be most useful when founded on average rates extending over a considerable number of years. They would then indicate what permanent and constant influence the various geological soils and geographical positions exert on the production of phthisis. Other fluctuating influences can scarcely be considered geographical.

INDIAN MIDWIVES.

EUROPEAN and East Indian women are now receiving regular instruction in midwifery and nursing at the Madras Medical College. Diplomas are granted after the required course of study, and the passing of a satisfactory examination by the candidates.

SMALL-POX IN VIENNA.

THE epidemic of small-pox, which has long prevailed in Vienna, still fails to show satisfactory signs of abatement; and the weekly returns manifest curious fluctuations, especially as regards mortality. Thus, in the three weeks ending September 27, October 4 and 11, the average daily numbers of cases under treatment in hospital were 396, 379, and 375; while the numbers of deaths in the three weeks respectively were 94, 59, and 90.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

THIS Society held its annual meeting on Tuesday, October 1st. The Secretary's report shewed that its past session had displayed more than the usual activity, both in the number of papers contributed and the exhibition of morbid specimens. Its pathological department had increased in value, and a great advance had been made in the opening of a dissecting-room for the use of its members. Eight new members had been added during the year, and two honorary members, viz., Dr. Bridges, of London, one of its former Presidents; and Dr. Stevenson, its first secretary. The Society had now been in existence ten years, and its present register of effective members numbered forty-two. The retiring President, Mr. Foster, in replying to a vote of thanks, said that "the Society had done good work. It had been of great benefit to the profession in Bradford, not merely in multiplying scientific knowledge, but by its organisation enabling medical men to mingle freely with each other, softening asperities and elevating professional tone; it had engendered mutual esteem, and laid the foundation of lasting friendships." Dr. J. H. Bell was elected President; Mr. J. Mossop, M.B., Treasurer; and Dr. Goyder Secretary, for the ensuing year.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

THE first meeting of the session was held on Friday evening, October 11, 1872, Prior Purvis, M.D., in the chair. The following gentlemen were elected officers of the society, for the session of 1872-1873. *President:* Ralph Gooding, B.A., M.D.; *Vice-Presidents*: J. Anderson, M.B.; C. Nind, M.R.C.S. *Council:* J. M. Burton, F.R.C.S., W. Carr, M.D., S. Giles, M.D., W. Lockhart, F.R.C.S., F. Moon, M.B., M.R.C.S., J. P. Purvis, M.R.C.S., H. W. S. Sturton, M.R.C.S. *Treasurer:* Prior Purvis, M.D. *Secretary:* H. G. Hitchcock, M.R.C.S. *Librarian:* G. K. Bothwell, L.R.C.P.E. After the election of officers, a practical and interesting inaugural address was delivered by the President.

MANCHESTER MEDICAL SCHOOL AND INFIRMARY.

OUR Manchester correspondent writes:

The winter session of the Manchester School opened on Monday, October 7th, with an address by Mr. T. Turner, the founder of the School, and, indeed, the chief promoter of provincial medical schools throughout the kingdom. He dwelt chiefly upon the great and mutual advantages which would accrue to the School and to Owens' College from their recent incorporation; and while he spoke with just pride of the names of such colleagues as John Dalton, Sir James Bardsley, Roget, Ransome, and his veteran friend Mr. Jordan, he predicted a still more successful future, and a steady growth in power and excellence for his favourite nursling. The unusually large number of fresh entries, amounting as they do to forty, lends probability to his prophecy; and there can be no doubt that, in adding a hundred and twenty students, as the Medical School at once does, to the total number of the collegians at Owens', the latter gains a very material element of strength. At the last general meeting of the trustees of the Manchester Royal Infirmary, the resolutions—of which I spoke in a former communication—were all passed, so that there are at present vacancies for seven officers at this institution; viz., for two assistant-physicians, two assistant-surgeons, an obstetric physician, an ophthalmic and a dental surgeon. It is not yet decided whether the elections shall be conducted by an electoral board or on the old principle—*i.e.*, by the votes of the entire body of trustees. This very important question will be settled on Monday next.

THE TESTING OF MILK.

IN a recent number of the *Mechanics' Magazine*, there is an elaborate article on the testing of milk, by Mr. Wanklyn. The first point insisted upon is the great constancy of milk, or rather the fact of its never falling below a certain limit of richness. According to an elaborate investigation made by Müller and Eisenstück for the Agricultural Society of Sweden, the milk of a herd of fifteen cows of different breeds never once, during a whole year, fell so low in solids as 11.5 per cent., and only four times below 12 per cent. The highest yield of solids in the milk was just over 14 per cent. In this investigation the milk was examined daily throughout the year. Mr. Wanklyn confirms this result by publishing a number of analyses of milk. The most variable constituent of milk is the fat; and, if the amount of fat found in milk be subtracted from the total amount of solids in milk, a quantity is arrived at which is more constant than the total solids. This quantity, which is the "Solids not Fat," Mr. Wanklyn proposes to employ as a datum for calculation in milk-examinations. Average country-fed milk contains, in 100 parts, 9.3 parts "Solids not Fat," 3.2 parts of "Fat," and 87.5 parts of "Water." If milk be skimmed, the proportion of fat contained by it will be diminished, but the "Solids not Fat" will not be diminished; on the contrary, they will be increased to a trifling extent by skimming. Watering, on the other hand, will diminish the "Solids not Fat," but it will not alter the ratio of the "Solids not Fat" to the "Fat." In order to ascertain how much "Solids not Fat" is contained by a given sample of milk, a small quantity of it is weighed and evaporated to dryness in the water-bath, and the residue carefully dried at 212 deg. Fahr., and finally weighed. Afterwards, the fat is dissolved out of the solid residue by means of ether and the ethereal solution evaporated to dryness. The residual fat is then weighed; and its weight, subtracted from the total solids, leaves the "Solids not Fat," which constitute the new datum for calculation. Let the number of

grammes of "Solids not Fat" contained by 100 *grammes* of a sample of milk be called *a*, and the number of *grammes* of fat be called *b*. Then, taking genuine milk as containing 9.3 *grammes* of "Solids not Fat" and 3.2 *grammes* of "Fat," we have:

Number of *grammes* of genuine milk employed to make 100 *grammes* of the sample = $\frac{100}{9.3}\ a$.

Number of *grammes* of fat removed from 100 *grammes* of the sample of milk = $\frac{3.2}{9.3}\ a - b$.

Number of *grammes* of extraneous water in 100 *grammes* of the sample of milk = $100 - \frac{100}{9.3}\ a + \frac{3.2}{9.3}\ a - b$.

The "Fat Removed" may be expressed as cream by writing one *gramme* of cream for every $\frac{2}{10}$ of a *gramme* of "Fat Removed." This, however, owing to the variable consistency of cream, does not lay claim to any high degree of accuracy. By way of example, showing how the new calculation works, the analyses of milk supplied to the London workhouses are taken and thrown into a tabular form. We have already called attention to these analyses, which were published in Mr. Rowsell's most important Report on the Condition of the Metropolitan Workhouses.

THE "COTTAGE SYSTEM" FOR THE INSANE.

Dr. Kirkbride, of Philadelphia, in his last report of the Pennsylvania Hospital for the Insane, states (says the *New York Medical Record*) that this proposed family system, no matter what size is adopted, takes away the facility of supervision, while the risks of accidents of various kinds, especially of escapes, personal injury, and of fire, are greatly and unnecessarily increased. His own experience with cottages and detached buildings, even at very short distances, long since led him to the conclusion that no building to be occupied by patients should be so far removed from the main structure as not to be connected with it by a covered way, well lighted at all times, and comfortably warmed in winter.

THE LOCALISATION OF BRAIN-FUNCTIONS.

Meynert, one of the ablest of the modern students of the anatomy of the nerve-centres, has sought, by combining phrenological with clinical and pathological observation on the functions of the cortical layer of the cerebral hemispheres, to define to some extent the localisation of the different functions in the grey matter of the cortex. He distinguishes five special functional centres. 1. The olfactory lobe or nerve, which, highly developed in animals well gifted with the power of scent, is almost atrophied in man, less highly endowed in this respect. 2. The walls of the fissure of Sylvius. These are in intimate relation with the power of speech, as is found in aphasia, which is the consequence of changes in them. 3. The occipital and temporal lobes. Anatomy shows the relations of these parts with the organs of the senses—the retina, labyrinth, and olfactory nerve. In cases of blindness and deafness rapidly developed, these lobes are the seat of evident alterations. The experiments of Flourens on the ablation of the cerebral lobes support this theory; for, if but little of the substance be removed, the senses are not much affected; but, if the ablation be carried deeper, the sensorial functions immediately cease. 4. The frontal lobes. These lobes are the principal seat of motor excitation, as is shown by their anatomical relations with the corpora striata. Besides, in the forms of psychoses which are accompanied by extensive disorders of the motility (general paralysis), these are the most atrophied of all the parts of the brain. The continued need of movement, the agitation of mania, are equally based upon change in the frontal lobes. 5. The cornu of Ammon. This organ plays an important part in the functions of motility, and almost always presents, in epilepsy, conditions of atrophy or sclerosis.

NEW HOUSES.

Some recent observations in the *Pall Mall Gazette* form a fitting pendant to our articles on the choice of site and construction of dwelling-houses. It is justly pointed out that one of the many errors which people who build houses are apt to commit is that of living in them, or rather dying in them, before they are sufficiently dry for occupation. It not unfrequently happens that a man, disgusted with the defective sanitary arrangements of the generality of houses ancient and modern, builds a dwelling for himself and his family, constructed with all the latest improvements, and in his extreme anxiety to commence a career of longevity rushes into it before the workmen are out of it, and while the walls are still saturated with moisture. The consequences are, as might have been expected; in addition to the architect's charges, the rash owner is called upon to pay within the first few months a further bill to the doctor, and too often to the undertaker also. A house-agent not long ago, being asked why the house-agency business was so commonly combined with that of the undertaker, grimly replied that the two "went together;" and, on being asked for a further explanation, stated that he had found, as an almost invariable rule, that when as a house-agent he found a tenant for a newly built house, he was applied to as an undertaker on behalf of that tenant or some member of his family within a twelvemonth from the date of occupation. He added that he himself (the house-agent) would be sorry to live in any house "that had not been baked by six summer suns." Whether this amount of baking is absolutely required is a question for doctors and architects to decide; but there can be no doubt whatever that a want of caution in this respect leads occasionally to the most lamentable consequences. An instance in point will be found in the case of Peabody's Buildings, mentioned in the annual report of the medical officer of health for Southwark, lately printed. It seems that these buildings have a death-rate of 23½ in 1,000 persons living, or 1 in 43. In other metropolitan model buildings the death-rate only averages 17 per 1,000. The less favourable state of health prevailing in Peabody's Buildings is attributed to their being too soon occupied after construction, many of the ground floors having been found to be still very damp some months after the buildings were inhabited.

SECRET POISONING.

For the further elucidation of the poisoning cases at West Auckland, the bodies of the persons suspected of being poisoned have been exhumed and examined. In the viscera of the bodies of Charles Edward Cotton and Joseph Nathan, large quantities of white arsenic were found. The viscera of the children, Frederick Cotton and Robert Cotton, in which an irritant poison was found throughout their whole extent, have been sent to Mr. Scattergood of Leeds for analysis.

HEALTH OF THE CUSTOMS.

We have just received a copy of the sixteenth annual report of the Commissioners of Her Majesty's Customs. The medical officer, Dr. Walter Dickson, R.N., furnishes a carefully prepared and instructive report on the health of the officers of the establishment. During 1871, the mean daily number disabled by sickness was 36, or 3.6 per cent. The deaths were five above the average: 16 occurred from disease and 2 from accident. The mortality was 17 per 1,000; the mean annual mortality of the last fifteen years having been 12. This increased death-rate Dr. Dickson attributes to small-pox and accident.

ALLEGED CURES FOR HYDROPHOBIA.

At the close of an inquest lately held at Salford (on a case of accidental drowning), the coroner, Mr. Price, alluded to a death from hydrophobia which had recently occurred in the borough. At the inquest, he had ventured to state what he thought was best to be done immediately a person was bitten by a dog, a cat, or any other animal in a rabid state, and since then he had received two communications as to the remedies for hydrophobia. One was from the Vicar of Birling, in Kent, who stated that a person in that village had a recipe for the cure of hydrophobia. It had been in the possession of the family for a hundred years, and had always been found effectual. The second communication was from a Mr. Whitehead, of the Ragged and Industrial Schools, Huddersfield, who stated that Dr. Rich's extract was an unfailing specific. Numerous testimonials were given of persons who had been cured by these remedies, and if what these gentlemen stated was true, there really was a remedy for this lamentable disease. It seemed to him

(the coroner) a pity that these remedies were not better known; and he believed it to be the duty of local boards and other public bodies—for the matter was of national importance—to test these remedies, and if they were found to be effectual, then government ought to purchase the recipes, and make them public, for the benefit of the people at large. He might add that his colleague, Mr. Edge, had received communications of a similar kind, and any one who wished for further information could apply either to him (Mr. Price) or to Mr. Edge. Of course, with excellent intentions, the coroner has talked a good deal of nonsense on a very grievous and serious subject. There is no existing or known remedy for hydrophobia; and, though hundreds of secret and avowed remedies have been brought forward, and large prices have been asked and paid for them, they have all proved to be the kind of frauds which secret remedies have proved to be, without one known exception, in the history of the world. Warm baths, Turkish baths, vapour baths, woorara, herbs, drugs, and vapours, have been tried with a persistence and enthusiasm which are yet far from exhausted; but all have hitherto been attended with a common failure. It should be the duty of a coroner or any other public officer, before he makes public statements on an important subjects, to refer to some ordinary text-book of authority. From any such he would have learnt that his wisest course was to impress upon all who are bitten by animals which are suspected of rabies, to have recourse to instant cauterisation or excision of the wound, and to trust to nothing else, for nothing else is trustworthy—certainly not the proposed nostrum of some village quack.

CHOLERA IN NUBIA.

A LETTER under date of August 27th, from Berlee, on the Nile, states: The cholera has passed this way. The first intimation of its approach was telegraphed from Kassela, an outbreak having occurred at Catmea, a neighbouring village. Leaving Kassela untouched, it created havoc at Abrate and Goyregiab, finally reaching Berlee. Here the mortality has been confined to the black population, of whom about seven hundred have died in ten days, the period mentioned being the ordinary duration of the epidemic at all places where it has been felt.

PRECAUTIONS AGAINST CHOLERA.

THE Thames Shipping Inspection Committee, formed to unite the riparian districts of the Thames in the prophylaxis of cholera, have dissolved, their action being superseded by the new civic authority under a special clause of the Public Health Act. The *Rhein* and the *Dreadnought* were made ready for all emergencies, and careful precautions were taken to isolate any case of cholera which might be brought into port. The total expenses of the Committee did not amount to £100. Thanks were voted to Dr. Meymott Tidy and to Mr. Harry Leach, who have acted as advisers to the Committee.

MEDICAL OFFICER FOR ST. GEORGE'S.

DR. CORFIELD, the able and accomplished medical officer for Islington, is in the field for the vacant appointment of medical officer of St. George's, Hanover Square. In Dr. Corfield are united thorough chemical acquirements, and all the practical and theoretical knowledge which go to make up the complete science of sanitation. To the solid basis of a brilliant University career, in which he was distinguished in mathematics, chemistry, geology, and other branches of natural science, he has added fruits of laborious and ably conducted investigations into the disposal of sewage, in connection with the Committee of the British Association, of which he is the official reporter; into the sanitation of towns and villages for the medical department of the Government; and into the theory and science of sanitation, as Professor of Public Health at University College. As medical officer of Islington, Dr. Corfield has already shown that he well understands how to fulfil such duties with tact and judgment, as well as with skill and intelligence. It is rare that a candidate for such an office presents himself bearing such high credentials from the most esteemed authorities, and so fully equipped at all points. Books of testimonials may be very voluminous and yet of little value in the eyes of those who are able to read between the lines. We have never seen more weighty and flattering testimonials than those which Dr. Corfield is able to produce.

THE ALICE HOSPITAL.

HIS MAJESTY the Emperor of Germany has been pleased to confer the Order of the Prussian Crown of the third class on Dr. Mayo, Fellow of New College, Oxford, formerly Staff Surgeon-Major and Director of the Alice Hospital at Darmstadt; and the same order, of the fourth class, upon Mr. J. C. Galton, M.A., formerly staff-surgeon in the same hospital; who are also, together with Mr. H. Rundle (formerly staff-surgeon), Dr. H. W. Page, Dr. R. Cory, Dr. W. E. Buck, Mr. H. E. Jackson, and Mr. W. E. B. Atthill (all former members of the staff of the hospital), to receive the war-medal for non-combatants. The first five named have, moreover, received the Hessian Cross for medical service (Sanitätskreuz); and Dr. Mayo, in addition, the Hessian Order of Philip the Generous and the Bavarian Cross of Merit. It will be remembered that the Alice Hospital was established in 1870 by the English Staff, with the aid of funds furnished by the Red Cross Society; and when that Society gave it up it was continued by the German Government as a State hospital, the management being left in the hands of the English Staff. About 700 Germans and 250 French sick and wounded soldiers were treated at the hospital. The number of deaths was 51. The hospital was in existence about nine months.

TRANSMISSION OF CHOLERA.

THE Imperial Medical Society of the Caucasus, at a meeting held on the 16th of August last, elected Mr. J. Netten Redcliffe, of the Local Government Board, a corresponding member of their society, in consideration of his report on the recent diffusion of cholera in Europe. This report was presented to Parliament last session, together with a letter from Mr. Simon, calling attention to its character and importance. Its special interest depended upon the suggestion that a new route is in rapid course of development for the conveyance of Asiatic cholera into Europe, and that the continental infection which attracted notice here last year, but which seems to have commenced two years previously, probably entered Russia by this at that time comparatively undeveloped channel of intercourse. The route referred to as one of vastly increased and increasing traffic is that which, traversing Transcaucasia from east to west, and having Tiflis at about its mid point, brings the Black Sea into intimate relation with the Caspian and with northern Persia. Over the western half of this route a railway is in actual operation, and the line for the eastern half is now in course of construction. The honour conferred on Mr. Radcliffe by the society may be taken as evidence of the value which the medical profession in the Caucasus sees reason to attach to his suggestion. We are not disposed to make light of it; but continental authorities treat it with ridicule. The facilities which railways afford for cleanly and rapid conveyance are such that, if the pilgrims could be conveyed by rail, cholera might be kept pretty well at arm's length.

AID TO THE SICK AND WOUNDED.

IN the report of the German Aid Societies for tending the sick and wounded, just issued, to which we last week referred, much minute and comprehensive information is given respecting the societies' depôts in that part of France occupied by the French armies, their various hospitals all over Germany, the steamers they chartered, and the sanitary trains they fitted out for ambulance purposes. An idea of the magnitude of the operations of these societies may be formed from the fact that the entries of sick and wounded soldiers on their books stand at 509,837 men, of whom 60,000 were French. The total income of the central committee at Berlin has been £2,735,671. Germany contributed £1,541,101; the rest of Europe, £74,750, of which £26,200 came from Great Britain and Ireland; America, £214,000; Asia, £17,200, of which £1,580 was contributed by the British-Indian

army; and Australia, £6,110. The donations sent direct from abroad to different societies amounted to £58,775. The grand total in cash was £1,946,798. The value of the donations in kind amounted to £788,873. The subscriptions of the German central committee in London exceeded £40,000. The German gymnastic society of London alone collected close upon £2,000, and as much more in the shape of parcels in kind. After defraying all necessary expenses, the societies find themselves the possessors of a balance of £52,200. These aid societies intend to preserve their formation and improve their internal arrangements, so that they may be the better able in future to alleviate suffering without waste of time and labour, should such a lamentable necessity ever arise. They propose during peace not only to perfect their organisation, but to train as great a number of nurses and sick-bearers as possible, giving them, at the same time, some elementary or surgical instruction to be brought into requisition when medical aid is not at hand, in cases of accident, etc., to look after the sanitary condition of their respective towns, to counteract epidemics by giving advice as to diet, and so on. In the report will be found much interesting matter respecting the English, American, Belgian, Swiss, and other aid-societies, which did good work on their own account.

SCOTLAND.

THE ADMISSION OF LADY MEDICAL SUDENTS TO THE EDINBURGH INFIRMARY.

By a majority of two to one, the managers have decided to remit the question of the admission of lady medical students to the practice of the Edinburgh Royal Infirmary to a committee, to report "whether, and to what extent, it is practicable to give instruction to females within the wards of the Infirmary." The minority desired that arrangements should at once be made for the instruction of lady students.

MEDICAL EDUCATION OF WOMEN.

A moiety of the £1,000 recently promised by Mr. Walter Thomson to the funds of the Committee for securing a complete Medical Education of Women in Edinburgh has been forwarded to the Executive Committee; (1) in payment of expenses that have to be incurred in prosecuting the claim of women to the highest medical education obtainable in the University of Edinburgh and elsewhere; and (2) in assisting or encouraging lady-students who have been subjected to extra charges by the obstacles interposed in Edinburgh.

IS THERE A CATO AMONG TEA-MERCHANTS?

Out of twenty-seven samples of black tea at all prices collected in different parts of Glasgow, six (all high-priced) were genuine, twenty were more or less adulterated, and one, which had been forwarded to a Glasgow merchant from London as a sample of cheap tea, contained, as far as could be discovered, not a single leaf of genuine tea. Of eight specimens of green tea examined, every one was more or less painted or adulterated. Such is the result of analyses made for the Editor of the *North British Mail*. It was said by South that no man ever offended his own conscience, but that, first or last, it was revenged upon him for it. We shall willingly admit that tea-merchants are possessed of a conscience, and shall believe that the natural result will happen. We should be much more pleased, however, to have undoubted evidence that the police authorities of Glasgow have contributed towards the avenging process.

THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

At a meeting of this Corporation, held on the 7th inst., the following office-bearers were elected for the ensuing year, viz.:—*President*, Eben Watson, M.D.; *Visitor*, George Buchanan, M.D.; *Treasurer*, John Coats, M.D.; *Librarian*, J. D. Maclaren, M.D.; *Vaccinator*, Hugh Thomson, M.D. *Councillors:* The President, *ex officio;* the Visitor, *ex officio;* J. G. Fleming, M.D.; Robert Scott Orr, M.D.; H. R. Howatt, M.D.; James Steven, M.D.; Andrew Fergus, M.D. *Board of Examiners:* R. S. Orr, M.D., Medicine and Materia Medica; W. Leishman, M.D., Midwifery and Medical Jurisprudence; W. Lyon, M.D., Surgery and Surgical Anatomy; E. Watson, M.D., Anatomy and Physiology; J. Morton, M.D., Surgery and Surgical Anatomy; R. Perry, M.D., Chemistry; P. A. Simpson, M.D., Midwifery and Medical Jurisprudence, and Medicine and Materia Medica; A. Lindsay, M.D., Chemistry; G. Buchanan, M.D., Anatomy and Physiology. *Examiners in Arts:* J. Coats, M.D.; J. Steven, M.D.

IRELAND.

THE PARLIAMENTARY SESSION OF 1872.

The following are the Acts of Parliament passed in the session, the provisions of which extend to Ireland, and which affect the medical profession. 1. The Adulteration of Food, etc.: To amend the law for the prevention of adulteration of food and drink, and of drugs, cap. 74.—2. Boundaries of Counties: To amend the law relating to the defining of boundaries of counties and other divisions and denominations of land, cap. 48 (this will probably affect rural sanitary or dispensary districts).—3. Local Government Board: For constituting a Local Government Board in Ireland (in lieu of Poor-law Commissioners) concerning the public health and local government, cap. 69.—4. Superannuations: To amend the Act, 28 and 29 Vic., cap. 26, as to superannuation-allowances to officers of unions in Ireland, cap. 89. We have already directed the attention of our readers to each of these Acts from time to time during their progress through Parliament.

MEDICO-PSYCHOLOGICAL ASSOCIATION: IRISH BRANCH.

On the 8th inst., a meeting of the ordinary and honorary Irish members of this Association, was held in the King and Queen's College of Physicians, Dublin, "with the view of organising an Irish branch of the association to hold stated meetings during the year, as in England and Scotland, and for the transaction of general business connected with the interests, more especially of the Irish associates." Dr. Duncan, of Finglass, presided, and there was a large number of other medical gentlemen present. Dr. R. Stewart, Belfast, observed that at the annual meeting of the Association, held in Edinburgh, the question was mooted as to the advisability of having quarterly meetings in Ireland. They had consequently agreed to have a beginning, and for that purpose the present meeting had assembled. If there were such meetings from time to time, the members of the profession would be brought together in friendly intercourse, and, by talking together and comparing notes, a beneficial result would be produced, not merely on themselves, but for the good of the afflicted class committed to their charge. He thought there were a sufficient number of members present to form the nucleus of an efficient society for the purpose indicated. The chairman said that no doubt they were late in Ireland in commencing quarterly meetings, but it was only recently they were instituted in England, and still more recently in Scotland. He had no doubt that the proposed meetings would be a source of pleasure and profit, while the papers that would be read, and the subsequent discussions that would take place, would be highly creditable to the Irish branch of the Association. They would find that, the meetings once established, a large number of the profession would join them. After a long discussion, in the course of which all the gentlemen present warmly concurred in the desirability of having the proposed meetings, it was moved by Dr. Lalor, seconded by Dr. Eustace, and resolved, "that we, the members of the Irish branch of the Medico-Psychological Association, agree to organise ourselves for the purpose of holding stated meetings for the discussion of scientific and other questions connected with our speciality in the same way as our brethren in England and Scotland have been in the habit of doing."

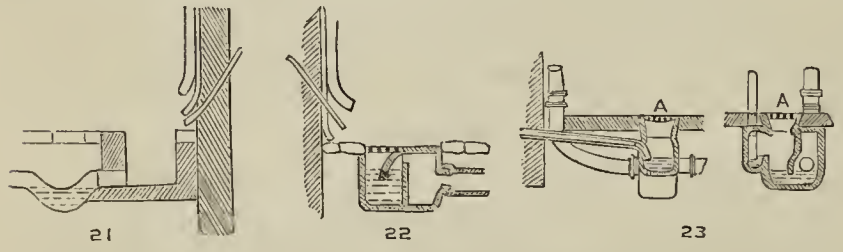
REPORTS
ON
SANITARY ENGINEERING IN HOUSES, HOSPITALS, AND PUBLIC INSTITUTIONS.

By WILLIAM EASSIE, C.E.

II.

Ventilation and Disconnection of House-drains from the Sewer, etc.

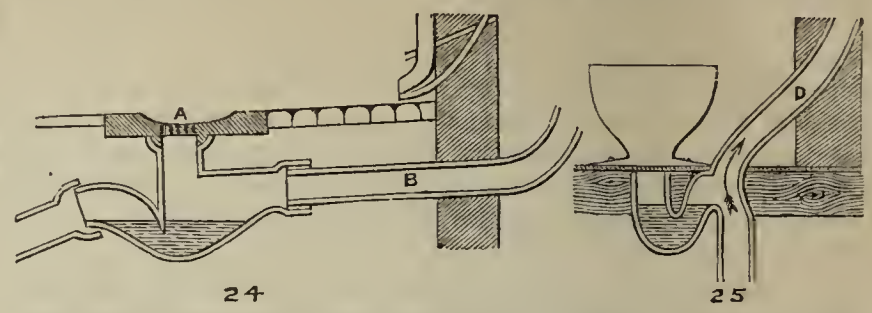
SUPPOSING any of the drain-pipes mentioned in the former article to have been carefully laid and with proper fall from the sewer up to the outside of a building, the next question to consider is, how best to convey into them the various *effete* matters of the household. The common practice is to run the pipes into the house, and join the waste-pipes directly into them; but the consequence of this is, that the sewer-air, when compressed from any cause, forces the hydraulic seals of the traps, and disperses itself over the house. One safe plan, therefore, is to disconnect the drain-pipes inside the house from those outside the house by building over the channel of conveyance, somewhere close to the exterior side of the wall, a grid or grating, and so opening the drain at that point to the light of day. By such a procedure, the passage of the sewer-gases into an establishment is effectually prevented.



21 22 23

A simple system of disconnection is the constructing of a small and shallow square well at the side of the house, as drawn at Fig. 21; and the fixing between it and the drain proper of a syphon which will prevent the exit of the sewer-air. If sewer-gas should bubble up and escape, it would soon be dissipated in the open air. At about a foot or two above this well-hole, the rain-water pipes, and the sink, bath, and lavatory wastes are made to deliver their contents; and it is optional whether a grating be affixed to the top of the well or not. It is found in practice, however, that an open drain-ventilator of this description very close to a house sometimes proves a nuisance. Another method of achieving the same end, and avoiding this, is to terminate these pipes about the same height from the ground, and cause them to spout their contents over such a trap as that drawn at Fig. 22. This trap is furnished with a water-seal; that is, a small body of water is interposed between the air of the sewer and the respirable atmosphere. A syphon like that drawn on the sewer-side of the ventilating well (see Fig. 21) is in this case not absolutely needful, but it would be an additional precaution.

There is a ready-made article, known as Mansergh's ventilating trap, which comes sufficiently near. for most practical purposes, to what is wanted; and this is sketched in section and elevation at Fig. 23. For instance, a sink-pipe is made to terminate over a small trap on an upper shelf of the main body of the trap. The drain-pipe from the sewer leads into a lower and larger trap; and opposite this is a ventilating pipe, of about four inches diameter, which runs up the side of the wall to the top of the house, and takes any excess of sewer-gas which may be in the drains between the trap and the sewer. Should, however, the sewers become overcharged by the tide or by heavy rainfalls, and any sewer-air force this lower water-trap, it will at once rise to the open grating at A, which is over the space between the drain-pipe and the sink-pipe or other waste-pipe, and be scattered abroad. This ventilating medium of Mr. Mansergh's is to be trusted to, provided that the rain-water pipes are not made to act as the sole ventilators. The pipe which enters the trap is needed for ventilation alone; and, if the rain-water be required to enter the same gulley, the whole trap, which is of earthenware, should be bodily lowered just so much as will allow the rain-water pipe to be bedded in the pavement as far as the grating over the central chamber of the trap. It is a fallacy to rely upon the rain-water stack-pipes to properly ventilate the drains; for, when most wanted—viz., after a storm—they are performing their own specific duties.



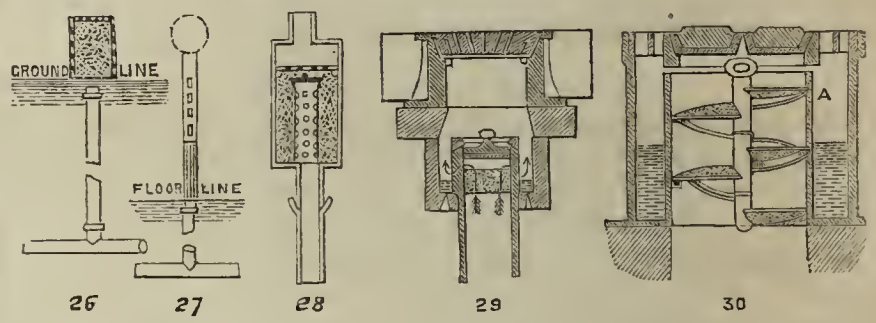
24 25

Mr. Molesworth has lately invented a trap which is worth a description, as it is about the only other article in the market which carries out this kind of drain-ventilation. A sketch of his arrangement is given at Fig. 24.

Here the rain-water pipes and smaller waste-pipes and overflows empty themselves so as to run through the grating at A. The fouler sink and scullery wastes are supposed to be brought into the drain by the pipe B. The sewer-air is prevented from entering the sink-pipes and so passing into the house, by the water-trap; and even if this water-seal were forced, owing to a sudden change of temperature in the main drains, or any like cause, the foul air which escaped would rise through the large grating at A and be harmlessly distributed. Fig. 25 exhibits his method of ventilating the soil-pipe of the water-closets. A sigmoidal bend is attached to the base of the closet as usual, and from this there rises up an air-pipe of wide diameter D to a few feet above the eaves. This pipe ventilates the drain inside the point of disconnection.

Deodorisation of House-Drains.

Sufficient has been said concerning disconnection; but, as cases will continually occur in which the escape of any smell whatever would prove noxious, it will be necessary here to point out how the house-drains can be deodorised as well as ventilated.



26 27 28 29 30

An excellent plan would be to fix somewhere above the line of drain-pipe between the sewer and the place of disconnection, a square perforated box containing charcoal, which would purify the mephitic gases as they were formed, and prevent them reaching the house, or even the back yards of the house. A protruding ventilator of this description is sketched at Fig. 26.

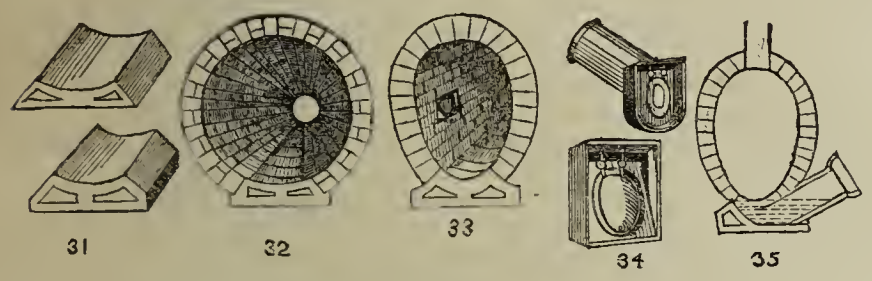
In the case of shelving terraces, or of houses built at different levels, it would not be difficult to understand how the ventilating continuations of the soil-pipes of the lower placed houses might taint and perhaps dangerously infect the atmosphere of the houses above. To avoid this, the top of the ventilating pipe could be fitted with a ventilating shaft, such as is shewn at Fig. 27, which is a hollow column provided with gratings, upon which are placed canisters of charcoal or other disinfectants. The above two methods of deodorising the drains were lately patented by Dr. Taylor.

It must be understood that, as Dr. Stenhouse did not in 1854 protect by letters patent the use of charcoal for this purpose, patents which provide for the slow combustion of the sewer-gases by charcoal, can simply monopolise peculiar methods of exposing that material. Another registered design for the end of the soil or ventilating pipe is given at Fig. 28, the invention of Mr. Lidstone. The space around the central perforated chamber, which is equal in diameter to the ventilating pipe, is packed with charcoal, and, in consequence, the ascending air of the drains is purified before it can emerge into the exterior atmosphere.

In the grounds appertaining to a large public building, where from the very length of the drains there must be a generation of some foul gas, a ventilating pipe and deodorising arrangement become in most cases necessary; such a contrivance is sketched at Fig. 29, which is a view of the drain-pipe ventilator of Messrs. Brooke and Sons, largely adopted—especially in the north of England. A much larger venti-

lator, suitable for erection over a square shaft, and very well adapted to the larger drain-pipes, is given at Fig. 30, and here the charcoal is laid upon a portable spiral tray. The rain or road-water enters in at the annular gratings outside, and when the grit box is full, *i. e.*, as high as A, it runs away down the small square trough underneath the shelves of tray and so into the sewer. All the gases rising from the sewer are compelled to pass these charcoal barriers. It is impossible, also, for water to get at the charcoal and so expel the oxygen there.

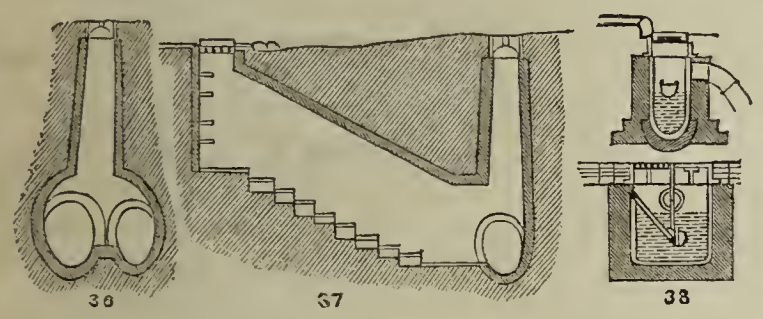
The main sewers are formed either circular in shape, as drawn at Fig. 32, or egg-shaped, as at Fig. 33. In both cases, it is usual to lay in the bottom with what are called inverts. These are sketched at Fig. 31, and are shown in their places at Figs. 32 and 33. Where the drain-pipes of a house enter the main sewer, a flap-trap similar to Fig. 34 is fixed in the sewer-walls. A square one, for instance, is shown in the sewer at Fig. 33. These flaps swing open to allow the house-drains to empty themselves, and close again to shut out from the drain-pipes the foul air of the sewers.



31 32 33 34 35

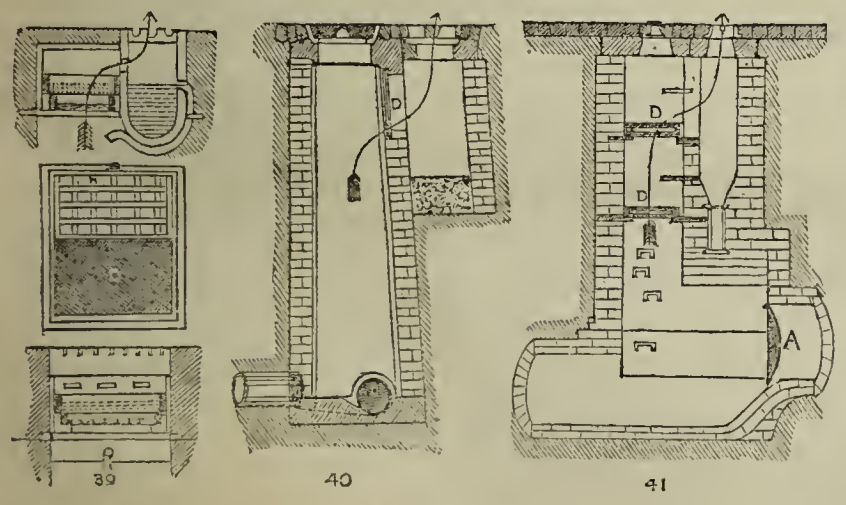
Sewers.

A patent mode of ventilating the sewers, the invention of Mr. T. Walker, and one largely adopted in Birmingham, is drawn at Fig. 35. A peculiarity of the system is, that the earthenware drain-pipes lead into the sewer at the bottom, and not half-way up, as is usual. Moreover, instead of a flap-trap, there is a water-trap. The ventilating pipe is a very good feature in the arrangement, whatever might be said about the liability to choking up at the entrances to the tributary drains.



36 37 38

It might be useful to explain that, when two sewers join together, in the direction of the flow of the sewage, as they should always do, what is called a *bell-mouth* is formed, with a ventilating shaft up to the road-way. One description of these junctions is drawn at Fig. 36. There are also side entrances into the sewers; and one of these flights of steps, which are arched over, is exhibited at Fig. 37. Two sections, also, of a common roadside gully are given at Fig. 38. These are fixed in the road beside the kerb of pavement, and, as will be noticed, are so constructed that they will intercept the road-grit, and so prevent the filling up with gravel, etc., of the space left for the water.



39 40 41

The sewers are deodorised and disinfected in many ways. A view of the apparatus which is inserted in the crown of some sewers, in the middle of the street, is sketched in plan and sections at Fig. 39. The charcoal-trays can be observed in plan at D, and in section in the sketches above and below. Fig. 40 represents the common method of ventilating and disinfecting the larger pipe-drains of the streets; and here the charcoal screen is placed in an upright position (see D). The sewers are similarly treated, but the movable filtering screens are laid across the shaft, as drawn at Fig. 41. When there is a break in the sewer, a flap is fixed at A; and this prevents, or is intended to prevent, the foul air from reaching the higher districts of a town. The sketches Figs. 40 and 41 were first prepared by Mr. Rawlinson, and are copied from an official pamphlet of his.

The foregoing description of the drain-pipes and sewers will probably be deemed sufficiently explanatory; and we will therefore, in the next article, point out the most useful kinds of traps.

ASSOCIATION INTELLIGENCE.

YORKSHIRE BRANCH.

THE autumnal meeting of this Branch will be held at Scarborough, on Tuesday, October 22nd.

Gentlemen who purpose attending the meeting, or bringing forward communications, are requested at once to communicate with the Local Secretary.

W. PROCTER, M.D., *Honorary Secretary.*

York, October 2nd, 1872.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE autumn meeting of this Branch will be held at Pontypool, on Friday, October 25th; T. J. DYKE, Esq., F.R.C.S., President, in the Chair.

Members who are desirous of reading papers, etc., are requested to communicate their intention to one of the Secretaries, without delay.

ANDREW DAVIES,
ALFRED SHEEN, M.D., } *Honorary Secretaries.*

September 25th, 1872.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE annual meeting will be held on Friday, October 25th, at the Midland Institute, Birmingham. The Chair will be taken by Mr. HOUGHTON, at 3 P.M.

T. VINCENT JACKSON, *Honorary Secretary.*

Birmingham, October 14th, 1872.

CUMBERLAND AND WESTMORLAND BRANCH.

THE autumnal meeting of the above Branch will be held at the Green Dragon Hotel, Workington, on Friday, November 1st, instead of October 30th, as previously announced; T. S. CLOUSTON, M.D., President, in the Chair.

Gentlemen intending to read papers or cases, or be present at the dinner, are requested to give notice to the Secretary as early as possible.

HENRY BARNES, M.D., *Honorary Secretary.*

Carlisle, October 16th, 1872.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEDICAL MEETINGS.

THE autumn meeting of the above district will be held at the Norfolk Hotel, Arundel, on Tuesday, October 29th, at 2.45 P.M.; Dr. TYACKE, of Chichester, in the Chair.

The dinner will take place at 4.30 P.M.

Members who are willing to read papers, or bring forward cases, are requested to communicate with the Honorary Secretary *at once*, in order that notice of the same may be inserted in the circular convening the meeting.

WM. J. HARRIS, *Honorary Secretary.*

13, Marine Parade, Worthing, October 14th, 1872.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the session will be held at the College Green Hotel, Bristol, on Thursday evening, October 31st, at 7 o'clock; T. G. STOCKWELL, Esq., President, in the Chair.

E. C. BOARD,
R. S. FOWLER, } *Honorary Secretaries.*

Bristol, October 1872.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 8TH, 1872.

T. B. CURLING, F.R.S., President, in the Chair.

NON-PURULENT CATARRH OF THE MIDDLE EAR. BY W. B. DALBY, ESQ.

MR. DALBY commenced by stating that the object of the communication was to direct attention—firstly, to the several conditions under which the Eustachian tubes become so obstructed as to prevent the free passage of air from the pharynx into the tympana; secondly, to the various effects which follow catarrh of the tympana; and thirdly, to the treatment adopted for these affections of the ear. The notes of cases treated at St. George's Hospital and elsewhere, extending over a period of three years, formed the basis of the paper, and there was an appendix containing an abstract of twenty cases which were considered typical of the disease under notice. When the Eustachian tube only was involved, the appearances of the tympanic membrane most frequently noticed were—an increased inward curvature, unusual prominence of the short process of the malleus, and a tilting inwards of the handle of this bone. The chief element in treatment was regular inflation of the tympanum, on Politzer's method, until the catarrhal condition had subsided, when the hearing was completely restored. In the next class of cases—viz., where the mucous membrane lining the tympanum was the seat of catarrh—the changes noticed on examination of the tympanic membrane were alterations in curvature, opacities, thinning of the membrane generally as well as in circumscribed spots, and calcareous degeneration. The author considered that these should be regarded merely as the effects of catarrh, and not, as in the classification adopted by Mr. Toynbee, separate diseases. Such changes were not of themselves the cause of deafness; the origin of this would be found to be behind the membrane, in the form of accumulations of mucus, and it was to the softening and removal of these that the treatment must be directed. With this view the injections of alkaline solutions into the tympanum was practised, either by means of the Eustachian catheter, or forced into the cavity of the tympanum with the aid of a Politzer's bag, while the patient performed the act of swallowing—some of the fluid thus used having previously been injected from a glass syringe into the inferior nares of the side to be acted upon. In a large proportion of the cases very considerable improvement in hearing followed; but the author stated that in many there were no appreciable results, for as it was impossible to judge of the precise changes that had taken place behind the tympanic membrane from its appearances, it was difficult to predict what might be the effect of treatment. In some instances an incision was made into the membrane, and the mucus evacuated through the cut by passing a stream of air through the Eustachian tube. Very good results followed this proceeding, but it was only done where more simple means had failed, and there was ample evidence of the mucus being in a fluid state.

Mr. HINTON said that perforation of the membrana tympani was much more frequent in children than was generally supposed. When he first turned his attention to aural surgery, he soon noticed that affections of the ear occurred in children very frequently in ways not suspected. He did not refer to cases attended with cerebral disease, but to those which, commencing with mild symptoms, were liable to go on to deafness. In some of these cases of deafness, perforation of the tympanum took place without pain, and soon healed. He had remarked in some cases a tendency to the accumulation of inspissated mucus behind the perforation. The consideration of cases of catarrh of the ear had led him to conclude that it was desirable that the tympanic membrane should give way. Deafness was sometimes apparently dependent on nervous irritation, rather than on accumulation of mucus; and he believed that it diminished when the tympanic membrane became perforated. He had observed also that accumulations of mucus in the tympanum sometimes became sources of irritation to the nerves not only of the ear, but of other parts, causing ordinary catarrh. He referred to the case of a boy who for four years had been subject to attacks of deafness, which could not be arrested. At last, attention was directed to a bulging of the membrana tympani; an incision was made, and fluid escaped. The deafness did not return for a year, when an incision was again made, and was followed by complete recovery. As to the indications for incision, he believed that it might be safely abstained from in the most recent cases. In comparative experiments on such cases of deafness, affecting both ears, he had not seen greater improvement in the incised ear than in the other. The quantity of thickened mucus discharged through an incision in the membrana tympani was sometimes very remarkable. Sometimes, after its removal, the deafness was removed, and returned in a day or two. It seemed as if the mastoid cells became filled up, and that masses of thickened mucus were discharged into the ear, so that they could be removed from day to day.—Mr. HARVEY asked if any of the cases where incision was made had been seen six or twelve months afterwards. He had not seen one case which would give him reason to perform incision in non-purulent catarrh. Nothing had been said with regard to constitutional treatment. Many cases of non-purulent catarrh of the tympanum recovered spontaneously; and he had met with persons who had complained of the results of incision. He would now perhaps be induced to try incision; but he could not imagine it justifiable in cases of non-purulent catarrh. He asked if in any of the cases there had been syphilis or rheumatism.—Mr. THOMAS SMITH could confirm the observations of Mr. Hinton as to the frequency of tympanic catarrh and perforation in children. In some cases, the symptoms appeared and went on to perforation in the course of four hours; and in four days the perforation was healed. He did not agree with Mr. Dalby as to the difficulty of healing pathological perforations. He had seen the good result of incision and removal of mucus in chronic cases.—Mr. HULKE asked how incurvation of the membrana tympani could be compatible with distension.—Mr. CHARLES HAWKINS observed that Sir Astley Cooper had recommended puncture of the tympanic membrane, but, he believed, did not follow the practice.—Mr. DALBY had described as pathological those perforations which took place slowly, from pressure of the accumulated mucus. He was familiar with cases where perforation came on rapidly; but the disease here was purulent catarrh. Most of his cases had been under observation from six to twelve months. He knew of three cases only with syphilitic history. Sir A. Cooper proposed perforation for obstruction of the Eustachian tube, but found that it was not useful, and abandoned it.

OVARIAN DROPSY OPERATED ON DURING ACUTE PERITONITIS. BY RICHARD T. TRACY, M.D., MELBOURNE.

(Communicated by T. SPENCER WELLS, F.R.C.S.)

IN this paper the author gave an account of a patient aged 31, married five years, the mother of two children: she had noticed the tumour fifteen months. When first seen, she was in a hectic condition, with a rapid and feeble pulse, and suffering great pain from the enormous distension of the abdomen. Some relief was at once obtained by tapping and drawing off two quarts of thick colloid fluid (the tumour was multilocular). After the tapping, she was removed to the hospital, and carefully examined. She measured thirty-eight inches in circumference, nine inches from the ensiform cartilage to the umbilicus, and eight and a half inches from the umbilicus to the pubes. Her stomach was very irritable, and she had to be supported by nutrient enemata. Her temperature was 102 deg.; pulse 120; the abdominal tenderness extreme. As it was evident she would soon sink unless something could be done to relieve her, ovariotomy was performed on March 19th. The tumour was multilocular, semi-solid, and almost universally adherent; the peritoneal surface was deeply congested, much thickened, and full of flaky lymph, which was removed in large quantities. The pedicle was secured with a clamp, and the wound closed by deep silk sutures and superficial ones of horsehair. Two hours after the operation, there was a considerable fall in the temperature. On the fourth day there was a large escape of gas and fetid fluid from the wound, and from this time recovery was rapid and finally complete. The author expressed his opinion in favour of bichloride of methylene as an anæsthetic, and recommended the extraperitoneal treatment of the pedicle by the clamp wherever it was practicable.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 11TH, 1872.

SIR WILLIAM GULL, Bart., M.D., President, in the Chair.

Acute Rheumatism with Cerebral Symptoms and High Temperature treated unsuccessfully by Cold Affusion.—Dr. SOUTHEY related the case of a well built man aged 35, of highly nervous temperament, in the habit of drinking wine and beer, but not intemperate. This was his first attack of acute rheumatism. The rheumatic articular inflammations were not established until after he had been ailing for fourteen days, with a temperature ranging between 100 deg. and 102.5 deg. The rheumatic symptoms were well marked. The invasion of several joints with swelling and redness, the tongue, the pulse, and the sweating were highly characteristic. On the eighteenth day of illness pericarditis set in, the joint-inflammation suddenly subsided, and delirium of a peculiar kind, preceded by head-pain and obscurity of vision, presented itself; the temperature now ranged between 104 deg. and 105

deg. in the axilla for ten days, while twelve grains of quinine, from six to ten ounces of brandy *per diem*, and various opiates, as well as chloral, were administered with little sedative effect. Bronchial symptoms now ensued, with great failure of power, although food and stimulants were freely taken. Delirium, akin to coma vigil, still continuing, and his temperature marking 105 deg., the patient was immersed in a bath quickly cooled down from 96 deg. to 71 deg. The effect was immediate dissipation of delirium with reduction of temperature to 100.5 deg., followed by short repose; but, the bodily temperature quickly rising again, he was kept wrapped in a wet sheet exposed to the air of the room at 65 deg. for an hour; after this his temperature fell and remained between 101 deg. and 102 deg. for two days: some rest was now obtained, the pulmonary symptoms relieved, and the respirations fell from 36 to 28 per minute. Subsequently, the wet sheet was employed on four occasions, as often as three times in the twenty-four hours, with invariable relief of the delirium and subsultus. From the eighteenth day of his illness up to the fortieth, quinine was given in doses varying from twelve to twenty-four grains in the twenty-four hours, as well as brandy, from four to ten ounces, without noticeable good or ill effect. On the thirty-third day of his illness his temperature fell spontaneously to 100.5 deg.; he was then quite rational for twelve hours, and there was a slight return of the rheumatic pains in the joints, which lasted, however, only for a few hours. The patient gradually sank with low broncho-pneumonic symptoms on the forty-second day of his illness. The *post mortem* examination revealed that swollen condition of the glandular viscera ordinarily discovered after all acute febrile diseases, but no tubercle anywhere in the body, and no apparent mischief in the brain or its membranes. The author of the communication considered the case one of cerebral rheumatism, and thought that the cold-water treatment had prolonged life and relieved the delirium.—The PRESIDENT remarked that the question as to whether the cold affusion produced bronchitis or not in the present and in other cases was important.—Dr. BUZZARD thought that if the man were a drunkard, he was perhaps the subject of delirium tremens complicating the rheumatic attack; and referred to such a case in which the temperature did not rise above 102 deg. Besides, as in the present case, he had often heard of drunkards that they "had weak heads and could not stand stimulants."—The PRESIDENT, who had seen the patient in consultation with Dr. Southey, thought that the typhoid condition present pointed to probable intemperance.—Dr. SOUTHEY remarked that, so far as he knew, and he had had every means of knowing the habits of the patient, he had no reason to believe that the man was intemperate. At the same time, he had been in the habit of taking beer in the morning to breakfast.—Dr. WILSON FOX pointed out the comparatively low temperature at which the affusion was employed. He thought that strong measures should not be used unless nature appeared to be unable to bring about a cure. He had often seen cases of acute rheumatism with a temperature of 105 deg. recover without the cold water treatment. He thought it desirable not to commence the application of cold water until the temperature was sufficient *per se*, say above 107 deg., to threaten a fatal issue. Cerebral complication alone was not fatal. He believed that a temperature of 106·5 deg. had been naturally recovered from. He had seen one patient die from exhaustion after a temperature of 106 deg. had gone down. With regard to the bronchial affection, he thought that it should be looked upon as a natural phenomenon, at least in some cases.—Dr. HERMANN WEBER thought that Dr. Southey's case differed from those for which Dr. Fox had applied cold baths and affusion. He considered it one of cerebral rheumatism, not fulminating, as the high temperature cases did, in heat-stroke. He had used the wet sheet with advantage in cases of cerebral rheumatism.—Dr. THEODORE WILLIAMS had tried the cold bath in phthisis with pyrexia which did not give way to drugs. The increased temperature was due to hectic. In three cases there were no signs of bronchitis. He put the patients into a bath at 85 deg., and reduced it to 72 deg. They were kept in the water from twenty-five to forty minutes.—Dr. SOUTHEY, in reply, said that the cold sheet always relieved the patient, and produced sleep. The bronchitis was, he thought, not brought on by the cold application.—Dr. DOUGLAS POWELL said it would be interesting to know what was the exact effect on the joint-affection.—Dr. HERMANN WEBER said that in the cases which he had seen the joint-affection had become very slight before the temperature rose; and in one the joint-affection recommenced to a slight degree after the cold bath.—The PRESIDENT shortly detailed the case of a girl with a temperature of 107 deg., who was put into a bath at a temperature of 90 deg., and cooled down to 47 deg. The temperature of the patient was reduced to 97.5; and in the bath her mind became clear, the conjunctivæ much less injected, and the joint-affection diminished. Sir William Jenner, who attended the case with him, did not expect to see the good effect on the joints, but here the joint mischief had already begun to disappear. How far might this high temperature be due to some incidental influence of the nerves, as in tetanus.

Dr. GREENHOW also read elaborate notes of an interesting case of Acute Rheumatism with high temperature unsuccessfully treated by cold water.—Dr. WILSON FOX said that there were mainly two classes of cases; one with immediate rise of temperature, and with slow reduction of pyrexia afterwards; and another class with long continued high pyrexia. He had had one of the latter class which had not ended fatally. He thought it probable that the cold was useful to reduce hyperpyrexia, while the rest should be left to nature or other remedies. He considered it to be a moral duty to employ the cold bath when the temperature was above 107 deg. He thought that after the reduction of the hyperpyrexia it would be well to see to what the subsequent rises came.—Mr. HULKE said that the process of bathing the patient had always seemed to him a very exhaustive one. He thought cold air would be more convenient and less exhaustive. In Dr. Southey's case, small doses of quinine were given; but he had seen a temperature of 108 deg. go down, in surgical fever, by means of scruple doses of quinine.—Dr. ANSTIE remarked that nothing under a scruple to two drachms, repeated, had been found to lower high temperatures.—Mr. COOPER FORSTER had given scruple doses of quinine every four hours in pyæmic fever, with marked effects on the pyrexia.—Mr. LAWSON had found, after the effect of quinine had been shown, that the result was the same; the patients died. He thought that the temperature, after the reduction by quinine, rose again; but of this he was not sure.—Dr. GREENHOW, in reply, said that no fatigue was produced in the patient, as he was lifted into the bath by means of the sheet on which he lay; the patient enjoyed the bath. Quinine was tried in his patient's case in scruple doses, which produced deafness for several days. He had not found quinine to produce any permanent effect on the high temperature of medical diseases.

LOCAL GOVERNMENT
AND
SANITARY DEPARTMENT.

THE Board of Guardians of the South Dublin Union have awarded £20 each to the eight medical officers of the urban dispensary districts for their services during the small-pox epidemic, and have invited the several rural dispensary district committees to report to the Board in case they should desire to recommend their medical officers for similar acknowledgment.

VACCINATION FINES.

THE anti-vaccinators show, in some instances, the earnestness of their belief, by their willingness to suffer in its cause. Two defaulters, Mr. Edward Foster, a druggist at Ruston, and Mr. W. Clarkson, a clerk in Yorkshire, have both been repeatedly fined for refusing to have their children vaccinated. Mr. Foster has already paid £13 or £14 in fines and costs, and expresses his willingness to suffer imprisonment when he can no longer pay the oft-incurred fines; but his enthusiasm is exceeded by that of Mr. Clarkson, who, after being repeatedly fined, has had his goods distrained upon, and, there being at last no goods left for distraint, and no means whatever of paying, has been sentenced to three months' imprisonment.

QUALIFICATIONS OF MEDICAL OFFICERS OF HEALTH.

SIR,—The following works will give Dr. Cartwright Reed the information which he requires, as to testing gas, milk, water, and air: Miller's *Elements of Chemistry*, Abel and Bloxam's *Chemistry*, Bowman's *Practical and Medical Chemistry*. It will hardly require much chemical knowledge to test most articles of food—as to their being fit for human consumption or otherwise. In reply to his second question, I presume a gentleman would scarcely offer himself as a candidate for an appointment, unless he possessed the special knowledge requisite to fulfil the duties of that appointment; and, not possessing it, he would probably have to obtain it at his own cost. The third is an open question; in my case the Local Board provides me with all that I require. And, in answer to the fourth, my duties were defined before my appointment. The Medical Officer of Health should be thoroughly acquainted with everything likely to prove deleterious to the public health generallly.

I am, etc.

C. S. BARTER, M.B.Lond.,
Officer of Health for Bath.

23, The Paragon, Bath, October 12th, 1872.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

PROFESSOR HUMPHRY gives notice that the course of lectures on Practical Anatomy will commence on Monday, October 7, at nine A.M., and be continued daily at the same hour.

The course of lectures on Anatomy and Physiology will commence on Tuesday, October 22, at the New Museums, at one P.M., and be continued on Tuesdays, Thursdays, and Saturdays, at the same hour.

UNIVERSITY OF OXFORD.

UNATTACHED STUDENTS.—*Apropos* of the "unattached" student scheme, the Delegacy have issued their annual report, from which it will be seen that during the four years of its existence there has been a steady increase in the number of students, who in 1868-69 numbered 53; in 1869-70, 72; in 1870-71, 104; and in 1871-2, 125. After recapitulating the distinctions gained by the students during the year, the report concludes as follows:—"The Delegates feel that they may call attention to the answer provided by these facts to the objection formerly urged, that these students might be intellectually below the general standard of the University. They are confident that the amount of intellectual life and industry, developed by the unattached system, may be compared not unfavourably with that shown by the average of students in the University. It only remains for the Delegates to express their thanks to their students for the regularity of their conduct during the year. The disciplinary duties of the censors have been very light, and they feel that the continued good behaviour and diligence of the men are satisfactory proofs of the success of the system, and a complete justification of the confidence reposed in these undergraduates by the University." From a voluntary return made by twenty students, the Delegates are enabled to answer the question of "What is the yearly cost of the system to a careful undergraduate?" they say, with some confidence, the following being the result of the averages:—Board and lodging for three terms of eight weeks, at 26s., £31 4s.; University dues, £4 10s.; examination fees (on the average) £1 1s.; tuition expenses (about), £10 10s.—total, £47 5s. These figures do not, of course, include travelling, books, clothes, pocket-money, or cost of living in the vacations. Still, the delegates say, "they prove conclusively that a careful student can get through his Oxford career for a sum not exceeding £50 a year."

MAGDALEN COLLEGE: NATURAL SCIENCE DEMYSHIPS.—The following have been elected: Mr. William Jocelyn Palmer Wood, from Clifton College; Mr. Charles Henry Wade, from Owens' College, Manchester. The stipend of the Demyships is £95 *per annum*, and of the Exhibition £75, inclusive of all allowances, and they are tenable for five years, provided that the holder does not accept any appointment which in the judgment of the electors will interfere with the completion of his University studies. The examinations for the Mathematical and Natural Demyships were held, in common with Merton College, at the same time and with the same papers.

MERTON COLLEGE.—A Natural Science Postmastership, of the value of £80 *per annum*, tenable for five years, etc., has been awarded to Mr. W. Hugh Jones, from Derby Grammar School.

OBITUARY.

FREDERICK WILLIAM YOUNG, M.R.C.S.ENG., L.R.C.P.LOND.

MR. YOUNG, who died in London, on October 8th, at the early age of 27, was educated at Sherborn School, and entered as a medical student at University College in 1862, where he filled in the course of his studies several clinical appointments. At the close of his student's career, he became house-surgeon to the County Infirmary at Dorchester. This he left about three years since, and after a short sojourn with Dr. McNab, of Bury St. Edmunds, and as pulmonary phthisis (to which he was hereditarily disposed) had given slight signs of its advance upon him, he settled at Margate, where he became first the assistant, and subsequently the partner, of Dr. W. P. Price. The bracing air of Margate had a most beneficial effect upon his health, which at first very greatly improved; but the hard work of the Margate season proved too much for his delicate constitution, and about six weeks since he was seized with violent epistaxis, which proved to be the beginning of the end; for he became weakened by loss of blood, and his old enemy gained steadily upon him.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, October 3rd, 1872.

Moore, Henry Cecil, King's Norton

The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 10th.

Jennings, William Oscar, Trinity Square, Borough
Pearde, Henry, New Romney, Kent
Smith, Thomas Bower, University College
Talbot, Russell Main, Guildford Road, Poplar

As an Assistant in compounding and dispensing medicines.

Pearce, Percy, Guildford Street, W.C.

MEDICAL VACANCIES.

THE following vacancies are announced:—

BALFOUR HOSPITAL, Kirkwall, Orkney—Medical Officer.
BELFORD HOSPITAL, Fort William, Inverness-shire—Resident Surgeon: £150 per annum, board and lodging.
BIRMINGHAM GENERAL DISPENSARY—Resident Surgeon: salary £130 increasing to £150 per annum, residence, coals, gas, and attendance.
BIRMINGHAM HOSPITAL FOR WOMEN—Dispenser: £20 a year to commence. (Females eligible.)
BRADFORD INFIRMARY and DISPENSARY—Surgeon.
BRIDGWATER INFIRMARY—Dispenser: £40 per annum, board, lodging, and washing.
CLITHEROE UNION, Lancashire—Medical Officer for the Whalley District: £16 per annum.
CLIFDEN UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Rinvyle Dispensary District: £100 per ann., and fees.
COVENTRY AND WARWICKSHIRE HOSPITAL—Dispenser: £80 per ann.
DAILLY, Ayrshire—Parochial Medical Officer: £40 per annum, with the probability of being appointed Medical Officer to two Collieries in the parish.
DONCASTER GENERAL INFIRMARY and DISPENSARY—House-Surgeon: £100 per annum, board and lodging.
DOWNPATRICK DISTRICT LUNATIC ASYLUM—Assistant to the Resident Medical Superintendent: £100 per annum, furnished apartments, fuel, light, washing, first-class rations, and attendance.
ECCLESALL BIERLOW UNION, Yorkshire—Medical Officer for District No. 2: £57:10 per annum, and extra fees.
EPPING UNION, Essex—Medical Officer for the Roydon District: £30 per ann.
EYE INFIRMARY, Newcastle-upon-Tyne—Surgeon.
GLASGOW ROYAL INFIRMARY—Extra Physician to the Dispensary.
HALIFAX INFIRMARY—Dispenser: £60 per annum.
HASTINGS UNION, Sussex—Medical Officer and Public Vaccinator for District No. 3: £90 per annum, and extra fees.
HENLEY UNION—Medical Officer and Public Vaccinator for the Nettlebed District: £80 per annum, and extra fees.
HOSPITAL FOR DISEASES OF THE THROAT—Assistant-Surgeon.
LEEDS GENERAL INFIRMARY—Resident Medical Officer.
LEPER HOSPITAL, Waterford—Apothecary.
MANCHESTER ROYAL INFIRMARY—Two Assistant-Physicians.—Two Assistant-Surgeons.—Ophthalmic Surgeon.—Obstetric Surgeon.—Dental Surgeon.
MANORHAMILTON UNION, co. Leitrim—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Manorhamilton Dispensary District: £100 per annum, and fees.
MIDDLESEX COUNTY LUNATIC ASYLUM, Hanwell—Apothecary: £120 per annum, furnished apartments, board, and washing.
NEWTON ABBOT UNION, Devon—Medical Officer for the Newton Abbot District and the Workhouse: £70 per annum.
SALOP INFIRMARY, Shrewsbury—Two Physicians in Ordinary.
SOUTH CHARITABLE INFIRMARY and COUNTY HOSPITAL, Cork—Resident Surgeon, Apothecary, and Secretary: £100 per annum, residence, coal, gaslight, attendance, etc.
UCKFIELD UNION—Medical Officer and Public Vaccinator for the Maresfield District: £85 per annum, and extra fees.
UNIVERSITY COLLEGE HOSPITAL—Assistant-Physician.—Assistant Surgeon.—Assistant Medical Officer in the Skin Department.
WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon: £80 per annum, board, lodging, and washing.
WESTBOURNE UNION, Sussex—Medical Officer for the Workhouse: £12 per annum, and extra fees.—Medical Officer and Public Vaccinator for District No. 1: £62 per annum, and extra fees.
WEST LONDON HOSPITAL, Hammersmith Road—Two Junior Physicians.
WEST RIDING LUNATIC ASYLUM, Wakefield—Clinical Assistant.
WEST SUSSEX PRISON, Petworth—Medical Officer: £100 per annum.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

ALDER, James W. B., Esq., appointed Medical Officer for the Town District of Alverstoke Parish, in the room of W. J. Rundle, Esq., deceased.
DOUGALL, John, M.D., appointed Medical Officer of Health for the Burgh of Kinning Park, Glasgow.
KIBBLER, Willliam A., Esq., appointed Resident Medical Officer to the London Hospital, *vice* Stephen Mackenzie, Esq., resigned.
LITCHFIELD, Henry R. C., Esq., appointed Medical Officer for the Ninth District of the Brentford Union, in the room of T. Litchfield, Esq., deceased.
MEADE, Warren, Esq., appointed Medical Officer for the Country District of Alverstoke and the Workhouse, in the room of F. J. Lowes, Esq., resigned.

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LECTURE

ON

THE ANTAGONISM BETWEEN THE ACTIONS OF ACTIVE SUBSTANCES.

Delivered before the Royal College of Physicians, Edinburgh.

BY

THOMAS R. FRASER, M.D., F.R.S.E., F.R.C.P.E.

LECTURE II.

MR. PRESIDENT AND GENTLEMEN,—When I was honoured by the request to bring under your notice some subjects bearing upon pharmacology, I found myself placed in the difficult position of having too many good things to choose from. Within my reach were the fruits—seldom altogether ripe, but without exception temptingly attractive—of numerous investigations, conducted both in this country and abroad, in the field of pharmacological research. At my disposal, also, were the methods by which these fruits had been cultivated—the refinements of experimentation, and the mechanical appliances by whose aid, within recent years, results of surpassing beauty and interest have been obtained, and much progress has been made in the establishment of a sound basis for therapeutics. The consideration of either of these subjects, however, would have required much more time than could be found within the limits of two lectures. It was for this reason that I selected two subjects that admit of briefer discussion, while at the same time they possess a sufficiently independent interest to allow of their being treated apart from the general subject in which they are included.

Definition of Antagonism.—The connection between the chemical properties and the physiological action of active substances occupies a position on the border-land of pharmacology, for it is placed between pharmacology and one of the sciences most intimately related to it. The subject which I propose this evening to bring before you is placed, on the contrary, in the centre of this region, seeing that it is chiefly concerned with the relationships that exist between different groups of well defined pharmacological facts.

Presupposing a definite knowledge of the modifications produced in normal physiological conditions by a certain number of active substances to have been acquired, antagonism is concerned with the opposing influence which the action of one or more of these substances is able to exert upon that of any of the others—with the opposing actions, for example, of morphia and atropia on the pupils and minute blood-vessels, of morphia and quinia on the circulation, of prussic acid and atropia on the vagi nerves, and of physostigma and atropia on the iris and on visual accommodation. When several of the actions of one substance are counteracted by those of another, the antagonism becomes a more general one than in the examples I have cited; and when, among the different counteracting actions that occur in general antagonism, there are included any by which the fatal effect of one or other of the substances is usually produced, the one substance may act towards the other as a physiological antidote.

Physiological antidotism is, therefore, a very different thing from chemical antidotism. In all probability, however, the origin of the one may be referred to the same cause as that of the other. Soon after it become known that injurious effects follow the introduction of certain substances into the system, attempts were naturally made to remedy these effects, and also to discover counteragents or antidotes to the hurtful substances. The success attending these attempts was of necessity closely related to the existing state of knowledge regarding the physiological action and the physical properties of active substances. When the effects of poisons were referred to supernatural manifestations, it was chiefly charms and superstitious rites that were trusted to as protectives and remedies. At a somewhat more advanced period in the progress of human knowledge, vague notions of physiological laws and processes supplied the indications of curative treatment; and bezoars, alexipharmics, Mithridates, and theriacæ, were employed almost indiscriminately as universal antidotes. Still later, chemistry suggested that, as the physical properties of poisons may be modified by various reagents, so may their effects be prevented by the administration of suitable substances.

The recommendations derived from chemistry were at first only of the crudest description; but, as the science advanced, many valuable hints were obtained, and now the class of the chemical antidotes includes a large number of efficient counteragents to poisons. Their operation, however, appears to be limited to the chemical changes which they produce on the poison while it remains in the alimentary canal. As soon as the poison becomes absorbed into the blood, it seems to pass beyond the antidotal influence of the chemical counterpoison; for no example exists of a chemical antidote neutralising a poison after absorption. This may be explained by the fact that the chemical antidotes known to us are never sufficiently stable bodies. Their affinities are numerous; and so, after their entrance into the blood, they dissipate the chemical energy on which their value depends by forming combinations with the elements of the blood and tissues, in place of reserving that energy until the absorbed poison is reached and neutralised.

Reputed Examples.—In order perfectly to neutralise the injurious effects that follow the introduction of active substances into the living economy, it would appear to be necessary that the physiological functions of the affected organism should be modified. The early though undoubtedly crude notions that originated the employment of alexipharmics, Mithridates, and theriacæ, to a certain extent recognised this principle. The two latter of these compounds contained opium, along with an immense number of other ingredients; and so their indiscriminate employment as antidotes may have led to the first suggestion, or at least to one of the earliest applications, of an antagonism whose recognition dates from a remote period of medical history. I refer to the antagonism between opium on the one hand, and belladonna, hyoscyamus, and stramonium, on the other. One of the earliest records of a belief in the existence of this antagonism is to be found in the *Stirpium Adversaria Nova*, published in 1570 by Pena and De Lobel, where the statement is made that some Italian pedlers, who gained much notoriety by employing the root of the belladonna-plant to quench thirst, were in the habit of administering opiates to remedy the evil effects that occasionally were thereby produced. Tracing the history of this antagonism down to the present time, we find that during the seventeenth and eighteenth centuries, and at the commencement of the present century, several cases were reported, more especially by Horstius, Faber, Boucher, and Joseph Lippi, in which opium was administered with apparent benefit in the treatment of poisoning by belladonna. Within more recent times, many modern authors, as Angelo Poma, Anderson, Cazin, Benjamin Bell, Behier, Lee, Norris, and Constantin Paul, have published evidence, derived from cases of poisoning in man, that appear to favour a belief in its existence. I need scarcely point out that evidence of this kind is usually surrounded by numerous causes of fallacy. It is not surprising, therefore, that observers of such recognised ability as Drs. John Harley and L. Orfila should have come to the conclusion, after a careful examination of the record of each case, that the evidence derived from clinical experience is insufficient to establish the reality of this antagonism; or that Dr. Fraigniaud and others should besides assert that the association of opium with belladonna, in place of producing a diminution, produces an increase, of the toxic power of both substances. For my part, I feel inclined to believe that, while the existing evidence is insufficient distinctly to prove that opium is able to prevent the fatal effect of belladonna, hyoscyamus, or stramonium, or these latter substances that of opium, it is still sufficient to render it extremely probable that a general antagonism does really exist—to the extent, at any rate, of the primary lethal action of morphia being preventable by the physiological action of the other substances which I have named. A properly devised series of experiments would in all likelihood justify the opinion of those who, with no little courage, have practically affirmed their belief in the existence of this antagonism.

The rapid development of pharmacology has led to the acquisition of definite knowledge regarding the manner in which many active substances influence the physiological condition of vital structures; and it has been found that the modifications produced by certain of these substances are of an opposite kind to those produced by others. In this way the existence of many instances of localised antagonism—to several of which I have already alluded—have been established.

The study of pharmacology has likewise led to the differentiation of the special structures by the modification of whose physiological conditions the lethal action of poisonous substances is produced. In a few instances, it has been shown that the nature of the modification produced in the physiological condition of the structure or structures involved in the lethal action of one substance, is apparently contrary to that produced on the same structure or structures by the physiological action of another substance. The establishment of such facts has led to the suggestion of various instances of antagonism, in which it is supposed that the lethal action of one substance may be prevented by the

physiological action of another. Prominent among these are the antagonism between the lethal action of prussic acid and the physiological action of atropia, and that between the lethal action of muscaria and the physiological action of atropia. The elaborate researches of Preyer and of Schmiedeberg and Koppe proved that both prussic acid and muscaria increase the excitability of the vagi nerves, and in this way so seriously affect the cardiac and respiratory functions, that death results when sufficiently large doses are given. Previous investigators—more especially Von Bezold and Bloebaum—had already discovered that atropia exerts an action that is in a remarkable manner contrary to that of these substances; for it paralyses the cardiac inhibitory fibres of the vagi, and likewise the terminations of these nerves in the lungs, and thus accelerates both the cardiac and respiratory movements. Guided by these facts, Preyer made a few experiments which strongly support the opinion at which he has arrived, that atropia is a physiological antagonist to prussic acid, even to the extent of being able to prevent the primary lethal action of that poison; while Schmiedeberg and Koppe have made several experiments which induce them to believe that the lethal action of muscaria may be counteracted by atropia.

In addition to these, many other examples of general or of lethal antagonism have been advanced. Their existence, however, has rarely been inferred from a knowledge that the substances concerned influence the same structures in contrary modes, but has been conjectured from a knowledge of merely the general phenomena that are produced by these substances. The conspicuous spasmodic effects by which the action of strychnia is characterised appear to have suggested the employment, as physiological counteragents, of various substances whose general action includes the production of paralysis; and accordingly the list of proposed antagonists to this alkaloid embraces opium, curara, aconitia, nicotia, bromide of potassium, chloroform, chloral, and nitrite of amyl. Opium and quinia have been proposed as antidotes to each other, on the supposition that the former exalts several of the organic functions, while the latter depresses them; and the physiological actions of iodine and bromine are said to neutralise each other, because the former substance produces sedation, and the latter excitation, of certain general functions.

Among these examples, there are several worthy of further examination; and it is not impossible that their existence may thereby be established. Meanwhile, the criticism of the Professor of Therapeutics at Paris, in reference to the majority of recorded examples of antagonism, appears to be a just one—that "la précision fait souvent défaut dans l'analyse des faits, les inductions manquent de rigueur, et la pratique attend de nouvelles lumières de la part de la physiologie expérimentale et de la thérapeutique rationnelle."

Chief Fallacies in the Evidence regarding the Existence of Antagonism.—This absence of precision may, I believe, with peculiar justice, be said to characterise the evidence by which the existence of such general antagonism as enables one substance to prevent the lethal action of another has been supported. In nearly every instance, too much weight has been placed on a mere modification, or it may be amelioration, of the symptoms, while the establishment of the fundamental fact of these symptoms being the result of a lethal dose has not been sufficiently attended to.

It is doubtful whether, from clinical observation alone, a sufficient degree of precision can ever be obtained. Not only are there difficulties in the way of discovering what dose of poison has been introduced into the system, but even when this dose is ascertained, it is generally impossible to feel assured that it is a sufficient one to produce death. And, further, the effects of the substance administered as a physiological antidote can rarely be accurately observed. The exigencies of treatment demand that every likely method of alleviating the symptoms should be applied; and, among the various remedial measures that are almost always applied, it is difficult, if not impossible, to discover accurately the effects of any single antidote.

How these Fallacies may be avoided.—The only method whereby the existence can satisfactorily be proved of an antagonism, so perfect as that which enables one substance to prevent the fatal effect of another, is by experiment on the lower animals. It is not necessary for me to attempt to show that the fallacies asserted to exist in such experiments have been greatly exaggerated, or that the supposed differences between the results obtained in man and in the lower animals do not possess the importance that has been claimed for them, as, fortunately, nothing remains to be done in this direction since the convincing arguments of Claude Bernard have been advanced and generally accepted.

By testing the existence of antagonism by experiments on the lower animals, the most important of the causes of fallacy to which I have alluded may readily be avoided. In any given species of animal, it is a simple matter to determine the minimum dose of an active substance that can produce death, and then to test the antidotal influence of its supposed antagonist after the administration of an undoubtedly lethal dose of the poison. In this manner, the most convincing proof may be obtained of an antidotal influence; and, inspired with the confidence that is thus gained, the practitioner may with propriety employ the antidote in cases of poisoning in man.

The Antagonism between Atropia and Physostigma.—A plan of this kind was followed in a research which I lately undertook on the antagonism between atropia and physostigma. The experiments were chiefly performed on dogs and rabbits, to whom the substances were administered by subcutaneous injection; and their main purpose was to determine whether the fatal effect of physostigma can be prevented by atropia. Some of the results seem of sufficient interest to justify me in bringing them before you at this time.

In order to illustrate the effects that are produced by physostigma alone, let me, in the first place, describe the symptoms that occur when a lethal dose of the extract of this substance is given to a rabbit. Soon after such a dose is administered, unfrequent and slight twitchings take place over the surface of the animal, and then movements of the mouth and lips occur, as if an accumulation of saliva were being removed. In the course of a very few minutes, there is evident difficulty in going about; gradually, stiff extension shows itself in the anterior, and then in the posterior, extremities; and thereafter the animal stumbles about, or stands shaking with the body elevated on the extended limbs. In a short time, the extended state of the limbs is succeeded by their partial paralysis; great weakness, accompanied with constant tremblings, is present; fluid escapes from the mouth, and soft and pultaceous fæces are passed at frequent intervals. The respirations become infrequent and laboured, and the heart's contractions diminished in their frequency and force; while the pupils contract below their normal size. Soon afterwards, the respiratory movements assume the character of more laboured gasps, the pupils still further diminish in size, and general weak tremors succeed each other; while the flow of saliva, the discharge of semi-liquid fæces, and the incessant fibrillary twitches of the surface continue. By and by, it is a matter of difficulty to distinguish any respiratory movement or cardiac impulse, and they soon altogether cease on the occurrence of death.

Such a train of symptoms is usually produced by a dose of physostigma representing the smallest quantity that can kill a rabbit, and this event occurs in from twenty to thirty minutes. Let us now see how the effects of a considerably larger dose may be modified by atropia.

A rabbit received, by subcutaneous injection, a dose of extract of physostigma considerably greater than the minimum-lethal; and one minute and a half afterwards it received, also by subcutaneous injection, half a grain of sulphate of atropia. In three minutes after the injection of atropia, the pupils measured $\frac{14}{50} \times \frac{14}{50}$ths of an inch, the measurement immediately before the experiment having been $\frac{10}{50} \times \frac{9}{50}$ths. In seven minutes, the pupils measured $\frac{16}{50} \times \frac{16}{50}$ths, the rate of the heart's contractions was considerably accelerated, fibrillary twitches were occurring, and a little restlessness was present. Soon afterwards, the pupils became still more dilated, and the animal had some difficulty in moving about. In twenty-five minutes, this difficulty had become greater—even to such an extent, that often the anterior extremities yielded, and the rabbit fell on the thorax. In fifty-two minutes, the pupils measured $\frac{15}{50} \times \frac{14}{50}$ths of an inch, but no obvious change had occurred in the general condition of the animal. In one hour and ten minutes, however, evidences of recovery were manifested; the rabbit went about with but little difficulty, and frequently a perfectly normal sitting posture was assumed. Indeed, the only symptom of an abnormal character that was now apparent consisted of frequently occurring and well marked fibrillary twitches. From this time the condition of the animal steadily improved, until perfect recovery occurred.

Preliminary experiments had satisfied me that the dose of physostigma extract given in this experiment was at least twice as large as the minimum-lethal. Yet the fatal effect of this large dose was prevented in a remarkable manner by the dose of atropia that was given in conjunction with it. To add to the proof that was thereby obtained of an antagonism between these two substances, I administered to this rabbit, nine days afterwards, a dose of extract of physostigma only one half as large as that from which it had thus recovered. Symptoms of poisoning very quickly appeared, and death occurred in about fourteen minutes.

In another experiment on a rabbit, which I shall briefly describe, a lethal dose of sulphate of physostigmia was allowed to exert its action for a longer period than in the last experiment, before a dose of sulphate of atropia was administered. Previously to the administration of the physostigmia, it was found that the average rate of the cardiac contractions was 38, and that of the respiratory movements 22, in ten seconds; and that the pupils measured $\frac{11}{50}$ths by $\frac{10}{50}$ths of an inch. Fif-

teen minutes after the lethal dose of sulphate of physostigmia had been given, the rabbit was lying on the side, and saliva was flowing copiously from the mouth; unfrequent, laboured, and noisy respirations were occurring; the cardiac contractions were extremely feeble, and at the rate of only nine in ten seconds; and the pupils had contracted to $\frac{7}{50}$ths × $\frac{7}{50}$ths of an inch. In fact, the animal was at the point of death.

A marvellous change, however, was quickly produced by the administration of sulphate of atropia. Two minutes after seven-tenths of a grain of this substance had been injected under the skin, the respirations were occurring at the rate of 18 in ten seconds, while their character was nearly normal; and the cardiac contractions were strong, and at the high rate of 50 in ten seconds, the rate before the antidote was given having been only nine in ten seconds. Soon afterwards, the pupils dilated and the flow of saliva ceased; and, by and by, the animal again turned from the side, raised the body on the limbs, and then assumed a perfectly normal posture. It was shown that the dose of sulphate of physostigmia from which this animal had recovered was a lethal one, by administering to it, several days afterwards, a dose of equal size, without any atropia. The usual symptoms of physostigma-poisoning were thereby produced, and death occurred in sixteen minutes.

I have said that the antagonism between atropia and physostigma was tested in dogs as well as in rabbits, and in order to illustrate the nature of this antagonism in the former animal, it may be proper to give a few details of one of my experiments. An active young Scotch terrier dog, weighing ten pounds and three ounces, received, by subcutaneous injection, three-fifths of a grain of sulphate of physostigmia, dissolved in a few drops of distilled water. Before the injection, the rate per ten seconds of the cardiac impulses was 32, and that of the respirations 4, and the size of the pupils, in a full light, was $\frac{12}{50}$ × $\frac{12}{50}$ths of an inch. In four minutes after the commencement of the administration, slight tremors occurred, and fibrillary twitches were present. In five minutes, a solution containing three-tenths of a grain of sulphate of atropia was injected under the skin. In two minutes thereafter, the tremors already noted had become more prominent and strong, the limbs were unable properly to support the body, saliva escaped from the mouth, and the eyeballs were unnaturally moist. In five minutes, the pupils were greatly dilated, but now the secretions of the salivary and lacrymal glands were diminished. In seven minutes, the dog lay quietly on the abdomen and thorax; and in thirteen minutes it fell over on the side. An endeavour was made to count the cardiac impulses, but, when the hand was placed over the heart, the tremors referred to became so greatly increased that it was impossible to distinguish the heart's impulse. It was not until thirty-eight minutes, that an attempt to count the heart's contractions was successful, and then it was found that the impulses occurred at the rate of 45 in ten seconds. At the same time, the respirations had a rate of 7 in ten seconds, and the pupils measured $\frac{17}{50}$ × $\frac{17}{50}$ths of an inch. In forty-eight minutes, the condition of the dog had so far improved that, after some efforts, it rose on the limbs, and then lay down in a normal crouching attitude, with the head raised. Soon afterwards, it again got up and walked about the room, with only a little unsteadiness. In one hour and fifty-five minutes, the animal seemed to be perfectly well. On the following day, the dog was active, and in a perfectly normal condition. Nineteen days after the performance of this experiment, the same dog received, by subcutaneous injection, a dose of sulphate of physostigmia, only one-half as large as that from which it had recovered when atropia was also given; and the result was that death was produced in twenty-two minutes.*

Gentlemen, the details of these three experiments will serve, I trust, to convince you that atropia exerts a powerful counteracting influence upon the lethal action of physostigma. I am glad to be able to state that several experiments bearing on this antagonism have been performed by Dr. Bourneville of Paris, which have led to equally satisfactory results. The experiments which I have brought under your notice by no means represent the amount of evidence that may be advanced in support of this antagonism; for results similar to those I have described were obtained in a large number of other experiments. These additional experiments, however, were not undertaken for the mere purpose of increasing the amount of this evidence.

* Full details of these, and other similar experiments, are contained in a paper by the author, in the *Transactions of the Royal Society of Edinburgh*, vol. xxvi, part III, 1870-71, pp. 529-713.

[*To be continued.*]

TESTIMONIAL.—Mr. Clement Hamerton of Navan, F.R.C.S.Irel., has been presented with a carriage, a purse containing £46 : 10, and a highly complimentary address, as a mode of evincing the gratification of his friends at his recovery from a severe and protracted illness.

CRITICISMS OF DR. CHAUVEAU OF LYONS ON THE DISCUSSION AT THE PATHOLOGICAL SOCIETY ON PYÆMIA.

By J. BURDON SANDERSON, M.D., F.R.S.,
Professor of Practical Physiology in University College.

I HAVE to thank the Editor of the BRITISH MEDICAL JOURNAL for having called my attention to a recently published criticism, by my friend Dr. Chauveau of Lyons, of my communication to the Pathological Society last April on the subject of pyæmia. The criticism in question forms an Appendix (entitled "Le poison pyohémique à la Société Pathologique de Londres") to a course of lectures on the Physiology of Infective Liquids, which has been published during the last three months in the *Revue Scientifique*. In these lectures the author has embodied the results of a lengthened and most important experimental inquiry, which in its general bearing somewhat resembles that in which my colleague Dr. Klein and I were engaged last winter. M. Chauveau's purpose is to demonstrate the close relation which exists between the virulent (or, as I prefer to call them, the infective) diseases and ordinary inflammation. He founds this *rapprochement* mainly on the resemblance between the irritant properties of inflammatory products, and those of the specific morbid poisons; and asserts that ordinary pus induces inflammation in any living tissue with which it is brought into relation, in the same way that a virus reproduces the disease from which it originated under similar conditions. Those of M. Chauveau's experiments which have to do with recent—*i.e.*, living—inflammatory products are in close relation with ours. But, in addition to these, he has made others in that older field of inquiry which concerns the toxic action of pus in various degrees of putridity.

Knowing as I do, by personal intercourse with M. Chauveau, the extreme accuracy of his method of working, and regarding myself as in some measure his pupil (for there are few men from whom I have learnt more pathology), I felt perfectly certain, as soon as I found that we were on the same ground and looking in the same direction, that, if there were disagreement between us, it could only arise from the imperfect manner in which the facts had been presented on one side or the other—in this case on my side.

At the Pathological Society, I founded what I had to say on an entirely new experiment, which I then regarded, and still regard, as a fundamental one. It is to this experiment, or rather to my interpretation of it, that M. Chauveau objects. I shall have no difficulty in showing that his objection arises from a misconception. He describes it in terms which (with the important exception of the words I have put in italics) are correct: "If a pyæmic liquid, introduced into the peritoneal cavity of a guinea-pig, be left there for a couple of days, *during which it does not determine any intense symptom in the animal*, the toxic power of that liquid increases to such a degree that, when taken from the first animal and transported to a second, it manifests the most pernicious activity, and produces symptoms which are very rapidly fatal." This, M. Chauveau adds, was demonstrated to the Society in a "dog, into the abdominal cavity of which six drops of a pyæmic liquid which had resided two days in the peritoneal cavity of a guinea-pig had been injected."

M. Chauveau expresses no doubt as to the strict accuracy of the facts, but thinks I have misunderstood them, and proceeds to recite an experiment of his own, which appears to him to furnish the key to mine. It is as follows. An old horse was sent to the veterinary school with a seton, the discharge from which was extremely fœtid; the animal, however, was in good health; pulse, 32; temperature in rectum, 99.7 deg. Pus was collected from the seton, diluted with twice as much distilled water, and strained. Of this liquid, 15 minims were injected subcutaneously on the right side into the neck of the same animal from which it had been taken. In twenty-four hours, the pulse had increased to 45 and the temperature to 101.8 deg. On the fourth day the animal died. There was an enormous diffuse swelling around the seat of injection, due to "œdematous gelatiniform infiltration" of the subcutaneous tissue. The swelling was gangrenous at the centre, and exhibited elsewhere patches of vascular engorgement or extravasation. There were no internal lesions. Thus, to quote M. Chauveau's own commentary on the facts, "a few drops of the same pus, which when contained in a pyogenic cavity occasions neither local irritation nor any appreciable general disturbance, when injected into the cellular tissue of the same animal destroys it in less than four days; and the inflammation thereby produced is of so violent a character that the circulation stops, hæmorrhagic *infarctus* are formed, the tissues die, and the animal

succumbs to poisoning caused by the absorption of the putrid products engendered by this gangrenous phlegmon". The experiment is of great interest, and, as Chauveau says, well worthy of the attention of the surgeon, but it is too widely different from ours to admit of comparison with it. To make this difference evident, all that is necessary is to refer to the professed purpose for which it was made. M. Chauvean's object was, to use his own expression, to investigate the action of "pus putride"—*i. e.*, of stinking pus. Our object, on the contrary, was not to inquire into the properties of putrid liquids, but of the products of inflammation; and for this reason, the most fastidious care was used to avoid the introduction of the element of putridity at any stage of our experimental procedure, by preserving our liquids from the possibility of septic contamination. In the first inoculation, the "pyæmic liquid" (as M. Chauveau calls it) used was simply the product of an acute inflammation, produced by the subcutaneous injection of a chemical irritant. This liquid was introduced into the peritoneum of a guinea-pig in extremely small quantity, and produced there an intense peritonitis. It was the product of this peritonitis which exhibited that extraordinary virulence, which I sought to illustrate to the Society by the experiment shown. In describing the results, I applied to them the term *intensification*. To this term M. Chauveau objects, and reasonably enough, for he supposes that in using it I meant to imply that in the case of the guinea-pig which received the first product and yielded the second, the former was *intensified* by mere residence in the uninflamed peritoneum of a healthy animal. I need scarcely say that this was not what I meant. In using the word *intensification*, I meant to apply it, not to the liquids, but to the *process* which produced it; for obviously the infective liquid finally obtained is not the same with that which was first injected, but simply the product of the inflammation excited by it—*i.e.*, of the peritonitis. Its virulence, its infective activity, depends not on the mode in which the inflammation originated, but on the actual intensity it had acquired during the forty-eight hours of its duration.

There is one other point in M. Chauveau's paper to which I would ask space to refer. He objects strongly to my statement "that the ordinary bacteria of putrefaction do not in themselves possess a toxic action, and that liquids containing them can be injected into the circulation of a living animal without producing any effect". The statement, as it stands, is perfectly correct. Bacteria of putrefactive origin, if cultivated in liquids which are themselves innocuous, can be injected into the veins without producing any disturbance. It was suggested that in all probability the same thing would hold good of the bacteria of infective origin; but it was not stated either that the organisms of an infective liquid would, if they could be separated from it, be innocuous or inactive, or that the liquid without its organisms would retain its activity. As a result of these considerations, the opinion was expressed that, although these living particles are probably the carriers of infection, there is as yet no sufficient ground for supposing that their existence is the essential condition of infectiveness of certain products of inflammation.

A CASE OF RESECTION OF THE KNEE FOR BONY ANKYLOSIS, WITH THE LIMB IN FAULTY POSITION.

By JAMES E. ADAMS, F.R.C.S.,
Senior Assistant-Surgeon to the London Hospital.

Cases of bony ankylosis of the knee-joint with the bones at right angles to one another, are fortunately of somewhat rare occurrence; but it is evident, from the examination of specimens in the museums, that even among the few cases one is likely to meet with, there will be considerable variety in form and degree of union between the bones. It is therefore not sufficient to determine that any case is one of true bony ankylosis, but we must ascertain, as far as possible, what extent of the surfaces of the articular ends of the bones are in contact, how much new bone has been thrown out, etc., before determining how to proceed.

Dr. Little, in his article in Holmes' *System of Surgery*, does not, apparently, allude to any cases except such as can be relieved by subcutaneous chiselling, for he says, "that it (the subcutaneous section) cannot fail to become a standard operation, and is, in every respect, preferable to the operation of resection, when performed for mere ankylosis."

Now, the point I wish to bring forward is this; that there are certain cases of knee ankylosis which can easily be cured by the operation described by Dr. Little, and others in which anything short of an excision of a wedge-shaped piece is wholly useless.

Drawing No. 1* is intended to show a case of slight ankylosis with the anterior portions of the articular surfaces entire and separated by a wide

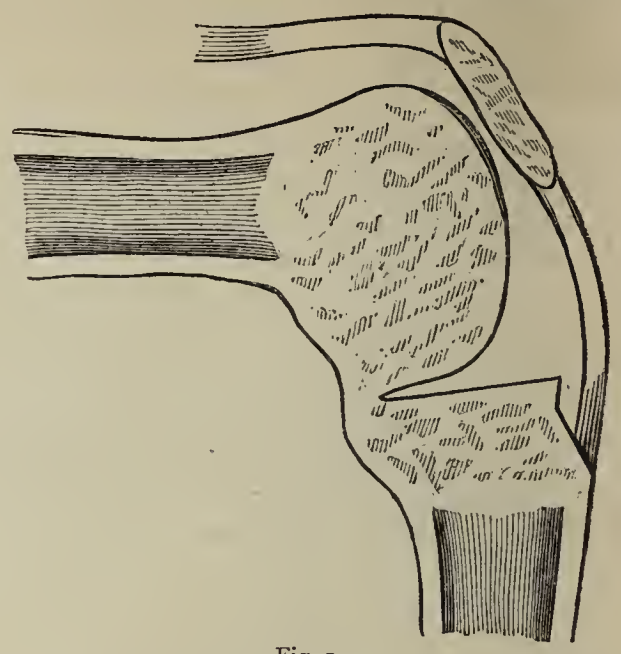


Fig. 1.

interval, and No. 2 represents such a case as mine, where all trace of the articular layers is destroyed, and the cancellous texture of one bone is continuous with that of the other, over the entire extent of the articular surface.

N. S., aged 14, a pale but fairly nourished boy, was admitted into the London Hospital in April last, with his right leg fixed at a right angle, the skin at the point of flexure marked by numerous cicatrices on all sides, some, especially those in the popliteal space, puckered in and adherent to the bones. There was absolutely no pain or tenderness; there was the most complete rigidity (under chloroform); the adjacent portions of the bones were expanded and rounded, so as to leave no interval or depression between them; the position of the patella could not with certainty be made out. The disorganisation of the joint occurred when he was one year and a half old, consequently the limb had been wholly useless for twelve years and a half; notwithstanding this, there was not much wasting and no appreciable shortening. On May 8th the operation was undertaken; a semicircular flap was raised from the front as in ordinary excision of the knee, and the original point of union carefully sought for, but no indication of it was found. A cut was then made with the saw in the direction of line 1 (Fig. 2), extending not quite through

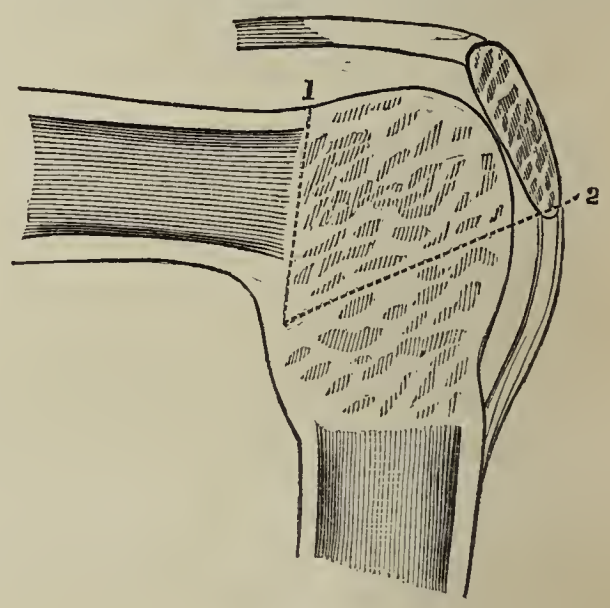


Fig. 2.

the bone; this was joined by a second cut (line 2) meeting it about half an inch in front of the posterior surface; the piece between them was then removed, and the remaining portion broken by flexing the limb. The object of this was to avoid any possibility of wounding the popliteal artery, which, it was surmised, might be lying closer to the bones than natural (supposing the posterior ligament to be destroyed); moreover, it was expected that there might be some new bone thrown out at

* Both diagrams are intended to represent vertical sections through the bones.

the posterior surface, which could not be safely cleared away at one cut. After this, the ends of the bone were smoothed down with the chisel until the limb could be easily straightened; it was then put up on a back-splint, specially made for it, and the wound covered with wet lint. In the course of the repair there was a fair amount of suppuration, and a few abscesses required opening; at the end of eight weeks there was firm union. One noteworthy circumstance was, that, for several days after the operation, the boy was literally tortured by pain in the back, which I attributed to his being obliged to remain in a position which, for obvious reasons, he had not been in the habit of assuming. The limb is now firm and straight, with less than two inches of shortening; a few sinuses remain open, and the muscles require time to gain strength, but, as far as the mechanical part of the cure goes, it is complete.

[Since the above was written, the boy has made uninterrupted progress, the limb being strong and straight, and able to bear the weight of the body.]

ON THE ACTION OF THE INTERCOSTAL MUSCLES.

By ARTHUR RANSOME, M.D., M.A.Cantab.

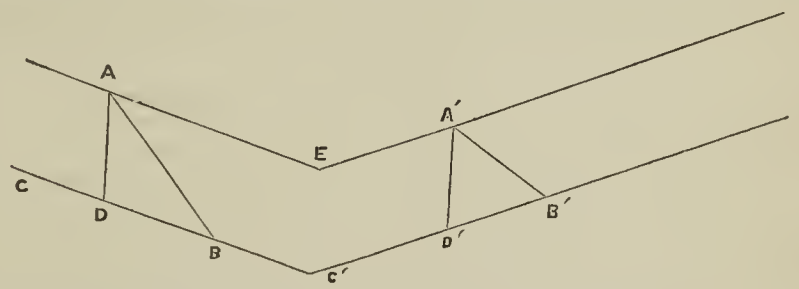
In the lectures on Human Myology recently delivered by Dr. Humphry before the Royal College of Surgeons, he has entered upon the much debated question of the action of the intercostal muscles, and has argued that both the external and internal sets of fibres act as levators of the ribs, and that they are both inspiratory in their function. Had the subject been treated mainly as one of observation or experiment, it is probable that no scope would have been found for doubting the truth of the conclusions arrived at by so able an observer; but the arguments used are, on the contrary, merely deductive, and are chiefly based upon geometrical reasoning.

In a vital problem of so complex a nature as this has proved to be, it seems needful to examine somewhat carefully any attempt to employ mathematical demonstration in its elucidation. It is seldom that physiological questions are so simple as to allow all their conditions to be included within the terms of a geometrical proposition, and it is rarely possible to limit the argument to one aspect only of the case; but this particular question is one of peculiar difficulty when thus approached. Dr. Humphry very fairly objects to the results obtained by Mr. Hutchinson, on the ground that the real conditions of the respiratory act are very imperfectly represented in the experiments to which he refers, in his work upon the Thorax in the *Cyclopædia of Anatomy and Physiology*. It would, however, be very difficult to avoid this accusation in any attempt at a simple explanation of the action; and I fear that it will be found that the data upon which Dr. Humphry's calculations are based are equally faulty in this respect. But, before giving instances of this defect, it may be well to notice for a moment one consideration, which has probably been allowed to have more weight in the controversy than it deserves.

An argument which has been much used in proof of the inspiratory action of both sets of intercostals, is to be found in Haller's remark that the upper ribs are the most fixed, and hence that any intercostal muscular fibres, whatever their direction, will necessarily draw the lower ribs upwards, the more movable being dragged towards the less movable parts. But it does not seem to have occurred to those who have been influenced by this argument that, although Haller's remark is true when the abdominal muscles are relaxed, and when the ribs are at rest, or after they have been drawn downwards, as in expiration, yet it is not true when these levers are in the position of extreme inspiration, and when the abdominal muscles begin to contract after inspiration. In this case, all the ribs below the first are just as free to move downwards as they were to move upwards when inspiration commenced. The argument, from the greater fixity of the upper ribs, thus goes for nothing, and if any depressor influence can be shown to be exerted by the internal intercostals, it can hardly be denied that they have free scope for their action. But I think that the geometrical reasoning employed by Dr. Humphry to prove the levator action of both the intercostal muscles will hardly counterbalance the direct observations of Hutchinson, Sibson, and Traube; and I venture to call his attention to the following defects in his proof.

1. Both in the text of the lectures (BRITISH MEDICAL JOURNAL, June 29th, 1872, p. 687) and in the foot-note (p. 688) it is assumed, probably for the sake of simplicity, that the ribs are semicircular; that they have only one chief motion, one of rotation about a sterno-vertebral axis; that they retain their parallelism during inspiration; and that the sternal and vertebral joints are fixed joints. Now, none of these assumptions are correct, and by this mode of stating the problem, the backward arching of the spine in deep inspiration, and the very considerable movements of the sternum are neglected; the motion of each rib upon a horizontal axis passing through the costo-vertebral joints is unnoticed, although it permits much greater extent of movement than that about the sterno-vertebral axis;* and the proposition also ignores the third or vertical axis of movement, which permits the lateral or outward motion of the ribs, and causes a considerable separation of their ends. The independent action of each rib, which has been fully proved by both Mr. Hutchinson and Dr. Sibson, and which is corroborated by my own measurements, is not admitted into the problem; and no note is taken of the fact which I have recently ventured to point out, that the ribs are not rigid bars, but that they are bent inwards forcibly during extreme expiration. It is doubtless permitted to a mathematician to neglect conditions which, from their minute influence on the result, might safely be left out of the proposition, and he may at times take for granted formulæ which may be more conveniently dealt with in a separate calculation; but I submit that none of the above mentioned facts come within these categories. I much doubt whether they are not enough to prevent any mathematical treatment of the subject whatever, and they certainly interfere directly with the reasoning employed by Dr. Humphry and his friend.

2. With regard to the "double action" which Mr. Hutchinson has attributed to the intercostales interni, I do not see in what way this conclusion is contradicted by the demonstration relating to fig. 5 (BRITISH MEDICAL JOURNAL, p. 687); since, if the line A B be drawn in the direction of an internal intercostal fibre, it will be shortened by depressing the ribs in the posterior part of the space, and lengthened by the same movement in the anterior half of the area; or, to use Dr. Humphry's method of illustration, the angle A D B will be increased by



the depression of the lines A E and C B, but the angle A′ D′ B′ will be lessened by the depression of the lines A′ E, C′ B′.†

3. Again, it must be remarked that Mr. Hutchinson's straight-line figures, although they come short of strict truth, yet they give a less incorrect view of the area of operation of the internal intercostal fibres than the geometrical diagrams used in the lectures. Mr. Hutchinson's figures show the costal cartilages rising to meet the sternum at a point in the rib-circuit which is practically true to nature; but the semicircular lines representing ribs in the illustrations to the lectures, bring the points, at which the costal cartilages may be supposed to commence their rise, exactly midway between the sternum and the vertebral column, a circumstance which is never found in human beings. It is acknowledged that the internal fibres are levator in their action within the intercartilaginous area, and that they are absent behind the angles of the ribs—*i. e.*, for about one-fourth of the true intercostal area, but there remain three-fourths of the space, in which the slope of the ribs is such that even Dr. Humphry would acknowledge their depressor or expiratory action, were it not that, in his opinion, this tendency is counterbalanced by the obliquity of the plane in which they act, owing to the widening diameter of the lower ribs. Unless this latter circumstance can be shown to be overwhelming in its effect, therefore, it must be allowed that the internal fibres in the whole of the true intercostal area are depressor muscles, and that they are expiratory in their function.

4. Now, the tendency of the increasing diameter of the lower ribs is indeed to diminish the depressing force of the internal muscle; but Dr. Humphry is hardly correct in stating that it increases the levator effect of the external intercostals, since it diminishes the obliquity of their fibres to the ribs in the same ratio as it diminishes that of the internal muscle. Its influence, however, upon either set of fibres is so small, even where the obliquity of the plane of the intercostal space is considerable, that it can interfere but very slightly with their special action; and in the lower regions of the chest, where the ordinary depressor action of the internal muscles would have most play, its effect

* In the case of the fifth rib, this joint sometimes allows its anterior extremity to rise vertically upwards to the extent of two inches.

† I would refer those who wish for direct proof of this "double action", to the conclusive experiments of Traube (*Gesammelte Beitrage*, pp. 160-164), from which he deduces (1) that the true intercostales interni are not rib-raisers, and (2) that the true intercartilaginei act during inspiration in difficult breathing.

may be said to be imperceptible. The extent of the influence may be calculated with a fair approximation to accuracy by measuring the slope of an intercostal space, the distance between the two ribs, and the length of an intercostal fibre. The influence of the widening diameter of the ribs may then be regarded as measured either by the lessening of the angle at which the fibre is set in relation to the rib, or by the supposed shortening of the fibre itself.

It may be stated that when the distance between the ribs is 0.50 inch, and the length of an intercostal fibre is 0.62 inch (a supposition based upon the drawings of Cloquet and Quain), and when the slope of the intercostal space is even as much as 20 deg., the effect of this slant of the walls of the thorax upon the length of the fibre would be as 62 to 59, and the diminution in the obliquity of the intercostal fibre would only be about 4 deg. (53 deg. 45 min. to 57 deg. 55 min.).

I should, from my own observations upon the movements of points on the chest-wall, be inclined to assign a different effect to this increasing diameter of the lower ribs. I have found an amount of backward and forward thrust of the ribs in forced breathing, which is altogether unaccountable if the ribs be supposed to be rigid levers; and careful direct measurements with callipers show that during extreme expiration the ribs are distinctly drawn in, their antero-posterior diameters in some cases being lessened by as much as 0.5 inch. Now the most probable agents in effecting this indrawing of the ribs are the intercostal muscles, especially the internal fibres; and it may readily be seen that when they are all working together, and when both the abdominal muscles are contracted and the clavicles and upper ribs are fixed, the resultant of the combination of these forces will tend to draw the ribs inwards, especially in the upper regions of the chest, where the greatest amount of horizontal movement is actually found.

I dare not speak dogmatically upon a question respecting which the most able anatomists are at variance; but, from a review of the works of others, and from careful experiments of my own, it has seemed to me most probable that the intercostals have a very mixed function; that, when the upper ribs are fixed, both sets of fibres may act together as levator muscles; and again, when the upper ribs are released and the lower ones drawn down and fixed by the abdominal muscles, both sets of fibres may draw downwards, and in this latter case they both tend to draw the ribs directly inwards, and so constrict the chest. But the two groups of muscles may also act independently; and in that case, if the external intercostals act alone, they raise the ribs and separate their ends, being assisted in doing this by the true intercartilaginous muscles; but when the internal intercostals alone come into play, they draw the ribs downwards, bend them inwards, and press their anterior extremities towards one another.

A QUESTION CONCERNING HYDROPHOBIA.

By GEORGE F. BURDER, M.D., Physician to the Bristol General Hospital.

Is there Evidence sufficient to warrant us in connecting the Group of Symptoms which we term Hydrophobia with the Bite of a Rabid Animal?

Many will, no doubt, consider this question superfluous, and some will think it absurd. I venture to submit the following considerations as at least justifying its discussion.

1. The period of incubation which the received theory assumes—a period ranging from a few weeks up to twelve months or more—being entirely without parallel in the history of disease, demands very strong evidence for its acceptance.

2. In the infinite variety presented by spasmodic nervous diseases of idiopathic origin, cases occur which cannot easily be distinguished from hydrophobia. For proof of this I refer to the second of the two cases recorded in Watson's *Practice of Physic*, of which it is said that "several medical men of much sagacity and experience" believed the patient to be suffering from hysteria.

3. Authorities on dogs are not agreed as to what disease it is which, when engrafted upon man, developes into hydrophobia. Witness the recent controversy in the *Times*. Generally we are told that rabies in the dog produces hydrophobia in man. Not at all, says Mr. Grantley Berkeley; it is hydrophobia in dogs which produces hydrophobia in man. Canine rabies and canine hydrophobia are, according to Mr. Berkeley, two distinct diseases. The former is common, not attended with dread of water, capable of easy cure, not communicable to man. The latter is rare, marked by horror of water, communicable to man, and absolutely mortal to both man and dog. Mr. Berkeley, no doubt, writes from his own observation when he insists on the innocence and curability of rabies. In his views respecting canine hydrophobia, one may be allowed to suspect an unconscious mental compromise with the popular theory.

4. There must always be in the community a very large number of persons, who within the previous twelve months have been either bitten or licked by a dog or cat; and these persons, no less than others, will be liable to idiopathic nervous disorders.

5. The idea of the connection between hydrophobia and the bite of an animal having once taken hold of the mind, evidence of a bite, if it cannot be discovered, will generally be invented. Every one knows how constantly facts are distorted to fit preconceived notions.

6. Notwithstanding the operation of the two last named causes, cases are every now and then reported in which it is admitted that no evidence of a bite could be supplied by either the patient or his friends. The first of the two cases which Sir Thomas Watson relates may fairly be said to come within this definition. The back of the patient's hand had been "struck" by the teeth of a terrier, but the testimony is positive that no wound had been inflicted.

7. In a large proportion of cases of hydrophobia, there is no proof whatever of the animal which gave the bite having been mad. In many cases it was a strange dog, of which nothing further was known. In others, the dog was undoubtedly ill, but was destroyed before the nature of the illness could be determined by a competent authority. It is worthy of note that in neither of Sir Thomas Watson's two cases is it shown that the dog was mad. In the first case the point is not referred to. In the second, the only evidence is that of the "mob of boys" who had been pelting and chasing the luckless hound.

8. The late Mr. Youatt was many times bitten by mad dogs, yet never contracted hydrophobia. He may, it is true, have been insusceptible of the disease, or the precautions which he took may have protected him. These considerations, however, while they weaken, do not destroy the value of the argument derived from his exemption.

9. It is in accordance with observed facts to hold that the force of imagination might be sufficient to develope the symptoms of hydrophobia in persons of a nervous temperament, who, having been bitten by an animal supposed to be mad, had been thereafter haunted by the apprehension of the terrible consequences believed to be impending. The occurrence of several cases in the same district about the same time might be so explained, and would be no more wonderful than many of the epidemics of imitative nervous disease with which the records of medicine abound.

10. In a discussion on the etiology of disease, it cannot be out of place to insist on the tendency of the human mind, in all times and places, to assign to every malady some outward and palpable cause. Epileptics were formerly "possessed of a devil". Witchcraft, in later times, has been made responsible for most of the ills that flesh is heir to. The untrained mind abhors a vacuum, and cannot endure not to know. Hence it happens that progress in pathology is marked not less by the exposure of old fallacies than by the development of new truths. In our own day some reputed causes of disease have been, or are being, abandoned, and perhaps others are destined to share the same fate.

IS HERNIA CURABLE?

By CARSTEN HOLTHOUSE, F.R.C.S.,
Surgeon to, and Lecturer on Surgery at, the Westminster Hospital.

In the JOURNAL for October 12th, a "Metropolitan Surgeon" asks:

"1. Can any reader state, from his own personal knowledge, the circumstances of a case or cases of inguinal or femoral hernia (congenital or from other causes) cured permanently by the use of trusses? If cured, then in what manner? by closure of the 'rings', or by obliteration of the canals in consequence of the pressure of the truss-pads?"

"2. Has any demonstrator of anatomy in the dissecting-room had the opportunity of dissecting the subject of a radical cure of hernia—radically cured by truss-pad pressure or by operation?"

In reference to the first question, I shall be happy to refer the writer to several cases which have come under my notice of the radical cure of hernia by truss-pressure; and I imagine there can be few men in much practice, especially midwifery practice, who could not, from their own personal knowledge, testify to the frequency of cures of congenital inguinal hernia by this means. The familiar facts of the great frequency of hernia in infancy and its rareness in boyhood, surely point to the same conclusion. Thus, on referring to a Report of the City of London Truss Society, a copy of which, for the year 1869, I happen to have by me, I find that, of 7,628 patients who were supplied with trusses in that

year, 885 were under 5 years of age; but only 229 between 5 and 10, and 215 between 10 and 15. Now, whence this falling off? Either the little patients must have died or been cured; that they have not died, at least in anything like the same proportion, may be inferred by comparing the number of children alive in London at these two quinquennial periods with the total population of London. I have no data at hand as to the population of London in 1869; but I cannot be far wrong in assuming that the proportion of the infant population under ten years of age to the total population, remained the same as it was at the census of 1851—this was 1 in 8.004 under 5 years of age, and 1 in 9.69 between 5 and 10; there are, therefore, almost as many children living between 5 and 10 years of age as there were under 5, yet those affected with hernia have diminished by nearly three-fourths. I hold, then, that there is incontestable evidence of the curability of congenital inguinal hernia in the child; and the evidence is almost as conclusive that it has been effected by the use of the truss.

As to the *modus operandi* of the cure of infantile congenital hernia, whether by closure of the rings or by obliteration of the canals in consequence of the pressure of the truss-pads", I am of opinion that the truss cures, not so much directly by its pressure, as indirectly, by preventing the escape of the viscus from the abdominal cavity. In these cases, Nature herself comes to our aid—a bargain is struck. If, says she to the surgeon, you will undertake to keep that little bit of bowel out of my way, I will undertake to close that small passage which I was engaged in doing till interrupted by the intruder. If this view be correct, the cure would result neither from the closure of the rings nor from the obliteration of the canals, but from a simple completion of that process which birth had interrupted.

The great frequency of inguinal hernia in infants is, in fact, due to a retardation of that natural process which we call the descent of the testis: the process has not been completed quite in time; birth has taken place a little too soon, and the vaginal canal which should have been closed and obliterated remains open. If birth could be delayed for a month, congenital hernia would probably be a rare occurrence. As regards the curability of non-congenital inguinal and of femoral hernia by truss-pressure, the evidence is also conclusive, though the occurrence is comparatively rare. This is what might be expected from the different conditions one has to deal with; for whereas in the congenital form of hernia we have seen there is merely retarded development, here we have to do with actual disease. There has been a giving way—a yielding or rupture, as was formally supposed—of a texture already fully formed; a stretching or elongation of this into a pouch (the hernial sac), and a gradual yet forcible separation of tissues which are normally united. As, then, the conditions are different, so is the mode of cure. In these cases, the truss-pad acts both directly and indirectly: directly, by its pressing together the walls of the sac and of the inguinal canal; and, indirectly, by preventing the entrance of the hernia, and so contributing to the natural tendency which the orifice of the sac has to contract whenever the herniated organs cease to act upon it. There is another mode of cure which I have witnessed more than once in cases of femoral hernia: the mouth of the sac becomes plugged by a piece of omentum, which the pressure of the truss-pad has caused to adhere, and thus the further descent of a hernia is prevented, while the original protrusion is effectually cut off from the peritoneal cavity.

The second question of "A Metropolitan Surgeon" I cannot answer; but I can give him the dissection of a case radically cured by operation. It is taken from the *New York Journal of Medicine* of March 1868.

"A German, forty-seven years of age, affected with a scrotal hernia of the right side, was operated on by Professor Carnochan after Dr. Rigg's method. On the 2nd of May, 1857, the operation was completely successful. Towards the latter end of July, pulmonic symptoms made their appearance; and, on the 9th of September, he died of tuberculosis of the lungs.

"*Post Mortem*, September 10th.—Upon opening the cavity of the peritonenm, the orifice to the hernial sac could not be traced, the internal ring being firmly closed around the cord. On the outer side of the peritoneum, and just below the situation of the internal ring, was found a small rounded body of a yellowish colour, supposed to have been the remains of the hernial sac. The upper portion of the inguinal canal, for nearly an inch, was closed by plastic exudation, which had become organised and somewhat fibrinous in its appearance; while the canal at its lower part, and the external ring, were to appearance in their normal condition, though the cord throughout the entire length of the canal seemed to be imbedded in plastic formation."

It must be explained that Dr. Rigg's method of operating for the radical cure of hernia consists in the introduction of a skein of silk into the inguinal canal; and the skein of silk used in this case being too large for the puncture made by the instrument, it was not introduced more than one inch, which will explain the fact of the lower portion of the canal and external ring being in their normal condition, while at its upper portion both the canal and internal ring were firmly closed.

IS HERNIA CURABLE?

By JOSEPH LAWRENCE, M.R.C.S.Eng., Bath.

In answer to "Surgical Queries" of "A Metropolitan Surgeon" in the JOURNAL of the 12th instant, several cases of congenital hernia in children I have known to be radically cured by truss. To be refreshed in memory, I have to-day seen a little boy, five years old, in whom congenital inguinal hernia of right side was detected when he was a month old. Two well-fitting ordinary spring trusses were at once ordered, so that when one was wetted a dry one might be applied; and these were alternately worn night and day, with strict injunctions to the nurse to place her finger on the ring when removal for washing or changing was necessary, so that the bowel was never allowed to descend. New trusses were, of course, made from time to time as the child grew. This treatment was strictly adhered to until the child was two years old; the trusses were then omitted by night, but worn by day for another half-year; they were then discontinned; and, up to this date, two years and a half, there has been no return of the hernia.

On examining this little fellow to-day, I found a distinct depression and absence of the fatty deposit where the truss-pad had been applied, the skin being tied down to the tendinous structures beneath; and the latter appeared firmer and more resisting on pressure than on the opposite side. In the treatment of hernia in infants, there are two circumstances favouring radical cure which do not obtain in the adult, viz.: 1. If the bowel be never allowed to descend, the opening does not increase, but the bowel does; 2. The fibrous tissue surrounding the canal and rings become firmer each month.

ETHER AS AN ANÆSTHETIC.

BY HENRY TRENTHAM BUTLIN, M.R.C.S.,
Assistant-Surgeon to the West London Hospital; late Registrar and Chloroformist to the Hospital for Sick Children.

AT a time when many deaths from the administration of chloroform are being reported, I am glad to find Mr. Morgan advocating the claims of ether as a safer anæsthetic. Although this has been done occasionally during the last few years, it has never been insisted upon sufficiently, and has not been backed up by those who are in the habit of largely administering anæsthetics, Now, however, I think everyone who has had much experience in the employment of these two reagents must allow that it is quite worth while to give ether a fairer trial than it has yet had in this country.

There appears to be a particular class of cases in which chloroform is especially dangerous; and this class of cases we have at present no means of diagnosing. That it includes a large number of cases of greater or less fatty degeneration of the heart, is evident from the most carefully conducted necropsies. The histories of most cases of death from chloroform would further point to cardiac weakness, analogous in some way to that produced by fatty degeneration.

It is well known that chloroform, given in small doses to a *healthy* animal during a considerable time, at first stimulates the heart's action, but later depresses it; given in large doses, however, it acts almost immediately as a depressant to the heart's action: but even the smallest dose, where the heart is affected with fatty degeneration, appears to act as an immediate depressant, and, after a few faint attempts to continue to beat, the diseased heart ceases to act, and cannot be aroused again.

From experiments on animals, from my own experience, and from the much greater experience of many American surgeons with whom I have spoken on the subject, I believe that these are just the cases in which ether may generally be safely administered. The experiments made by the committee appointed by the Royal Medical and Chirurgical Society in 1864, showed that ether acted much less strongly and directly upon the heart than chloroform: and I have often had the opportunity of noticing, whilst giving ether at the Hospital for Sick Children, that even at the end of a long and severe operation, the pulse has increased in force and frequency rather than diminished.

When we possess some easy method of diagnosing these affections of the heart, we may then employ ether only in those cases in which they are supposed to exist; but, until then, would it not be wiser to employ ether generally, at least for adults? If no other good results be gained, the fear of chloroform which at present prevails will be removed—a matter of no small consequence.

The inconveniences of ether are not nearly so great as is imagined—

a fact which Mr. Morgan has somewhat too partially pointed out. The quantity of ether required to produce anæsthesia is certainly large ; but the time required is little, if at at all, longer than for chloroform anæsthesia. The long-continued sickness, which is by no means uncommon after chloroform, is almost unknown after ether. The mouth-piece at present in use is cumbersome and occasionally in the way ; and this, combined with the fact that patients quickly recover from ether anæsthesia, renders it of difficult employment in some few operations. But I doubt not that, as we become better acquainted with its use, we may learn some more convenient and perhaps economic mode of administering it than we now know.

A CASE OF FOOT-AND-MOUTH DISEASE IN THE HUMAN SUBJECT.

By WILLIAM T. BRISCOE, B.A., M.B., Chippenham.

I AM desirous of communicating to the members of my profession a short note of the following case, in the hope that some of them may have met with a similar one, and may consequently be able to give their experience as to the best line of treatment to alleviate, and, if possible, shorten this terrible malady.

Miss L., the daughter of a farmer, had always been delicate, but had enjoyed better health than usual last spring and summer. She assisted in the work of a large dairy, the cows of which, during the months of June and July, had been affected with foot-and-mouth disease. She had occasionally fed and milked the sick cows, but was very careful to wash her hands afterwards. She was not aware of any cut or scratch on her hands or arms. She used a considerable quantity of milk as an article of diet ; but the family did not drink the milk of the cows while they were suffering from (at all events) the acute stage of the disease. She had not felt well for the last six weeks, and had complained of lassitude, loss of sleep, appetite, and vertigo.

August 20th. On examination, the mucous membrane of the mouth was very sore to the touch ; there was considerable inflammation of the tongue and lower lip. The submaxillary and sublingual glands were found hard, nodulated, and painful. The gums were red, and the teeth very sensitive. She said they were loose, but refused to let me examine them. Her pulse was 88 ; temperature, 99 deg. Fahr. Altogether, the symptoms much resembled those of salivation. A mild saline aperient was ordered, and a mixture containing bark, chlorate of potash, and ammonia. The mouth was ordered to be well rinsed out with lukewarm water.

August 21st (Morning). All the symptoms were much worse. The tongue was protruding two and a quarter inches out of the mouth ; it was so increased in thickness that the teeth were wedged into it. She could not separate her jaws far agart. A peculiar odour was on the breath. Her lower lip was much increased in thickness ; the glands, also, were much harder, larger, and more painful. She could not articulate a word, but wrote on a slate that she was in great pain in the back part of her mouth, evidently at the root of the tongue. The breathing was much impeded, and it was almost impossible for her to swallow any nourishment. A free incision in the tongue seemed at first sight indicated; but, on consideration, I decided to postpone the operation till the evening, fearing excessive hæmorrhage in so delicate and anæmic a person ; nor did I think much relief would follow from the state of the tongue itself. The discharge was more profuse ; pulse, 104 ; temperature, 101 deg. Warm poppy-head fomentations, with constant nourishment, beef-tea, milk, cream, etc., were ordered. In the evening, the symptoms were much the same as in the morning. The breathing was rather easier. I passed a needle deep into the tongue ; no fluid escaped. Pulse, 108 ; temperature, 101.5 deg. I desired the friends, should suffocation seem imminent, to send for me at once. The treatment was continued.

August 22nd. In the morning, she seemed better ; the skin was moist ; she could take her nourishment a little better ; the breathing was easier ; the discharge more profuse. She complained still of deep-seated pain in the tongue. Pulse, 98 ; temperature, 99 deg. In the evening, my friend Mr. Spencer saw the case, and agreed with me in considering it similar to the disease often met with in cattle in this neighbourhood. The discharge was now very profuse, running continually from the mouth.

The patient continued in this state till August 27th, when the discharge became thicker and more fœtid. She could now take nothing but milk ; anything else causing much pain to the ulcerated mucous membrane. The disease pursued the same course, the discharge becoming dreadfully fœtid ; sloughs also peeling off the tongue. She refused to allow a gargle or enema to be administered. Her mouth was well syringed out with weak solutions of carbolic acid and Condy's fluid ; and we thought that in the event of the least hæmorrhage she must sink.

On September 17th, hæmorrhage occurred from the under portion of the tongue, when she lost about two ounces : it recurred on the 18th and 19th, but was arrested by pressure and tincture of the perchloride of iron. She now began to improve very slowly, the discharge becoming thinner.

On September 25, the tongue had receded to the outer margin of the lower lip, and she was able to articulate a little.

October 4th. She was down stairs, and able to speak so as to be understood. The tongue had nearly resumed its natural size. The power of deglutition was still very weak, but she could swallow solids in the form of a pill.

The question of incision of the tongue is, I think, an open one : we must be guided by circumstances. I have met with a much milder form of the disease, which occurred in three young children who had drunk the milk from diseased cows ; but it readily yielded to a little caustic applied to the ulcers and tonic treatment : but I cannot hear of so severe a case as Miss L.'s occurring in the practice of any of my friends. The character of the disease in the human subject seems to differ from that in the animal, in running a much longer course, and in the feet not being affected. Miss L.'s case also affords an example of the wonderful life-sustaining power of pure milk : she took nothing else from the 25th August to the 29th September, thirty-six days.

A CASE OF UTERINE HYDATIDIFORM OR VESICULAR MOLE.*

By JOHN M. BRYAN, M.D., F.R.C.S.Eng., Northampton.

MRS. —, aged 38, a healthy lady residing in the country, had three children (the last born seven years since), with one previous miscarriage. She had her last catamenial period on the 25th May, 1871, which continued four days, and soon afterwards she thought herself pregnant (having missed one period); and at the end of July she had an accident which was followed by some little uterine sanguineous discharge for a day or two. On August 1st she left her home for the sea-side, and a few days afterwards had constant sickness, etc. She was under medical care for about six weeks, being confined to her bed, and unfit to be removed home. Her abdomen continued to enlarge, and eventually she returned home on September 19th. I saw her for the first time, and examined her on the 22nd. The breasts were moderately large and somewhat full. The areolæ were dark and fully marked, as in a pregnancy of four months. The uterus had the feeling of a soft and rather firm fleshy swelling, not particularly sensitive when pressed ; it extended quite across the abdomen, and reached as high as the umbilicus. The patient thought she felt movements, as of a child. On careful examination with the stethoscope, no pulsation nor bruit could be detected ; percussion gave a somewhat dull sound in all parts of the enlargement, and I was satisfied in my mind that some irregularity existed in the pregnancy. She had had for six weeks an inodorous sanguineo-aqueous discharge. She was reduced greatly in flesh, having retained little food of any kind for a length of time.

On examination *per vaginam*, the cervix uteri was found almost entirely obliterated, even more than the time of the pregnancy would warrant ; there was a somewhat granular feeling around the cervix ; and within the os (which was high up) nothing could then be distinguished.

Believing that miscarriage would be the best thing to happen, I prescribed half-drachm doses of Battley's essence of ergot three times a day ; and for the sickness, drachm doses of Schacht's solution of bismuth, with five-minim doses of dilute hydrocyanic acid in effervescing mixture of citrate of potash, with good effect. She had enemata, which brought away much scybalous matter, evidently long accumulated. She continued in much the same state, save that she had a distinct rigor on September 25th, until October 3rd, when she had had regular pains. On vaginal examination, I diagnosed a pulpy formation presenting at the os uteri ; and about 2 A.M. on the 4th she expelled a large mass consisting of hydatidiform or vesicular formation, combined with an apparent placental form, amounting to about two pints. The mass consisted of little bladder-like substances, connected in series like beads, and connected to the placental formation and an old firm clot paler than usual. The mass came away nearly altogether ; and a subsequent smaller mass was expelled about six or eight hours afterwards. On October 5th, the discharges being rather offensive, I directed the

* Read before the South Midland Branch.

vagina to be syringed out with Condy's fluid, two drachms to one pint of water, with good effect. From this time she slowly improved, although much reduced from the long continuance of discharged sanguineous fluid ; and she gradually attained her usual health and *embonpoint*, under a course of quinine and iron and full diet.

REMARKS.—I have occasionally been told by medical friends that they had a case of uterine hydatids, inferring that they were the same as found in the liver and other parts of the body. It is probably known to all present, that hydatid-like bodies have been discharged from the uterus ; and the resemblance between these bodies and hydatid cysts formed in other parts of the body, was sufficient to induce the older observers to consider the two identical. Later inquiries have proved that these bodies discharged from the uterus are not true hydatids, but that they are the product of conception, and have, indeed, nothing in common with true hydatids further than a slight external resemblance. The tendency of all modern research has been to demonstrate that the genuine mole cannot occur, except as the result of impregnation and the degeneration of the true ovum.

Cruveilhier first conclusively demonstrated its non-hydatid character, and expressed the belief that the hydatid-like cysts were the result of a transformation of the blood-vessels of the placenta. Since his time much has been said and written as to the nature and mode of origin of these bodies. The early stage escapes observation, as stated by Graily Hewitt, Montgomery, Barnes, and others. What are the circumstances determining the alteration? It has been universally supposed that disease of the chorion is the cause, death of the embryo the effect. In my case, an accident occurred causing a great shock to the system and a sanguineous discharge from the vagina, and probably uterus ; and no doubt, then, the death or blighting of the embryo took place.

In 1860, Dr. Barnes considered that the disease consisted in a perverted development force in the budding out which occurs in the chorion, so that, instead of growing into villi, it may dilate into true vesicles or hydatidiform cysts ; other views have been given which would take too much time for me to enter into.

HEAVIEST RECORDED BRAIN.

By JAMES MORRIS, M.D.Lond., Fellow of University College.

THE following case, with its heading, if not now correct, is taken from my notes, made at the time, which were authenticated by Mr. Moncrieff Arnott. I believe it has not been before published.

On October 3rd (I think the year is 1849) there was admitted into University College Hospital James Hursey, aged 38, bricklayer, a robust-looking man. Ruptured seventeen years before, he had left off his truss for two or three years : now the rupture was down, and could not be returned. It was right inguinal, small and tense, with no impulse on coughing. In the evening, Mr. Arnott operated. The sac was opened ; much serum, tinged with blood, ran from the abdomen ; the omentum was adherent to the sac ; the constricted bowel, of a dark mahogany colour, but shining surface, was returned. He did well at first, but died two days later. Erysipelas and pyæmia at that time prevailed in the hospital. Of ten successive cases of strangulated hernia operated on by several different operators, and treated afterwards on the most diverse principles, only one survived. In that case (Mr. Marshall's), the sac was not opened.

The *post mortem* examination of Hursey disclosed peritonitis, a serous cyst in the liver, some damage to the kidneys, old pleuritic adhesions of the right side, recent lobular pneumonia (result of pyæmia), and some hypertrophy of the left ventricle of the heart. The weight of the brain, taken immediately on removal, exceeded sixty-seven ounces. This weighing was most carefully made, and was witnessed by several students. The brain was well proportioned; the convolutions were not flattened ; though the surface was fairly moist, it only lost about one ounce weight after the usual dissection and draining for two hours. The specific gravity was not taken. The cerebellum and pons were separately weighed ; of these I have not the figures, but there is no reason to suppose that they were disproportioned to the rest of the brain, as in the cholera case recorded by Dr. Parkes.

Hursey's height was five feet nine inches and a half. There was the utmost difficulty in obtaining a satisfactory history of him. His wife and his landlady gave different accounts. It seemed that he was a native of Sussex (Dr. Parkes' case was an Irishman), and had left his village and changed his name on account of some poaching troubles ; that he was not very sober, had a good memory, and was fond of politics. He could neither read nor write.

OBSTETRIC MEMORANDA.

CRANIOTOMY IN A TWIN-LABOUR.

IN June last, after a severe and lingering labour in a primapara, with a very small female child, I was compelled, by the following circumstances, to deliver by craniotomy a second large (male) child : a distorted pelvis, inability to turn, impacted head, convulsions, pains absent, and failure of the forceps. The first child was revived with difficulty by artificial respiration, the warm bath, etc. The size of the second and the disproportion of the pelvis justified the operation. The mother recovered well, only suffering for a few days from headache and drowsiness, with dilated pupils.

Melbourne, October 1872. W. M. KNIPE.

ABSENCE OF THE UTERUS AFTER FREQUENT PREGNANCIES.

I.

I HAVE twice met with cases of absence of the uterus since 1867 : one occurred in my own practice, and the other at the Samaritan Hospital. Both women had borne children and passed the menopause ; and, further than a slight dimple at the top of the vagina, there was nothing to be felt, and certainly no opening where a sound could be passed and turned round. I cannot imagine where the sound could be thrust and twirled with impunity, as in the case published by Mr. Whitehead, if not in the uterus.

Whilst looking through my private case-books. I have come across the following, which I have tabulated in order, and think may be interesting.

Absence of Catamenia.

Came under notice. Date.	Initials.	Age.	Menstruated	Condition.	State.
July 1867...	E. W.	22	Never.	Normal.	Single.
Nov. 1868.	J. H.	22	Never.	Normal.	Single.
Jan. 1869..	C. H.	24	Never.	No vaginal or internal organs of generation.	Married.
April 1871.	J. P.	19	Never.	Normal.	Single.
June 1871..	J. P.	18	Never.	Normal.	Single.
June 1871..	R. R.	18	Never.	Normal.	Single.
Aug. 1871.	A. W.	33	Never.	Uterus one inch and a half long.	Married 10 years.
Aug. 1872.	E. K.	29	Twice.	Uterus very small ; cervix size of a bean.	Married.

REMARKS.—None of these have suffered any inconvenience from absence of catamenia. C. H. was not aware of her malformation till after marriage. She has had the tissues successfully divided to the depth of two inches and a half.

PERCY BOULTON, M.D.,
Physician to the Samaritan Hospital.

II.

I THINK there is a much more feasible explanation of Mr. Whitehead's case than he has advanced. That the uterus should disappear absolutely after pregnancy, only a *post mortem* examination could allow us to entertain for a moment. My belief is, that Mr. Whitehead's case is really one of extreme involution, and that he has perforated the fundus by the sound—an occurrence to which I have repeatedly drawn attention.

LAWSON TAIT, Birmingham.

THERAPEUTIC MEMORANDA.

USE OF PHOSPHORUS IN NEURALGIA.

"HAPPY are they that hear their detractions, and can put them to mending." I have recently learnt a lesson from the homœopaths which is worth knowing. I lately had a patient of a highly excitable nature, who suffered from severe and frequently repeated attacks of neuralgia of the chest-walls. I ran through all the orthodox treatments for neuralgia from the hyssop on the wall in the shape of quinine, even to the cedar of Lebanon, or blisters and arsenic to eye-soreness. Nothing, however, did him any good ; neither poppy nor mandragora (I am not quite sure about the mandragora) gave him more than temporary relief;

when the lethargy caused by a narcotic drug passed away, the pain was found to be unabated. I consulted Ringer and Buchheim, and gave him courses of carbon, with which they head the list of remedies ; and this failing, I went steadily through the catalogue until I came to chamomile, with which they end the list, and which was as serviceable as the rest. One day I missed him ; but the next he came to tell me he was cured, and by a homœopath. He brought the magic secret with him, which was simply a couple of drops of the mother tincture of phosphorus in a little glycerine. There was no mistake about it, he said ; he was in agony; he swallowed the draught, and in two minutes he was well. Since then my patient, who had to go to the homœopaths to be cured, never travels without a small bottle of the mother tincture of phosphorus (phosphorus dissolved in alcohol in the proportion of 1 to 10) in his pocket. The attacks are becoming very much rarer ; but when they occur, a couple of drops equal to one-fifth of a grain of phosphorus—a homœopathic dose, by-the-bye, larger than anything dreamt of in our philosophy—never fails to give entire relief. I have since used the drug whenever I met with what I thought a suitable case, and have every reason to be satisfied with it. It will not cure every case, but where the neuralgia is accompanied by much nervous waste, as is often the case in the nervous and sanguineo-nervous temperaments, then it rarely fails to put an end to the paroxysm. Romberg calls neuralgia the cry of the hungry nerve for blood ; it would, perhaps, be more correct to say, it is the demand for its special food, which is phosphorus contained in the blood. This at least seems to me the *modus medendi* which phosphorus effects in curing neuralgia.

S. M. Bradley, F.R.C.S., Manchester.

STYPTIC COLLOID AS A LOCAL APPLICATION IN ERYSIPELAS.

I am desirous of calling attention to the great value of Dr. Richardson's styptic colloid as a local application in erysipelas. It will usually be found sufficient to paint it freely over the affected surface about twice in twenty-four hours, though there can be no objection to using it oftener should the comfort of the patient require it. Its application will be found to be almost immediately followed by relief from the peculiar stinging sensation and feeling of tenseness in an erysipelatous part, and it seems to have a decided effect in arresting the progress of the disease. It has the additional merit of affording protection from air, it has an agreeable odour, and it is cleanly. Its disinfectant properties, too, would probably be useful in preventing the diffusion of the materies morbi in hospitals.

George F. Elliott, M.D., Hull.

CLINICAL MEMORANDA.

TÆNIA IN THE NEW-BORN INFANT.

The British Medical Journal of August 17th contains a commnnication from Mr. G. Armour, in which it is stated that an infant, five days after its birth, commenced to pass well matured tænia solium. I will make an attempt to explain this observation. Having examined under the microscope, immediately after birth, the contents of the mouth of the new-born child, I have discovered (*vide Die Parasiten der weiblichen Gesehlechtorgane des Menschen und einiger Thiere*, etc., Berlin, 1870) that they contain not only the pavement-cells of the mucous membrane, but also, in nearly all cases, materials derived from the maternal vagina—viz., mucus, blood, vibriones, trichomonas vaginalis, vegetable spores, leptothrix vaginalis, oidium albicans, and sometimes those bodies which I have called "wandering parasites" of the vagina, as the eggs of tænia solium, etc. Further, I have found in the mouths of newly born infants portions of the contents of the maternal bowels that have been expelled during labour, such as undigested muscle-fibres and vegetable spores, which manifestly, during the passage of the child's head, penetrated into its mouth from the soiled perinæum. Therefore, I have said (p. 133) : "Although the quantity of vegetable parasites that enter the child's mouth with the intestinal contents may be of no importance, it is otherwise with the introduction of animal parasites or their ova ; and herein perhaps lies the key to the explanation of the cases now and then recorded in literature, where infants have been very early infected with various animal parasites." In Mr. Armour's case I believe, assuming that the mother was not the subject of recto-vaginal fistula, that only portions of tænia could have penetrated after the birth of the head into the child's mouth from the soiled perinæum of the mother. Their late evacuation, on the fifth day, can be perfectly explained through the accumulation of the meconium. Dr. Haussmann.

Berlin, October 1872.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

GUY'S HOSPITAL.

REPORTS OF CASES OF ANÆMIA OF OPTIC NERVE TREATED WITH THE HYPODERMIC INJECTION OF STRYCHNIA.

By C. J. W. Pinching, Late Dresser in the Eye Wards at Guy's Hospital.

Hypodermic injection of strychnia has of late been used at Guy's Hospital in many cases of anæmia of the optic nerve. The solution used consisted of eight grains of the nitrate in an ounce of distilled water. I commenced by injecting ten minims into one of the temples three times a week, and increased or decreased the amount as seemed necessary. A very large amount of the injection (twenty-five minims) was used in some cases without any bad symptoms. In the cases that improved under treatment, one eye only seemed to recover ; but although the patients were on the whole able to see much better, no change was observable by the ophthalmoscope.

The test-types referred to in the following report of cases are those of Dr. Snellen of Utrecht.

Case I.—Sarah M., aged 36, married ; no family ; catamenia regular. Three years ago, her right leg was paralysed. She had regained use of it since, and had walked for the last twelve months. At the time of the seizure, her sight became so dim that she could not read ; her left eye became worse, and for the last eighteen months she had scarcely been able to see the window with it. She could see with her right eye to go about. On admission, her right eye was sensitive to reflected light, and with it she could see coloured letters on a black ground (type xx), one or two of which she could distinguish. With her left eye she could not see reflected light, and called the A of type C C something black on a white ground. The ophthalmoscope showed in both eyes an optic disc, white throughout, and the veins of the retina somewhat dilated, but much below par as regarded number.

In this case, I injected ten minims three times a week for a fortnight, with slight improvement, the patient being able at the end of the time to read three letters of type vi with her right eye. I then increased the amount to fifteen minims, and continued for another fortnight with steady improvement, the patient being able to read all type iv, and some few letters of type iii. I increased the amount to twenty minims ; after the first injection she was giddy, and could not walk for a short time, but after this there was no bad symptom. I continued for a week, when she had to go into the country for a month. She was now able to read type iii well with her right eye ; her left eye had made no improvement. The ophthalmoscope showed no change.

She returned, after a month's absence, in the same condition as when she left. I now continued an injection of ten minims for a month, at the end of which time she could read most of type ii with her right eye. She went away again for three weeks, and returned, her right eye being as well as when she left the hospital, her left having made no improvement since the commencement of the treatment. The ophthalmoscopic appearances remained the same as on admission.

Case ii.—Susan G., aged 24, single, dressmaker, had always enjoyed good health ; her catamenia were regular. Five weeks ago, she found she could not read, and, a little later, that she could not thread her needle ; she gradually became worse.

On admission, she could just see light with her right eye, and could tell when a hand was passed before her face. With her left eye she had good perception of light and reflected light, and could read type xl and a few letters of type xxx. The ophthalmoscope showed that both optic discs were white throughout. In this case, I injected ten minims for a month, with steady improvement ; at the end of this time she was able to read type viii with her left eye. I continued for another month with the same amount, but she made very little progress, sometimes being able to read a few letters of type vii. At this time, she left the hospital, her right eye having made no improvement. The ophthalmoscopic appearances had not changed since admission.

Case iii.—Eliza H., aged 36, single, artificial flower maker, had worked a great deal by gaslight. The catamenia were regular. She could see well with both eyes seventeen months ago. Nine months ago, she could not read with the right eye. At this time, the left eye also became diseased, and she lost the sight of it very quickly; she had not been able to see her way about for six months. There was no history

of bad sight in her family. She had had pains in her head for two years. On admission, she could just distinguish the windows and fire with both eyes. The ophthalmoscope showed, in the right eye, slight anæmia of the optic disc, and numerous atrophic black pigment patches throughout the choroid. In the left eye, the optic disc was slightly anæmic. The blood-supply to the retina was defective ; the veins were slightly varicose. In this case, I injected ten minims for a fortnight, and increased the injection to fifteen minims for another fortnight, without the slightest change taking place.

CASE IV.—Walter H., aged 19, had always enjoyed good health ; had never smoked nor drunk. He could see to read quite well a month ago, when he thought he "caught cold in his eyes", since which his sight had been going gradually.

On admission, perception of light and of reflected light was good with both eyes. He had no discrimination of colours. With the right eye he could see to read type XXX ; with the left he could see the A of type C C. The ophthalmoscope showed in both eyes an optic disc, white throughout, and slight anæmia of the retina. In this case, for three weeks I injected ten minims, with slight improvement in the right eye. I then increased the amount to fifteen minims for a fortnight, with marked improvement, the patient being able to read type X with his right eye, and one or two letters of type LXX with his left, and to distinguish the colours blue and red with both. After a month's absence he returned, still in the same condition. I injected ten minims for a fortnight, when he left the hospital, able with his right eye to read all type IV and most of type III, and to distinguish yellow and blue, calling red purple. His left eye made no further progress. The ophthalmoscopic appearances were not changed.

CASE V.—David M., aged 45, single, an engineer, with no history of syphilis, had smoked largely (an ounce of shag tobacco daily), and drunk considerably of spirits. Eighteen months ago he arrived in Russia with perfectly good sight ; fifteen months ago, while still in Russia, his feet and legs began to swell, and they pitted on pressure. A week after this, his sight failed quite suddenly, and the next day was so imperfect as to compel him to leave off work, which he had been unable to resume, his sight still continuing in the same state.

On admission, he complained of numbness and pain in the feet and legs ; they were not swollen. There were no cerebral symptoms. He had good perception of light and reflected light with both eyes ; he could read type XVIII with his right eye, and type XX with his left. The ophthalmoscope showed, in both eyes, anæmia of the inner two-thirds of the optic disc, and anæmia of the retina ; otherwise they were both healthy. I here injected ten minims for five weeks, with gradual improvement, the patient being able to read type V with his right eye at the end of this time. I then increased the amount to fifteen minims, and continued it for three weeks, but without improvement. The left eye remained the same as on admission. The ophthalmoscope showed no changes.

I also took under my care two of Mr. Pye-Smith's cases (Nos. V and VI, reported in the BRITISH MEDICAL JOURNAL of May 18th, 1872) which had been unsuccessful under galvanism, but, I am sorry to say, without good result.

LONDON HOSPITAL.

TWO CASES OF EXCISION OF ELBOW-JOINT.

(Under the care of Mr. RIVINGTON).

CASE I.—George Garibaldi Marsh, aged 11, came into the London Hospital under the care of Mr. Rivington in January 1871, with strumous disease of the right elbow-joint. He was also the subject of congenital ichthyosis affecting the trunk and the extensor surfaces of the limbs. The elbow presented a doughy swelling without inflammation or sinuses. Pulpy thickening of the synovial membrane was diagnosed. Scott's dressing was tried for some time without improvement. Fluctuation then becoming perceptible, a small incision was made, and some serous fluid, mixed with gelatinous and altered synovia, was evacuated. In the beginning of May, excision was advised and performed. A single straight incision was made, and the olecranon removed with bone-forceps. The joint being exposed, the synovial membrane was found to be extensively diseased, without any ulceration of cartilage. A thin slice only of the humerus and thin slices of the radius and ulna were taken away. It was found very difficult to remove all the synovial membrane, but as much as possible was clipped away. The arm was put up on a straight splint running in front of the elbow-joint, and suspended for some days. Three weeks later, when the wound, which had been dressed and syringed with lotions of chloride of zinc, had nearly closed, passive motion was commenced. The patient soon obtained very good use of his arm, flexion and extension, and pronation and supination being preserved ; but an obstinate sinus remained, running transversely beneath the ligamentoid union of the bones, and resisting various attempts at closure by means of stimulating injections and setons. At last, at the end of October, it was determined to lay the sinus open ; and, when this had been done, it was found that there still existed some remains of the thickened synovial membrane at the bottom of the sinus. The ends of the bones were completely covered in by soft tissue. A small piece of bone which had developed in the tendon of the triceps was removed. The actual cautery was applied to the sinus, the arm placed on an angular splint, and the wound dressed from the bottom. Some days afterwards, granulations sprang up ; but the healing process was so slow, in spite of occasional stimulation with chloride of zinc and lunar caustic, and the use of lotions of nitrate of silver (five grains to an ounce), that it was not completed till the middle of January 1872. At that time the sinus had filled in, and the cut surfaces of the soft tissues between it and the surface had cicatrised, leaving a depression between the ends of the bones, with loss of extending power. It therefore became necessary to refresh the surfaces thus cicatrised, and bring them together with hare-lip pins. These pins were kept in for a week, and, on their withdrawal, strapping was applied. By the end of February, the wound had soundly healed, and galvanism was used to stimulate the triceps. The movements of the joint were nearly perfect, and the limb, if not altogether, was almost, as good as its fellow. The boy has been lately to see Mr. Rivington, and the only appreciable difference between the utility of the left arm and that of the right is that he can lift heavier weights with the former than with the latter.

CASE II.—Richard Coppins, aged 54, smith, a man of impaired constitutional powers, came into the London Hospital under Mr. Rivington on the 29th November, 1871, for disease of the left elbow-joint. The patient was afflicted with complete amaurosis of both eyes, and there was an obscure history of rheumatism. Two years ago, he fell and struck his elbow, but it got well again, and he had good use of his arm for the next fifteen months ; it then became affected with inflammation, and began to swell. It gathered, and his wife "got it to break by poulticing." It had kept on discharging ever since. When he came in he could bring his hand to his mouth, and had some power of flexion and extension without pain, and the radius could be rotated : the elbow, however, was much swollen, and the surface pitted deeply on pressure. At the back of the limb, over the olecranon, which was quite obscured by the œdematous swelling, a small opening existed, and dead bone could be felt at the bottom of the sinus. On two occasions dead bone was taken away by Mr. Rivington, with apparent amendment. When the sinus was more freely opened, and the finger passed in, a smooth cavity only could be found, and no more dead bone could be detected. By the beginning of January 1872, there was less swelling, and it appeared as if it might altogether subside ; but a fortnight afterwards, the joint became inflamed, the arm swelled above and below the elbow, and he had less use than before. A consultation was held with Mr. Hutchinson, who recommended excision. On the 7th February, the patient was placed under chloroform, and a vertical incision, several inches in length, was made over the joint. The soft parts were now found to be extensively thickened, brawny, and infiltrated, and so inelastic that a transverse incision had to be made, while the vertical incision was prolonged. The olecranon having been removed, it was found that the synovial membrane was thickened and the ends of the bones much enlarged. The articular extremity of the humerus was eburnated in parts. The ends of the humerus, radius, and ulna, having been removed, the edges of the wound were brought together with sutures ; the arm was laid in a splint, made of hatters' felt, fitted to it, and the elbow was dressed with strips of lint soaked in carbolic acid lotion. The case progressed from the first most satisfactorily—parts of the wound healing by first intention, and the thickening of the tissues becoming reduced by suppuration. On the outer side of the arm, a cavity formed underneath the skin and fascia, secreting pus, and leading to one extremity of the transverse incision. Accordingly, a drainage-tube was inserted ; and, after it had been in a few days, one end of the sinus thus formed was enlarged, so as to allow the cavity to be dressed from the bottom with lint soaked in a stimulating lotion. The effect was excellent, as in a day or two the cavity ceased to secrete, and the surfaces became adherent. Gentle passive motion had been employed at intervals of a few days, after the first fortnight. The patient was able to get up about the middle of March. At the end of March he requested to be allowed to go home. The wound had entirely healed ; the ends of the bones were not more than three-quarters of an inch apart, although nearly an inch-and-a-half of humerus and an inch of ulna had been removed ; and the swelling had entirely subsided. He had good use of his fingers, but the muscles of the arm had not regained their power. The limb promised, however, to be very useful to

him.—April 4th, 1872. He came to see Mr. Rivington at the hospital. He had gained power over the limb, and could flex and extend and raise the hand to the mouth.—April 11th. He was gaining more power over the limb every day, and was much pleased with the result.

SELECTIONS FROM JOURNALS.

SURGERY.

CHEMICAL PROBES.—M. Deneux, of Calais, in order to recognise in wounds from fire-arms the presence of metallic foreign bodies, employs threads impregnated with acetic acid fixed to the extremity of a sound or stylet. Withdrawn after contact with any metallic body, the tissue is submitted to a reactive agent (iodide of potassium, cyanide of iron, ammonia), which indicates immediately and accurately the nature of the metal. According to M. Legouest's report to the Academy of Medicine, the oxidation of the iron interferes with the test, and its efficacy is doubtful for zinc, copper, and bronze: it affords an excellent test for the presence of lead. M. Legouest has his own probe for lead—the stem of a clay pipe. In probing, he insists on the advantage of placing the wounded man in the position in which he received the wound. He discovered thus, in the enormous wound of Marshal Mac Mahon, a large fragment of lead lodged near the iliac spine, which had previously escaped the observation of the attending surgeons.

MULTIPLE SPONTANEOUS OSTEOMYELITIS.—Dr. B. Wenzel relates under this title (*Deutsche Zeitschr. für Chir.*, 1872) the case of a girl aged 13, a patient in the hospital at Hamburg, who had swelling of the knees and ankles, and œdema of the left leg, with febrile symptoms. The general symptoms soon abated; and the pain and swelling became localised in the outer ankles, and in the upper epiphyses of the tibiæ and lower of the femora. At a later date there appeared a diffuse thickening of the shafts of the left femur and fibula, attended with much infiltration of the soft parts and the formation of large abscesses. These were opened; but no disease of the surface of the bones could be found. In about half a year, the disease had abated, leaving only some thickening of the epiphyses, slight suppuration, and ankylosis of the right knee.—*Centralblatt*, August 23rd, 1872.

REMOVAL OF THE IRIS BY INJURY.—Dr. J. J. Chisholm of Baltimore relates in the *American Journal of the Medical Sciences* for July the case of a man named J. M., aged 37, who came under treatment for an injury of the eye. The left eye was of a bright blue colour, while the entire corneal portion of the right was black, with the exception of a white triangular scar at the lower edge. On ophthalmoscopic examination, this apparently unpromising right eye was found to be the sounder of the two; while the utility of the left was marred by a hazy cornea. The patient stated that, about three years previously, he had a fight, in which his antagonist tore his right eye. The next day, he found a piece of membrane hanging out; and in one or two days this came away. There was little or no pain, nor any symptom of importance: cold water was the only dressing applied; and, until the left eye became inflamed a month before he applied for treatment, both eyes had been in constant use, and he was not aware of any difference in vision. On examination, it was found that the iris had been completely torn away. The eye was myopic; but Dr. Chisholm could not ascertain whether it had always been so. With it, he could read No. 1 of Jäger's test-types at four inches, and No. 20 at eight feet.

TRAUMATIC DIAPHRAGMATIC HERNIA.—A. Popp relates, in the *Deutsche Zeitschr. für Chirurgie*, two cases of traumatic diaphragmatic hernia which had occurred in the Munich Hospital, and comments on the possibility of diagnosing the injury during life. In the first case, a penetrating wound of the eighth left intercostal space was followed by pleurisy; and, eighteen months afterwards, the patient died from a sudden attack of peritonitis with symptoms of strangulation. At the necropsy, there was found to be an opening in the diaphragm; a portion of the omentum and of the transverse colon lay within the thorax, and the omentum had become adherent to the lung and diaphragm. In the second case, a man aged 22 had been run over eleven years previously, and afterwards occasionally suffered from gastric symptoms, especially dragging pains, which, ten days before his admission, suddenly increased after violent exertion. He had all the symptoms of pneumothorax on the left side, and constant vomiting up to the time of his death. The diagnosis during life was, that there was displacement of the stomach into the left side of the thorax; and this was confirmed by the necropsy, the stomach being found displaced into the chest as high as the second rib, through a fissure in the diaphragm four inches and three-quarters in length. Dr. Popp has collected the statistics of thirty-seven recorded cases of acquired diaphragmatic hernia. In nearly all the cases, the injury was traumatic—arising from stabs in twenty-one; in two, the œsophageal opening in the diaphragm was dilated. In thirty-two cases, the lesion of the diaphragm was on the left side.

MIDWIFERY.

RUPTURE OF MEMBRANES DURING PREGNANCY.—Dr. W. H. Campbell records in the *Boston Medical and Surgical Journal* the case of Mrs. H., aged 22, who, in her second pregnancy, applied for relief from excessive vomiting. She stated that she was in her sixth month, and had vomited from the commencement, but could always retain some portion of her food till lately, and at the present time she vomited everything she ate. Dr. Campbell tried various remedies with no success; and at last, after consulting with another physician, he proceeded to induce premature delivery. On the evening of May 30th, he passed a sound into the uterus and ruptured the membranes. She vomited less that night, and next morning could retain food well. She improved from day to day, but no signs of delivery were manifested. On the afternoon of June 10th, however, twelve days after puncturing the membranes, she was delivered of a child which lived after birth about six hours. In this case, the fœtus remained alive and well for twelve days after the discharge of—at least a portion of—the amniotic fluid. Another point of interest was the relief obtained, the vomiting ceasing as soon as the contents of the uterus were disturbed, and before they were fully expelled, and long before the separation of the placenta.

RARE MODE OF DEATH IN INFANTS.—At a recent meeting of the New York Pathological Society (*New York Medical Record*, July 1st, 1872), Dr. Janeway exhibited an interesting specimen. The infant died two days after birth. The mother had a very protracted labour, the first stage being twenty-six and a half hours. The child did well for the first twenty-four hours, when it grew pale, passed no urine, and in the course of the day died. At the necropsy, the peritoneal cavity contained eight ounces of thick black fluid blood, which had its source in a detachment of the peritoneum from the upper part of the right lobe of the liver. The area of detachment was two inches square. All the other organs were normal. The kidneys contained urates in the tubes. This was the third specimen of the kind Dr. Janeway had seen, and, as far as he recollected, in both of the others the labour was protracted. This was the only one, however, in which the effusion was upon the upper lobe of the organ.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

COD-LIVER OIL WITH HYPOPHOSPHITE OF LIME.

MESSRS. WYLY and Co., Coventry, have prepared a cod-liver oil cream with hypophosphite of lime, of which a limited trial induces us to report very favourably as deserving the attention of prescribing physicians and medical practitioners. It is a convenient, nearly tasteless form of prescribing a quite invaluable conjunction of remedies. Each tablespoonful contains two teaspoonfuls of cod-liver oil, and two grains of hypophosphite of lime.

SALT'S ILLUSTRATED CATALOGUE OF SURGICAL INSTRUMENTS.

THIS Catalogue is very creditable to this enterprising provincial firm. Mr. Salt has never been content to occupy any other than a leading place in the trade. He has signalised his firm by some well known improvements, especially in trusses and belts; and the excellent display of instruments which he contributed to the Birmingham Museum indicated a full acquaintance with the progress of the art of surgical instrument-making, and with the novelties introduced from time to time. This Catalogue will be found a very useful and convenient guide to surgeons. Such illustrated *armamentaria chirurgica* used to be among the treasured literature of a past age, and are only less valued now, perhaps, because so much more complete and accessible that they are commonplace.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 26TH, 1872.

CONCERNING FOOD.

III.—EXTRACTS OF BEEF.

HITHERTO we have confined our attention exclusively to the organic constituents of food—the so-called essential elements—and to the relative value of the different nitrogenous and carbonaceous foods, in reference to the maintenance and nutrition of the body. These do not, however, exhaust all the necessary elements of food; nor do they include a class of substances formerly considered luxuries, but which now play an integral part in the alimentation of the majority of civilised races. The inorganic constituents of food are quite as important as the organic, inasmuch as they are alike indispensable. The salts of sodium and potassium enter largely into the composition of the fluids and tissues of the body; and their presence in the food is also necessary for the due assimilation of the organic materials, and for the purposes of tissue-metamorphosis and tissue-formation. These salts are present for the most part, and in the requisite amount, in the ordinary articles of diet, and are largely supplied by the vegetable food-stuffs. The injurious effects resulting from excess of the one or deficiency of the other, formerly so common, are now equally rare—a brilliant triumph for the *science* of food. The physiological action of the potash-salts, and particularly the phosphates, has lately assumed a special importance in reference to the much disputed value of Liebig's extract of meat. As an article of nutriment, in the sense of containing complex atomic compounds of carbon and nitrogen fitted for oxidation and subservient to the nutrition of the body, extract of meat cannot be said to possess any value. The method of preparing the extract involves the removal of all the albuminous, fatty, and gelatinous part of the meat; so that it is only a concentrated residue of all the constituents soluble in water, and consists of certain organic compounds, chiefly creatin and creatinin, together with a large proportion of potash-salts, principally phosphates. Creatin and creatinin, which were formerly supposed to be of great value as pabulum for muscular work, do not appear to have the value thus assigned to them. They are too highly oxidised to serve the purposes of nutrition, and are excreted unchanged. Are we then to say, as some have done, that extract of meat possesses no value? This would be a most illogical conclusion, and one which is contradicted by the facts of every-day experience, which, in matters pertaining to food, is a tolerably safe guide. A proper recognition of this fact has led to several elaborate investigations of a subject involving many important economical considerations. Unfortunately, little agreement exists among those who have directed their attention to the question. Kemmerich attributes the action of extract of meat entirely to its potash salts, which he says, in small doses, act as stimulants to the heart, like tea, coffee, and alcohol; while, in large quantities, these salts, as well as the extract itself, cause death by paralysis of the heart. The deduction which some have drawn from these experiments is, that extract of meat is a poison, and therefore worse than useless. Bunge, on the other hand, considers it very improbable that beef-tea and extract of meat should owe any beneficial effect they may possess to potash-salts, inasmuch as these are already present in excess in ordinary food. He denies to them any stimulant action, and shows that the poisonous action of these salts has been highly exaggerated. He reckons the quantity of potash-salts taken daily in potatoes by some Irish labourers at 100 *grammes*. Instead, however, of depreciating the value of beef-tea and extract of meat, he arrives at a conclusion which, we think, is the one which best accords with the facts of experience, and which will go far to explain the testimony to the value of extract of meat quoted by Liebig from the notes of Schwanfurth and Von Schneider—viz., that these substances owe their exhilarating and beneficial effect to their warmth, and to the fact that their appetising influence enables a person to take with relish a larger amount of dry and tasteless food than he otherwise could do. This is far from being an unimportant consideration, and is one which in a great measure serves to explain the use of other auxiliaries to food properly so called. If extract of meat, added to food not otherwise deficient in the elements essential to nutrition, can impart to it that which constitutes the flavour and relish of meat itself, its economical value, even on that ground alone, would cause it to occupy a high place among the articles of a wholesome national dietary.

The appetite for food is not always a measure of the real wants of the organism; nor is the satisfaction of that appetite necessarily an index of the fulfilment of the real physiological requisites of the individual. It is the exception, rather than the rule, to find in civilised life those whose bodily functions come fully up to the typical physiological standard of exactitude and regularity. Much more is this true of the hard-worked and not overfed members of the community; and it is this which, in some measure at least, accounts for the almost universal recourse to auxiliaries of food, in the shape of tea, or coffee, or alcoholic stimulants; in regard to which, however, there is manifested, in a manner unknown elsewhere, a tendency to make the results of experience bend to the dicta of this or that theory, and where the most opposite qualities of good or evil are attributed to them, according to the measure of enlightened knowledge or unscientific prejudice. There must be some philosophy at the foundation of the general verdict; and, as Liebig says, "if a poor factory workman imposes on himself privations in his food and other necessaries of life in order to spare a few pence for tea, there must be a deeper cause for this than mere custom." Neither tea nor coffee can be called articles of nutriment; nor, we fear, can alcohol be regarded as such. No one, however, denies the refreshing and exhilarating effect of a cup of warm tea or coffee, or can refuse to see the cheering effect of a glass of generous wine. Are these things really beneficial? or are we the victims of a deceitful *euphoria?* It would be impossible for us here to enter into a discussion of the physiological action of these substances; or, if we did, to find anything very definite in the midst of so much that is discordant. The observations of Ranke on this subject are interesting and of great practical value. The organism resembles a provident individual, ever seeking to form a reserve-fund, and to save more or less of its daily income. The use of this food-capital is, in ordinary circumstances, restricted and limited within cer-

tain bounds by the feeling of fatigue and disinclination to exertion, which lead to rest, and stimulate to taking nourishment. The feeling of fatigue is, up to a certain point, capable of being dispelled by tea and alcoholic stimulants, so that work can be performed at the expense of the reserve-store, beyond the limits which would be otherwise set. Under their influence, the circulation is so modified that the brain and organs of mechanical work receive a more copious supply of blood, and with it more pabulum; oxidation is increased; more energy is evolved; and at the same time the products of metamorphosis, the accumulation of which is the proximate cause of fatigue, are swept away. The organism is thus enabled to convert all its food into work, and in this sense these food-auxiliaries have a definite economical value. They are true *dynamophores*. The organism, it is true, lives fully up to its income; but, other considerations apart, there is no real harm done, but even good, provided the income is sufficient. It is, then, only that these substances begin to be injurious when, by their aid, the organism is encouraged to expend more than it earns—when it uses up more material than the daily supply is made to replace. This is what is constantly seen among the poorer classes. Taking insufficient food, they lull their real wants, and obtain a false appearance of strength, by frequent recourse to stimulants. There are "tea-drunkards" as well as "spirit-drunkards". Poverty and hard work lead naturally to both. Such individuals are in a state of physiological bankruptcy. They borrow from themselves to satisfy their own wants. It is impossible in the body physiological long to keep up appearances under such conditions; and, sooner or later, disease results from the direct action of the stimulants themselves, or the power of vital resistance is so lowered that the organism succumbs to attacks from without, which, with a more healthy state of nutrition, would be disregarded or easily shaken off. It is too often the custom to argue against the use of a thing, good in itself, from its immoderate use or abuse. Theoretically, no one requires extract of meat, or tea, or coffee, or alcohol; and, practically, many never use them. But we have seen that they may each and all—and we class them all together—not only be not useless or injurious, but in the highest degree advantageous, beneficial, and economical.

CONSULTATION WITH HOMŒOPATHS.

In a recent article, a medical contemporary paraphrased circuitously and reproduced the argument and language which we have employed on former occasions in stating the reasons why a practitioner who respects his mission cannot hold any professional communication with homœopaths, or join them under any circumstances at the bedside or in consultation. The periphrastic and obscure phraseology of the writer has a little obscured the principle to which he signifies his adhesion. This is one of the subjects on which we should have a clear understanding. We will restate the argument briefly.

A physician practises medicine, not for the sake of solving puzzles, but of saving patients. If a child come to a man to sharpen a knife, in order that he may cut himself, it is his right and duty to refuse, even though it be part of his ordinary business to sharpen knives for legitimate purposes. If a diseased person, who, in his ignorance, submits himself to the homœopathic delusion, find the wit of his homœopathist obviously dull on the nature of his disease, and desire a physician to sharpen it, in order that the homœopathist may with the greater ease of mind practise upon the patient with globules, the physician obviously may and ought to decline to be a party to any such mischief. The physician who consents to "diagnose" a disease for a homœopathist, becomes a party either to a folly or to a fraud. It weighs nothing, in the decision, that the patient, in his ignorance, is willing to be defrauded or befooled. He is free to make such a choice: we are not free to assist him in it. A physician is only called upon to exercise his calling when and as his conscience approves it. *Toujours prêt* is an excellent motto for a cabman. When duty calls, and as conscience bids, is the rule for medical workers. It is an individual harm to each patient that he should submit to the delusion, and we are called upon to have no part in it. It is a general injury, and tends to propagate the error that homœopathists have any claim to scientific consideration or footing of professional respectability (we mean always scientifically, and not personally or socially), that a physician should consent to do anything which could bear the semblance of a consultation with a homœopathist, or a recognition of any claim on his part to be a rational therapeutist, or to possess any claim to rank or associate with healers and physicians. Homœopathy, which began as a delusion, is now rapidly ending as a fraud. The ignorant delusion that all diseases were varieties of the itch, which was a cardinal point of homœopathic belief at the outset, has faded before the discovery of the itch-insect. The mystic folly of extreme dilutions, the potency of increasing weaknesses, the value of direction in shaking and stirring, are fading follies likewise; their place is being taken by frauds. We hear now of castor-oil and hydrate of chloral, tincture of aconite and tartar emetic, in heroic and almost poisonous doses to produce purgation, give sleep, reduce the heart's action, and promote secretion. It no more becomes us to assent to a fraud than to yield to a delusion; and now more than ever, perhaps, must it be held disgraceful for a physician to hold any direct or indirect intercourse with a homœopathist, whether "hard-shelled" or "soft-shelled", globulist or trimmer.

AS OTHERS SEE US.

It must be a source of sincere satisfaction to the members of the British Medical Association, that the public objects which they pursue with so much earnestness and sincerity attract increasing attention, from year to year, at home and abroad. This Association has always set before itself high aims, and has in everything preferred public and general interests to private or merely professional considerations. Animated by the highest spirit which can animate a body of cultivated men engaged in the noblest of professions, they seek in union the means of advancing the general welfare, of cultivating science, and of deliberating on its application to the prevention not less than to the cure of disease, to the improvement of legislation, to the removal of the obstacles to the health, welfare, and physical progress of the masses, and to the discovery and diffusion of the relations of the healthy mind to the healthy body. We see with pleasure that one of the ablest and most respected of French scientific periodicals, the *Revue Scientifique*, has republished the more important of the orations and communications at the Birmingham meeting. Dr. Lorain, Professeur Agrégé of the Faculty of Medicine in Paris, prefaces the translation of Dr. Maudsley's address with words which it is a pleasure to reproduce here; nor can we do so without expressing our high appreciation of the generous, able, and discriminative eulogy which he bestows upon the Association.

"The discourses given at this meeting," says Dr. Lorain, "and the resolutions adopted, have a character of general utility. The end of this Association is to utilise the medical forces of England for the good of the nation, or rather, for the progress of the race. It is not professional interests, in the strict meaning of the word, which bring together these doctors, amongst whom the most honoured is the most zealous. They do not discuss their private relations with patients, or even medical education. Public hygiene, the *rôle* which science must play in political and administrative councils, the aid for which society is waiting—these are the questions which, above all, find place in this meeting. This is a new and important course of action, and one which will propagate itself over the world; and the English will have had the honour of being the initiators. It is characterised by the sentiment of the brotherhood of humanity. The '*solidarité*' between the rich and

poor, the wise and ignorant—the pacific revolution which comes from above, and, conducted with prudent management and with the safety which science gives—it is worthy of our admiration and imitation. The consolatory and charitable part of medicine is put in the first place; pedantry does not appear; and medicine is conducted to her true and most easily attained end, the relief and consolation of those who suffer; but she does not content herself with this alone: she gives advice on questions affecting public morality, and thus marches at the head of the sciences. It is to the addresses on these subjects that we particularly draw the attention of French readers. We must admire, again, the freedom and liberty used, and the originality and *esprit* of the speakers; we feel that these are free men who have freedom of speech, and who are firm without violence, simple without false modesty, proud without haughtiness; *bon officiel* men, who do not fear to compromise themselves. The energy used in the attack against bad sanitary arrangements—against the negligence and carelessness of the administration of hygiene, or of public charity, against the government of towns and counties—is seen in increasing proportions year by year; and we are called upon to revere medicine that appeals to good sense, to good feeling, to the respect for lives of men, especially for those of the poor, and ends by accomplishing her purpose. All honour to those who engage in this struggle. It may be that some readers will find, in certain expressions, and in certain pleasantries uttered in a familiar manner in some of the lectures, a homeliness which is startling. For ourselves, there is nothing but what pleases us in these free harangues. In them are found philosophical thoughts, expressive of humane sentiment and social progress. Perhaps some may wonder at the caustic spirit with which the Rev. Dr. Haughton assailed the judges, or rather the lawyers. On this point, we can say that our grievances are at least equal to his; that in France medical men have also ground to complain of the absence of special juries in criminal cases; that the ignorance of our advocates in natural history is often only equalled by their self-sufficiency; and that reforms are urgently needed which would put each in his place, and better protect the interests of society. As to the questions mooted by the orator on psychological medicine, Dr. Henry Maudsley, they directly attack that reserved ground on which few official men dare place their feet. It needs great courage, a supreme conviction, to thus publicly attack prejudices, fanaticism, and received ideas, and to wage war face to face with the moral, philosophical, and theological doctrines which to-day hold their sway over us. To review the subject of free will and conscience from a scientific standpoint, and by the aid of methods used in the study of natural history, is a new and grave study; but it is a study that must be attempted."

CHOLERA-INFECTION IN ANIMALS.

Dr. Popoff of St. Petersburg has published, in the *Berliner Klin. Wochenschr.* (No. 33, 1872), an account of researches made by him during the epidemic of cholera in 1871, on the infection of animals with the excreta of cholera patients. The results of experiments on the possibility of thus producing cholera in animals have, he remarks, been most contradictory, in spite of the care of the observers. On the one hand, positive results are stated to have been obtained by Meyer, Thiersch, Charcellay, Crocq, Legros and Goujon, Leyden, Burdon Sanderson, and Budner; and negative by Namias, Carl Schmidt, Guttmann and Baginsky, Bartholow, Goldbaum, Stokvis, Snellen and Miller. Among the latter class of observers, some have stated the results of their experiments to be *nil;* others have ascribed the phenomena produced to putrid infection; while others again have been unable to identify the symptoms with any other known form of disease. Where positive results have been obtained, they have been described by some as following the introduction of fresh cholera-evacuations: by Thiersch, that of the evacuations in a state of decomposition; and by Sanderson, the employment of both fresh and decomposed cholera-matters has been found to produce characteristic symptoms.

The experiments of Dr. Popoff were made on dogs. He injected into five animals, into the veins or subcutaneously, infusion of putrid meat; in three cases producing the poisoning within twenty-four hours, and in the other two extending the experiment over one or two months. On nineteen other dogs, he tried the effect of cholera-evacuations—fæces and urine—obtained from patients having the disease in a well marked form. The excreta were generally fresh when used; and were sometimes introduced into the veins, sometimes into the stomach; in one case, subcutaneous injection was employed. The results in the two classes of experiments are described as presenting well marked differences.

When putrid matters were injected, the symptoms of poisoning appeared rapidly after the injection, and reached their maximum intensity within the first day; while the injection of cholera-excreta was not followed by characteristic symptoms until after this time, often not until several days had elapsed. While there was an apparent similarity in some of the symptoms, others presented differences. For instance, the diarrhœa following putrid infection appeared early, and the stools were generally of a brown colour and often contained blood or hæmatine; while the diarrhœa following the introduction of cholera-matter did not appear till the following day or even later, and the stools were of a pale yellow or clear greenish grey colour. Vomiting followed the injection of putrid matter more constantly than that of cholera excreta. After the injection of cholera material, the rise of temperature was less rapid than after the use of putrid matters; it usually attained its maximum some days after the injection, and retained it for some days, again falling before death. After poisoning with putrescent material, the rise of temperature was rapid, being most marked in cases where death occurred within a few hours. Spasmodic muscular contractions were never found to follow the injection of putrid matters, while they were frequent and often severe when cholera-evacuations were used. The frequency of the pulse was often diminished in the cholera cases, even when the temperature was high; while in poisoning with putrid matters there was usually an increase of frequency. After death, in the case of cholera-poisoning, there was a distinct elevation of temperature, which continued for some time.

Among the *post mortem* results, the most marked differences were found in the alimentary canal. In poisoning with putrid matters, the so-called hæmorrhagic gastro-enteritis was produced, the Peyerian glands being either not affected at all or only very slightly; while, in cholera-poisoning, the latter were always found extensively diseased, as were also the solitary glands. The liver presented signs of parenchymatous inflammation in both cases; but these were much less marked after the injection of cholera-matters than after that of putrid materials. In the cholera-cases, there was well marked parenchymatous inflammation and fatty degeneration of the kidneys; and the right cardiac ventricle was distended, the left being empty.

The resemblance of the symptoms produced by the injection of cholera-matters to the ordinary symptoms of cholera was most marked in proportion to the freshness of the matter that was injected. When the cholera-evacuations were not used until they had undergone some decomposition, the cholera-symptoms were more or less mixed with, or even, when decomposition had been allowed to reach an advanced stage, replaced altogether by, those of putrid infection.

On the nineteen dogs subjected to cholera-poisoning, forty experiments were performed. Of these, sixteen were made with urine, sixteen with fæces, seven with vomited matters, and one with the contents of a pustule. The urine was introduced into the stomach in two cases, without result. In the other fourteen cases, the urine was injected into the blood. In three cases it was not fresh: in two of these symptoms of putrid infection were produced, and in one the phenomena were those of cholera, but were not distinct. Fresh urine was used in eleven cases, in six of which distinct choleraic symptoms were produced, ending fatally in three. In the other five, the symptoms were less marked. Vomited matter was introduced into the blood in three cases; in two of these it was fresh, and in both cases symptoms of cholera appeared, proving fatal in one. In the other instance, the matter was undergoing decomposition and produced symptoms of putrid poisoning, from which the animal recovered. Fresh vomited matter was introduced into the stomach in two cases, and decomposing matter in two others: no result followed, except in one of the former two. The fluid of fresh cholera-stools was injected into the blood in six cases; and in one only were characteristic symptoms pro-

duced, ending fatally. In the other five cases, and in four others where the fæces were undergoing decomposition, the symptoms produced were either those of putrid infection or presented a mixed type, ending in recovery. In five dogs, in which fæces were introduced into the stomach, death took place in three (after the introduction of decomposing fæces) with symptoms of putrid poisoning; in one case, where fresh excrement was used, the choleraic symptoms were more or less characteristic.

The general results of his experiments are thus summed up by Dr. Popoff.

1. Cholera-evacuations are generally capable of producing the disease when introduced into the body; and this property is possessed not only by the vomit and fæces, but by the urine.

2. The infecting power is most marked in proportion to the freshness of the excreta.

3. When the excreta have undergone decomposition, the choleraic symptoms produced are obscured, and are more or less mixed with those of poisoning by putrid materials.

4. Cholera-infection may be produced by the direct introduction of the material into the blood.

5. After the introduction of cholera-poison into the bodies of animals, two or three days generally elapse before the characteristic symptoms are produced.

Miss S. J. Williams, M.D., has been appointed City Physician by the Corporation of Springfield, Massachusetts.

The stamp-duty on patent medicines in the last financial year amounted to £86,516 : 18 : 3, and the excise-duty on medicine-vendors to £7,138 : 15.

The next meeting of the French Association for the Advancement of Science will take place at Lyons, under the presidency of M. Quatrefages, in August 1873. M. Wurtz is Vice-President.

DIFFERENCE BETWEEN MALE AND FEMALE.

The *New York Record* is responsible for the following: What difference is there between a man and a woman? Ans. *A vas deferens.* How vast! One can't conceive.

KING'S COLLEGE MEDICAL SOCIETY.

The annual inaugural meeting of this Society was held on Thursday, October 17th, when the address was delivered by W. B. Whitmore, Esq., M.B.; the speaker especially treating of the relation of science to medicine. There was an unusually large attendance, including the Rev. Canon Barry, D.D., Principal of the College; R. Cheese, Esq., member of the Council; and many of the professors and staff.

DISTRESSING CHLOROFORM-DEATH.

We read in the *Boston Medical and Surgical Journal* that Dr. Asa Wheat of Canaan, United States, on August 24th, 1872, gave his wife chloroform for the extraction of teeth. His brother, a dentist, had pulled three, when the patient became faint, and, in spite of every effort made to revive her, died in a few moments.

THE REFRIGERANT TREATMENT OF HYPERPYREXIA.

Dr. R.T. Edes presents, in the *Boston Medical Journal*, an interesting summary of the recent reports on this subject, seeing the present interest of the subject. Part of this matter has already been laid before our readers in another form. The systematic and scientifically regulated employment of cold to reduce very high temperatures in fever and in acute rheumatism is one of the most remarkable improvements in modern medical treatment, but it is one which must be employed with care and scientific exactness. Cold may kill as well as cure; and the caution which Dr. Wilson Fox gave at a recent meeting of the Clinical Society was in no way premature or trivial.

THE SWINEY LECTURESHIP.

This lectureship, which has just been vacated by Dr. Cobbold of the Middlesex Hospital, will be filled up in February. It is a travelling lectureship, open to Doctors of Medicine of the University of Edinburgh, and is tenable for five years.

THE "EDINBURGH REVIEW" ON BRIGHT'S DISEASE.

The current number of the *Edinburgh Review* has an interesting and very able article, from an accomplished pen, on the Progress of Medicine and Surgery. It contains, however, the following statement on the subject of Bright's disease, which requires qualification, lest it should be seriously misinterpreted by general readers.

"Among the medical discoveries of the last thirty years, the affection known as Bright's disease may be considered as the first. This is a form of kidney-disease which generally proves fatal; and the method of diagnosis is one of the triumphs of pathological chemistry, which shows itself in a very dramatic form. A very small portion of the urine, placed in a test-tube, by the application of a drop of nitric acid, or the mere application of heat from a spirit-lamp, affords sufficient proof, in nine cases out of ten, to seal the fate of the patient. The presence of albumen is by either of these tests immediately made evident; and the constant drain of this essential element of the blood is mortal. A little coagulation of the contents of the test-tube, and the physician knows that the days of the patient are numbered."

The essence of this paragraph is, that the presence of albumen in the urine is proof of the existence of an incurable disease, and that death results from the loss of the albuminous constituents of the blood. Professional readers will detect the want of qualification which underlies these statements; but to the laity they will convey an erroneous, and to some persons perhaps an alarming, and therefore a mischievous, view of the subject. It would have been desirable to explain that the term Bright's disease is used to designate various forms of acute and chronic disease of the kidney; that a very large proportion of the cases are curable; and that, while an albuminous condition of the urine is, with rare exceptions, common to all cases, by the aid of the microscope and other methods of clinical research, the acute forms and the early stages of the disease, which are curable, may now with ease and certainty be distinguished from the advanced stages of the chronic and incurable degenerations of the kidney. Then, too, it is well known that, in the fatal cases, death is usually caused, not by the drain of albumen from the blood, which, in some of the worst forms of disease, is quite insignificant, but by the retention of poisonous excreta consequent on the destruction of the secreting tissues of the kidney. It is often difficult to give to a patient and his friends a clear view of the significance of albumen in the urine; and it is particularly desirable that precise language should be employed in writing on the subject for the general reader.

POISONING BY CARBOLIC ACID: RECOVERY.

Dr. Mosler of Greifswald has related the case of a man who drank by mistake a glass of a mixture containing between two and three drachms of carbolic acid. He immediately fell insensible, and was convulsed. When Dr. Mosler saw him eighteen minutes afterwards, the extremities were cold, the pulse scarcely perceptible, the heart's action irregular, the breathing stertorous; consciousness was lost, and he was in a state of intense trismus—in fact, he appeared to be moribund. Dr. Mosler immediately had his mouth held open by a wooden gag, and poured warm water into the stomach through a tube: he then fixed an India-rubber pipe to the end of the tube, raised the patient, and bent him somewhat forwards; this was at once followed by the escape of a large quantity of fluid smelling strongly of carbolic acid. As consciousness did not return, Dr. Mosler, supposing that some of the carbolic acid had probably entered the blood and was acting on the brain, bled the man to the amount of about a pint. Consciousness then returned: the pulse became stronger and the breathing more tranquil. The blood that was removed had an odour of carbolic acid. For some days the patient had irritation of the throat and slight gastritis; but was dismissed cured on the eleventh day.

MEDICAL OFFICER OF HEALTH FOR ISLINGTON.

MR. ALFRED HAVILAND will be a candidate for the medical officership of health, in the event of Dr. Corfield being elected at St. George's in the place of the late Dr. Aldis. Dr. Corfield obtained his election at Islington by polling one vote above Mr. Haviland.

THE ANTISEPTIC AND PHYSIOLOGICAL ACTION OF SILICATE OF SODA.

A. RABUTEAU and F. Papillon, after briefly referring to the researches of Professor Dumas on the action of borax in fermentation, describe at length (*Comptes Rendus*, Sept. 30th) a series of experiments made with the view of ascertaining the effect of silicate of soda upon alcohoiic fermentation, upon the fermentation of urea, upon lactic fermentation, and upon amygdalic fermentation. It appears that silicate of soda acts in a similar manner to borax, but far more energetically. Not only does it prevent fermentation, but it is a strong disinfectant; and its physiological action, when injected in the blood in aqueous solution (1 to 40), is fatal to animal life, while such is not the case with borax under similar conditions.

THE VOLUNTEER MEDICAL SERVICE.

IN the *London Gazette* of October 18th, an order appears declaring Her Majesty's approval of the draft scheme of amendments relative to the efficiency of Volunteers, recommended by an order in Council held after the consideration of the original scheme by both Houses of Parliament. No reference is made in any way to the medical service. No reply has as yet been received by Dr. John Murray, Honorary Secretary, Volunteer Medical Association, with regard to the ultimate intentions of Government on this point. Under the present circumstances, therefore, we presume that the medical service will remain *in statu quo*.

CANADA MEDICAL ASSOCIATION.

THE annual meeting of this body was held in Montreal on September 11th and 12th. An address by the President, Dr. Sewill of Quebec, was read; and the rest of the session was devoted to papers on medical and scientific subjects, and to discussions. Among the important matters brought forward for the deliberation of the Association, was the proposed Medical Act for the regulation of medical practice in the Dominion; in which, however, very little useful progress was made. St. John, New Brunswick, was selected as the place of meeting for the next year.

DEATH OF AN EMINENT BOTANIST.

DR. FREDERICK WELWITSCH, a gentleman well known in botanical circles, died on Sunday afternoon, in a little lodging in Fitzroy Street, near Tottenham Court Road, London. The deceased devoted most of his life to the flora of Africa. He was on the West Coast of Africa for eighteen years, in the service of the Portuguese, and was present at the taking of Congou by them. He had collected forty thousand specimens of African flora, and was at the time of his death engaged in a *magnum opus* upon them. His lodging was almost filled with his specimens and books. His best known work is on certain African molluscs.

THE "LADIES' MEDICAL COLLEGE."

WE have more than once intimated to the supporters of the "Ladies' Medical College" that they had neither a claim to nor prospect of the desired support and countenance, while that misleading title was maintained for what is, in truth, an obstetric school. It is now announced that this establishment will hereafter be designated "The Obstetrical College for Women", a much more correct title. It is, however, further announced that it is intended to apply to Parliament for "such an amendment of the Medical Act as will give women access to a registerable diploma in midwifery, and confer upon properly educated midwives a defined professional status." Pending such legislation, the Female Medical Society has determined to issue certificates of proficiency in midwifery to ladies who have fulfilled the prescribed curriculum of study and passed a satisfactory examination. On this head it may be observed that there is a great objection to placing upon the *Medical Register* any but complete medical diplomas, but there is none to forming an authorised register of midwives who have passed the examination of a chartered body. Between such examinations and the unregulated examinations by a school styling itself a college of its own pupils there is, of course, a wide gap. The examination of midwives by a recognised and reliable examining board unconnected with any teaching body is a desideratum, and one which the Obstetrical Society proposed recently to fill up. Certificates given by "a society" to its own pupils are of very variable, and therefore of very dubious, value.

BALLOONING.

M. PAUL BERT has rendered easier the pathway to the skies. Among the chief difficulties experienced in ascending to great heights are the respiratory troubles of the aeronaut, whose capacity for enduring the respiration of highly rarefied air is, at present, the practical limit of ascent. M. Paul Bert, in the course of a long series of elaborate experiments, has ascertained that these sufferings are due, not to the physical rarefaction of the air, but the consequent deficiency of oxygen supplied to the blood; he believes that if, in these high ascents, the aeronaut supply himself, as it is easy to do, with a provision of oxygen, instead of simple respiring air, he may allow himself to rise much higher with impunity, the limit being then only the ascensional force of the machine.

PREPARATION OF ALCOHOL FROM SAWDUST.

ACCORDING to M. Zetterlund (*Moniteur Scient., Quesneville*, Oct. 1870, No. 370,) it appears that the preparation of alcohol from sawdust may be successfully carried on industrially. Into an ordinary steam-boiler, heated by means of steam, were introduced 9 cwts. of very wet sawdust, 10.7 cwts. of hydrochloric acid (sp. gr. = 1.18), and 30 cwts. of water; after eleven hours' boiling, there was formed 19.67 per cent. of grape sugar. The acid was next saturated with chalk, so as to leave in the liquid only a small quantity (half degree by Ludersdorf's acid areometer); when the saccharine liquid was cooled down to 30 degs., yeast was added, and the fermentation finished in twenty-four hours. By distillation, there were obtained 26.5 litres of alcohol of 50 per cent. at 15 degs., quite free from any smell of turpentine, and of excellent taste. When all the cellulose present in sawdust might be converted into sugar, 50 kilos. of the former substance would yield after fermentation, 12 litres of alcohol at 50 per cent.

THE RECENT INTERNATIONAL CRICKET MATCH.

ARE we Americans, asks the *Philadelphia Medical Times*, a physically degenerate race? It seems to be thought by many that such an inference may fairly be drawn from the fact that our oarsmen and cricketers have hitherto been overmatched by those of the mother country. And no doubt, to a certain extent, it is so; but there are circumstances to be taken into the account, which very much lessen the apparent gravity of the situation for us. Aside from the influences of climate and of habits of living (we allude now to diet, social customs, etc.), there is the important fact that the Englishmen who have been pitted against our men were differently placed, in that they could give their whole energies of mind and body to excelling in cricket or in rowing. Voltaire's trees, he said, grew well because they had nothing else to do. Our young men make the cricket-bat or the oar a secondary matter; they reserve their power for pursuits of graver moment. Then, again—and this seems a less favourable consideration—our national temperament is more excitable and mercurial, more nervous and anxious, than the English. Business and pleasure are alike, in this country, pursued with a feverish haste. It is to be hoped that with increasing years this tendency may subside, and that as public affairs become more and more settled, men may acquire a cooler and steadier tone and habit of mind. During the war of the rebellion, those who had occasion to see our armies could not but remark the wonderful effect of an out-of-door life, with continual exercise, upon our officers. They gained a physical

development, and a cool and manly mental tone, to which many of them had previously been utter strangers. This lesson should not be lost. We are only degenerate so far as we allow excitement and luxury to obtain sway over us.

UNMODIFIED SMALL-POX.

A LETTER received in San Francisco, from the United States Consul at Callao, states that the small-pox prevails in an epidemic form at many of the seaport towns on the coast between Valparaiso and Panama. The character of the disease, the writer says, is more pernicious than the ordinary small-pox, and much more destructive to life. The letter continues: "In one hospital at Santiago, Chili, *out of fifty-eight patients* entered in one week, *fifty-six died;* and, as there are eight or ten such hospitals in that city, you can conceive its destructiveness. The disease is making its way steadily to Callao."

WALL-PAPERS.

DR. CORFIELD, Medical Officer of Islington, in a recent report says: "It has been shown that infection hangs about wall-papers even for many years; and I am of opinion that, in all cases where a room has been occupied by a person suffering from an infectious disease, the paper should be washed with carbolic acid and water, and stripped off the walls and burnt. This is done in all cases of which we have cognisance."

EPIDEMICS IN RUSSIA.

AN order of the chief of the police notifies his agents that the Sanitary Commission of St. Petersburgh, desirous of arresting as much as possible the progress of cholera and small-pox in the capital, have thought it necessary—first, to direct the medical inspectors of districts to appoint assistants; secondly, to authorise them to use gratuitously the police telegraph for their communications with the hospitals. This order requires the police-officers to assist inspecting physicians in the performance of their duties, and to see that small-pox patients who are not in a position to take the necessary hygienic precautions at home, are immediately transported to the hospitals.

TRANSFUSION OF BLOOD.

THE *Bordeaux Médical* has on this subject the following note. Our readers are aware of the discovery of two *savants* of Lyons—the separation and preservation of the hæmatosine of the blood. One foresees already the possible realisation of the eternal problem of the tranfusion of blood. Professor Lorenzi, of Florence, at the Hospital della Consolazione, has made a trial on two patients which completely succeeded. A young surgeon, a hospital wardsman, furnished the necessary blood.

THE SMALL-POX AT HONOLULU.

WITH regard to the small-pox in the Sandwich Islands, the *Hawaaian Gazette* writes:—"Up to the present time, July 3, there have been thirty cases of small-pox reported, seven of which have terminated fatally. We understand one case to have been reported at Makawao, Maui, which was immediately isolated, together with those with whom the person having the disease had been in contact. Every effort has been made by the Board of Health to protect the people of Honolulu from the disease by vaccination, and we are happy to be able to state that the office of nearly every physician in town has been thronged with applicants. The Board of Health have made the most urgent appeals to the people to embrace the present opportunity to protect themselves from the terrible disease, and also to report all cases of a decided or doubtful nature which may occur."

THE PROPOSED MEDICAL MICROSCOPICAL SOCIETY.

THE preliminary meeting for the formation of the proposed Medical Microscopical Society will be held in the College Hall, St. Bartholomew's Hospital, on Friday, November 1st, at 7 P.M. precisely. Mr. W. Morrant Baker, Warden of the College, has kindly consented to take the chair. All qualified medical gentlemen and registered students interested in the movement are invited to attend.

SEPTICÆMIA.

M. BOULEY has performed some experiments bearing upon the startling results of inoculation announced by M. Davaine, to which we recently referred. But horses, sheep, dogs, and men, happily do not seem to display the same receptivity and tendency to intensification of the septic poison as rabbits and guinea-pigs. M. Bouley's experiments, however, are not complete; and M. Davaine, in the meantime, is disposed to generalise his septicæmic theory.

THE STUDY OF INSANITY.

DR. J. R. ALLEN, of Memphis, U.S., is a model expert in cases of insanity, and his evidence, given the other day at a murder-trial, will greatly simplify the studies of both doctors and lawyers in ascertaining the legal relations of the malady. "I have," said Dr. Allen, "been a practising physician for nearly thirty years. I have had some experience in cases of insanity, having been for ten years medical superintendent of the Kentucky Lunatic Asylum, and during that time had over 2,000 crazy people under my charge. I have heard the hypothetical case read by Mr. Phelan. I am here as an expert, and before answering the question, would like to say that the more I studied the question of insanity, the less I understood it; and if you ask me where it begins and where it ends, neither I nor any physician in the world could tell you; in fact, on occasions like this, lawyers make fools of themselves in trying to make asses of doctors."

MEDICAL CONVERSAZIONE AT THE WEST RIDING ASYLUM.

A MEDICAL *conversazione* was held at the West Riding Asylum, Wakefield, on the evening of Tuesday, the 15th instant, and was attended by upwards of two hundred of the medical practitioners of the district. Mr. Walter Spencer Stanhope, M.P., Chairman of the Committee of Visitors of the asylum, presided, and expressed the interest felt by himself and his colleagues in the scientific work which is now being carried out under the direction of Dr. Crichton Browne. He congratulated the medical profession on the improved methods of treating the insane which they have been instrumental in introducing; and he predicted, as a result of such meetings as that in which they were taking part, and of the laborious investigations which are now being inaugurated, an increased ratio of recoveries in the future. Having pointed out the importance of such gatherings, in enabling medical men to contrast their experiences, and to become acquainted with the system of treatment pursued in that great medical institution, he introduced Professor Turner, who had come specially from Edinburgh to deliver a lecture. Mr. Turner then lectured for an hour on "The Convolutions of the Cerebrum". He premised, as propositions universally admitted by physiologists, that the brain is the organ of the mind; that the convolutions forming the surface of the hemispheres of the cerebrum are the seats of those faculties which make up the intellect; that every mental act is accompanied by some molecular change in the grey matter of the convolutions; and that in the area occupied by these convolutions resides that mechanism or apparatus which furnishes the material conditions through which the intellectual processes are manifested. With this as a starting point, the lecturer proceeded to analyse the method of construction of the brain-area, enlarging first on mass and weight, then on external configuration, next on internal structure, and finally on vascular supply. In conclusion, he said that, even if the association of separate mental faculties with distinct convolutions were satisfactorily established, we should be no nearer the solution of the mysterious problem, why the energy evolved from the molecular changes taking place in one group of nerve-cells produced one kind of intellectual phenomena, and from another group another kind; or why from one brain proceeded a wealth of fancy and imagination, which stamped its author as a true poet, from another speculations and discoveries on the constitution of mind and matter which marked an epoch in science and philosophy, and from a third the merest commonplaces, or even absurdities, which proved their author to be a mediocrity or a fool; or why man, more than the brutes that perish, was en-

dowed with a self-consciousness, with the power of distinguishing good from evil, right from wrong. Regarding these problems, they might indeed say, in words not unlike those used by the prophet of old, "Eye hath not seen, nor ear heard, nor hath it entered into the heart of man to understand." At the termination of the lecture, which was heartily applauded, a vote of thanks to Mr. Turner was proposed by Dr. Heaton of Leeds, and seconded by Dr. Myrtle of Harrogate. Dr. Kendell of Wakefield proposed a vote of thanks to Mr. Spencer Stanhope, who "scorned delights and lived laborious days" in the public service; and this was seconded by Dr. Clifford Allbutt of Leeds, who remarked that these meetings were but part of a very great intellectual movement which was going on in the asylum. Many members of the medical profession were placed in institutions with great opportunities for observing and advancing the science with which they had cast in their lot; but their enthusiasm was unfortunately often damped and their labours hampered because they were not backed by those behind them. When they saw a colonel like Dr. Crichton Browne at the head of such a regiment as he commanded, they could see clearly that he was well backed up at the war-office, and was responsible to a splendid war-minister—that war-minister being Mr. Spencer Stanhope. He seconded the resolution with feelings of thankfulness that a gentlemen in the position of the chairman should have placed himself at the head of a great intellectual movement, which, not confining itself to the boundaries of the asylum or of the West Riding, would, he hoped, reach far beyond the mother country. Mr. Stanhope, in acknowledging the compliment, said that it had always been a matter of deep satisfaction to himself and his coadjutors to hear the favourable reports which the Commissioners of Lunacy—the most able and impartial of critics on such a subject—passed on the condition and management of the West Riding Asylum. He moved a vote of thanks to Dr. Crichton Browne, which was seconded by Professor Turner, and suitably acknowledged. The remainder of the evening was spent in examining various objects of medical and scientific interest which had been collected together in the Asylum hall, and arranged in a series of stalls. These included a large assortment of surgical instruments, and pathological specimens from the asylum museum, microscopic preparations, photographs, and drawings by the insane. The stalls were presided over by the medical officers of the asylum, Dr. Mitchell, Dr. Aldridge, Dr. Burman, Dr. Major, Dr. Oscar Woods, and Mr. Bryan Wood. The splendid band of the asylum performed a selection of music at intervals during the evening.

A COTTAGE HOSPITAL.

THE following extract from the report of the medical officer to the Local Board for the quarter ending September 1872, speaks well for the Lincoln Cottage Hospital. "Eighteen cases of small-pox have been reported to the Inspector of Nuisances during the quarter, of which eleven were moved to the Cottage Hospital; nine have been discharged, one is convalescent, and one admitted a few days ago is going on favourably. Of the seven other cases, four died."

A NEW COTTAGE HOSPITAL.

THE memorial stone of the North Cambridgeshire Cottage Hospital has been laid at Wisbeach by Miss M. E. Trafford Southwell, of Honington Hall, Grantham. Miss Southwell, who owns extensive property in the district, is about to erect on her own land a cottage hospital with capacious sick wards, convalescent room, occasional and special wards, operating and consulting rooms, dispensary, and every requirement for a well arranged institution entirely at her own cost. She also proposes to endow it with £3,000 to provide for its future maintenance, and has undertaken to furnish it throughout, also providing surgical library and instruments. The total value of the gift will be about £7,000. Mr. William Peckover, of Wisbeach, gives £2,000 to the endowment fund, and Mr. Algernon Peckover, both members of the banking firm of Gurneys, Birkbeck, and Peckover, a further sum of £500. A large number of persons were present to witness the laying of the memorial stone. A long platform was erected along the front of the building, on which the Mayor, in his official robes, the Corporation, the trustees, committee, magistrates, and a large number of ladies were assembled. Miss Southwell was received by the Mayor, who presented her with an illuminated address from the Corporation. Miss Southwell handed a written reply to the Mayor, and after prayer by the Rev. Canon Scott, the ceremony of laying the stone was proceeded with. A handsome silver trowel, with a suitable inscription, was handed to Miss Southwell, and after the stone had been declared duly laid, Mr. Farebrother, on her behalf, returned thanks to those who had undertaken the management of the hospital.

A NEW WORKHOUSE DIET.

MR. G. E. DOUGLAS, the Master of Marylebone Workhouse, has obtained the sanction of the guardians, by way of experiment, to vary the diet for the purpose of introducing articles which, although not generally found in a workhouse dietary, are not unknown to the poor in their own dwellings. In lieu of potatoes, many tons of which are used monthly in St. Marylebone Workhouse, and which at the present time are not only exceptionally dear, but very wasteful, Mr. Douglas has, with great success, found wholesome and economical substitutes in peas-pudding, haricot beans, boiled rice, etc.; and these, with Australian meat and American pickled pork, prevent the increased outlay which the high cost of food would otherwise entail on so large an institution. The guardians have requested Mr. Douglas to report the results of his experiments at the expiration of a month, when it is hoped they will prove satisfactory.

LIVERPOOL MEDICAL INSTITUTION.

THE winter session of the Liverpool Medical Institution was inaugurated on Thursday by a *conversazione*, of which upwards of 150 members of the medical profession of Liverpool and district were present. In the course of his inaugural address, Dr. J. Cameron, the President, observed that whilst their society—in common with other kindred associations—was serving the purpose of keeping up friendly intercourse, based on a common pursuit, and strengthening the bonds of professional fellowship, it was designed for the higher purpose of promoting the cultivation of medical science and the collateral branches of learning.

INFANT LIFE PROTECTION BILL.

AT a meeting of the Liverpool Health Committee, held on Thursday, the Town Clerk submitted a report upon the Infant life Protection Act, passed last session. For the purposes of the Act the Council is constituted the local authority of the borough, and the committee passed a resolution ordering that public notice should be given, that the medical officer is about to make arrangements for carrying the provisions of the Act into effect.

LONGEVITY.

THE entries on the registers of deaths in England and Wales in the year 1870 represent that 18 men and 63 women who died in that year had attained or passed the age of 100 years. According to the registers 6 men and 22 women were 100 years old; 1 man and 14 women were 101; 3 men and 11 women were 102; 2 men and 6 women were 103; 5 men and 7 women were 104; 2 women were 105; one woman, who died in Huddersfield district, was 107; and one man, who died in the district of Stone, Staffordshire, was 108 years old when he died. Of these centenarians 10 died in the metropolis, 6 in Somersetshire, 5 in Yorkshire, and 4 in each of the following counties—viz., Cambridge, Durham, Glamorgan, Monmouth, Norfolk, and Pembroke.

MR. DARWIN'S NEW WORK.

MR. DARWIN'S forthcoming work, on *Expression in Man and Animals*, bids fair (says *Nature*) to be of a more popular character than any of his other publications. It will commence with a statement of the general principle of Expression: that serviceable actions become habitual in association with certain states of the mind, and are performed, whether or not of service, in each particular case. This will be illustrated in the case of expression of the various emotions in man

and the lower animals. The means of expression in animals will then be discussed, and the special expressions of animals and man, such as the depression of the corners of the mouth in grief, frowning, the firm closure of the mouth to express determination, gestures of contempt, the dilatation of the pupils from terror, the causes of blushing, etc. In conclusion, the bearing of the subject will be spoken of on the specific unity of the races of man; the part will be discussed which the will and intention have played in the acquirement of various expressions; and the question of their acquisition by the progenitors of man will be referred to. Seven heliotype plates, reproduced from photographs, will illustrate the work.

REMOVAL OF THE MEDICAL SOCIETY OF LONDON.

THE Medical Society of London will shortly move its quarters to 10, Chandos Street, Cavendish Square, in consequence of the lease of the present house in George Street having expired. The new premises are much more commodious. The Centenary meeting of the Society passed off successfully on Monday.

MANCHESTER ROYAL INFIRMARY.

THE adjourned quarterly meeting of the Board of Trustees of the Manchester Infirmary was held in the Board-room of the institution on Monday, October 21st, when the report of the Weekly Board as to the mode of electing honorary medical officers was passed by a considerable majority. The plan which has been accepted, but which still has to be confirmed by a second special general meeting, is as follows. The Weekly Board will select from the general body of trustees the names of 150, whom they consider suitable men for an election committee. Lists of these names will be issued to every trustee, with a request that he will mark off the names of 30 whom he may prefer, and return the paper forthwith to the secretary, by whom the votes will be counted. The names of those who are found, on examining the papers, to have received the largest number of votes, will constitute the new elective committee. On this Board of thirty, no medical man will sit, except for the purpose of instructing the laymen as to the value of testimonials, etc. By this method they contrive to leave the franchise in the hands of the trustees, who elect the committee from their own body, while they do away with the expense and trouble and infinite annoyance of a personal canvass. A fresh election committee will be appointed every third year. If the trustees do not approve of the gentlemen selected by the Board, they are empowered to add whatever names they consider more suitable.

SCOTLAND.

IT is stated that, by the will of the late Sir David Baxter of Dundee, the University of Edinburgh will receive £40,000. He had already founded a Chair of Engineering in that University. He also, it may be remembered, made public his intention of erecting a convalescent hospital for Dundee, which will be forthwith erected.

THE OPENING OF THE SCOTCH MEDICAL SCHOOLS.

THE medical session at the University of Glasgow was opened on Monday with an introductory lecture by Dr. Leishman. The winter session at the Andersonian Institution will be opened on Tuesday. The classes in the Faculty of Medicine at Aberdeen will commence on October 30th. The session will be opened at Edinburgh on Friday, November 1st, at the University by an address by Principal Sir Alexander Grant, Bart., and at the School of Medicine by Dr. Angus Macdonald.

UNIVERSITY OF GLASGOW.

DR. LEISHMAN, in opening the medical session on Monday, referred in graceful terms to the late occupant of the chair of Medical Jurisprudence, Dr. Rainy. "When the time arrived that the home of the University should be transferred to the present site, Dr. Rainy threw himself with characteristic energy into the movement, and thought it a point of honour not to withdraw from his post until he had convinced himself of what he was best able to judge, that the interests and requirements of his special department were thoroughly provided for, and for this foresight on his part the students of this University will always have good cause to be thankful. His sympathy with his students, his constant courtesy to all, his unobtrusive piety, which of all forms of religion is that which most surely commands respect, have left behind him here in the minds of his *quondam* colleagues an affectionate remembrance which time will not readily efface. And I am sure that there are many hundreds of students of this University scattered over the face of the earth who have few more pleasant reminiscences of their college days than the dim recollection of him who spared no pains to smooth the path of their student life." The lecturer also referred to the new incumbent of the chair, and expressed his belief, founded on a long acquaintance with Dr. Simpson, that his discharge of the duties would justify the selection made by the responsible advisers of the crown. The address was further taken up with very shrewd advices to the students, to cultivate habits of honest work and careful observation. The classes were resumed on the 22nd instant.

ABERDEEN SEWAGE.

THE Aberdeen Irrigation Farm continues to prove a success. The sewage is allowed to flow over the ground periodically for not more than forty-eight hours. The farm contains forty-seven acres, and the receipts for the year will amount to fully £800. The suspicion at first entertained by purchasers of the sewage-crops is now at an end, and the irrigation-grass is freely used by the cow-feeders of the town.

MEDICAL OFFICER OF HEALTH FOR GLASGOW.

THOSE interested in sanitary matters in Glasgow eagerly scanned the newspapers on Tuesday morning, expecting to find there the appointment of a sanitary officer of health recorded. But they were disappointed. The Police Board received a minute from the Health Committee, according to which it was unanimously resolved by that committee to recommend Dr. J. B. Russell for appointment. The Police Board nevertheless resolved to postpone the consideration of the minute for another fortnight. Meanwhile we hardly envy the continual state of expectancy in which the candidate so recommended must have existed during the long period in which the matter has been under consideration.

GLASGOW SOUTHERN MEDICAL SOCIETY.

AT the twenty-ninth annual meeting of this Society, held on the 3rd instant, the following gentlemen were elected office-bearers for the session 1872-73:—*President:* R. W. Forrest, M.D. *Vice-President:* James Dunlop, M.D. *Treasurer:* E. McMillan, Esq. *Secretary:* John Dougall, M.D. *Seal-keeper:* E. Duncan, M.D. *Court Medical:* John White, Esq. (Convener); A. L. Kelly, M.D.; John Aitken, M.D. (Govan); H. R. Howatt, M.D.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.

AT the annual meeting of the College, held on the 17th instant, the following office-bearers were elected for the ensuing year:—*President:* W. Walker, Esq. *Treasurer:* J. Gairdner, M.D. *Secretary:* J. Simson, M.D. *Librarian:* Archibald Inglis, M.D. *President's Council:* Andrew Wood, M.D.; R. Omond, M.D.; J. Dunsmure, M.D.; J. D. Gillespie, M.D.; J. Spence, Esq.; H. D. Littlejohn, M.D.; *ex officio*, J. Gairdner, M.D. *Examiners:* A. Inglis, M.D.; R. Omond, M.D.; J. Dunsmure, M.D.; P. D. Handyside, M.D.; J. D. Gillespie, M.D.; H. D. Littlejohn, M.D.; P. H. Watson, M.D.; D. Wilson, M.D.; John Smith, M.D.; Argyll Robertson, M.D.; J. Bell, M.D.; T. Annandale, Esq. *Assessors to Examiners:* W. Brown, Esq.; J. Spence, Esq.; J. Simson, M.D.; J. Gairdner, M.D. *Conservator of Museum:* J. B. Pettigrew, M.D.

ALLEGED DECAY OF THE FRENCH SCHOOL OF MEDICINE.

OUR occasional correspondent (a French physician) writes to us from Paris :—Two annual reviews of the progress of medical science, in emulation of M. Schmitt's *Jahrbüch* and of the *Year-Book* of the British Sydenham Society, are contemplated in this country: the one a *Revue Trimestrielle des Sciences Médicales en France et à l'Etranger*, published by the well known and enterprising firm of Masson *père* in Paris, and edited by M. Hayem of the Paris Faculty of Medicine, one of the most eminent and accomplished of the younger physicians, and able to devote to the cause great abilities, industry, patriotism, and fortune. The other, *L'Année Médicale Universelle*, is provisionally announced to appear at Montpellier, under the competent direction of M. Bertin; it will appear in six parts during the ensuing year, provided an adequate subscription list can be secured in advance. It is probable that the simultaneous announcement of the two similar projects may interfere with their commercial success, for the aim and the programme of the two are identical. There can, however, be no doubt that such reviews are much needed, and ought to be very popular in this country; for nothing can be more remarkable than the general ignorance of contemporary medical science which has for many years prevailed and still prevails here. It is to this, no doubt, that must be attributed much that has of late years been noted of the backwardness of our French surgery and medicine, and much of the apparent egotism and unfairness which have brought our school into general disfavour in both the Old and the New World. The discussions at our Academies and Societies commonly either ignore what has been done elsewhere, or set it down to the credit of some recent French adapter. I have heard even M. Nélaton give the most elaborate lessons on Colles's fracture of the radius, with a minute historical introduction, and set down Colles's work to the credit of M. Verneuil. The discussions on the brilliantly successful operations of staphyloraphy still turn on the almost hopeless basis on which Roux left it; and the masterly and continuous successes of Fergusson and T. Smith are either not known except to a few, or are set down to M. Ollier and recent French imitators. Of the great British school of clinical medicine, next to nothing is known, except through the adapted work of M. Jaccoud and Trousseau's eulogium of the earlier work of Graves. A recent writer on two cases of ovariotomy even goes to the sublime point of announcing that it is the glory of the French school of surgery that it undertakes the desperate cases (and kills them), while the English surgeons select only the favourable cases. The feeble imitations by M. Guérin of the filtering and antiseptic principle and practice of surgery, laid down and worked out by Professor Lister, was treated only a fortnight since, and claimed, at the assembly of medical men, by M. Verneuil, at Lyons, as an original discovery, and laid also to the credit of the French school. The filthy system of dressings, the poisonous treatment of wounds after operations in our hospitals, and our enormous surgical mortality, still testify to the antiquated and barbarous condition of some leading parts of practice in this school, which is nevertheless remarkable for eminent qualities of intelligence, zeal, eloquence, and learning. These anomalies have often been set down to the blinding qualities of vanity and egotism, which interfere with the development of the French genius. They are more properly attributable to our honest ignorance of what is being done abroad. Our French physicians and surgeons neither travel nor read foreign books; they are afflicted with the *mal de mer*, with linguistic ignorance, and with a dislike to journeys. Some of the fatal consequences of these defects, which have all contributed to the present fallen state of French medical science and practice, will be remedied by the generalisation of reviews of foreign work, such as those which are now announced. It is, therefore, possible that they may succeed. The public which can profit by them is certainly large enough. On the other hand, the want of appreciation of light from without, which has led to the present decadence, and the rooted tendency to adore home productions as having necessarily the *cachet Français* which has an indescribable charm, may prevent those who may stand in need of such instruction from welcoming the opportunity which will present itself of receiving it. The inferiority of our medical literature to that of other countries has been a source of unconcealed grief to the few really well informed French medical men now for many years. Rarely does any book of solid original merit emerge from the press. I could not mention one really original treatise on any one disease, surgical or medical, for several years. Our leaders are men of eloquence, of fire, of readiness in the tribune; but in the wards they make a lamentable show. And our leaders, young and old, our Gueneau de Mussy, Barth, Béhier, Chauffard, Maisonneuve, Richet, Dolbeau, Giraldès, Verneuil, and Trelat, leave no mark. We are forced to confess that all the great improvements in surgery have, without exception, come from your side of the water during the last fifty years, or from across the Atlantic, although we do not like to mention it in our public debates. In surgery, the whole theory and practice of resections has come to us from Jones, Fergusson, and Hancock; we have learnt ovariotomy and perinæoraphy from Baker Brown and Spencer Wells, and we have not yet learnt it well; uterine surgery from Simpson and Marion Sims; the treatment of aneurisms by pressure from Bellingham and Vanzetti, by flexion from Ernest Hart (both of the latter came over here to teach us); of diseases of the eye from Græfe, Liebreich, and Bowman; and to the whole of this brilliant catalogue we have nothing to oppose. Thirty years of talking, of *thèses de concours*, *comptes rendus*, and bulletins, have left us without one achievement of progress really French. We have argued, perorated, flourished, and debated, and remained always in our own estimation *la grande nation*, as our presidents at two of our societies have recently assured us we are still; and, when we come to make up the account of our greatness, we find ourselves with a bankrupt and beggarly show indeed. But we only half acknowledge it to ourselves. We are making great protestations, but accompanied with pernicious bombast. Any one who should look at our proceedings, indeed, would find it difficult to believe in our sincerity, although we are in truth much more in earnest than we seem. We still borrow all our pathology quietly from Germany, abusing our abominably learned and insolently industrious neighbours all the time; and we borrow our surgery and medicine from you and from the Americans, quietly ignoring your authorities, and well aware that the medical masses are profoundly ignorant alike of your language, your books, and the practice of your *savans*, and can, therefore, never suspect that foreign researches are being palmed off upon them as native. The announcement of the two Reviews which I mentioned at the commencement of this letter is, however, an indication of the better feeling which is beginning to prevail. If they succeed and are widely read, there will be no resource for our leading aspirants but to work more and talk less; and foreign plumes will be more readily recognised, when stuck on as if natural growth. I conclude, therefore, as I began, by heartily wishing them success, and by welcoming them as the forerunners of a happy regeneration of our once great French school of medicine and of surgery.

THE ENTRIES AT THE METROPOLITAN SCHOOLS.

STILL the rush into the medical profession continues. The vast field presented in the colonies for medical men, which is day by day getting wider, no doubt accounts for the yearly increase of young aspirants to the science and art of healing. In 1860, as many as 483 new students entered the various metropolitan schools—a number exceeding by upwards of a hundred the average entry; but it was thought that this unusually large number was accounted for by the facilities given, before the new regulations came into operation, to students passing the preliminary examinations. And no doubt the explanation was in large measure the true one; for, during the next few years, the average entry was low. Since 1866, however, the popularity of medicine again became evident. The entry rose in 1866 to 362; in 1867 there was a slight decline, the number being 355; in 1868, however, 412 new students registered at the College of Surgeons. A progressive increase followed during the next four years; and, as will be seen, the number of new entries has this year increased to within 7 of the great entry in "the year of grace." This year, the Middlesex, the London, Charing Cross, and St. George's, and most markedly the last, have increased their numbers. St. Mary's remains as before; while the large schools, and the Westminster, show a decline in numbers. During each of the last four years, the total number of students has even been greater than in 1860. In that year, they numbered 1,228, while in 1869 they had reached 1,231; in 1870, 1,298; in 1871, 1,486; and in 1872 they number 1,496, or nearly five hundred more than in 1850.

	NEW ENTRIES.	ALL YEARS' ENTRIES.
Guy's Hospital	83	319
University College	83	273
St. Bartholomew's	79	254
St. Thomas's	51	156
St. George's	47	120
King's College	35	108
London	31	91
Middlesex	22	47
St. Mary's	21	61
Charing Cross	20	48
Westminster	4	19
TOTAL	476	1496

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Queen's Hotel, Birmingham, on Wednesday, the 13th day of November next, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

37, Great Queen Street, 24th October 1872.

CUMBERLAND AND WESTMORLAND BRANCH.

THE autumnal meeting of the above Branch will be held at the Green Dragon Hotel, Workington, on Friday, November 1st, instead of October 30th, as previously announced; T. S. CLOUSTON, M.D., President, in the Chair.

Gentlemen intending to read papers or cases, or be present at the dinner, are requested to give notice to the Secretary as early as possible. HENRY BARNES, M.D., *Honorary Secretary.*

Carlisle, October 16th, 1872.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT MEDICAL MEETINGS.

THE autumn meeting of the above district will be held at the Norfolk Hotel, Arundel, on Tuesday, October 29th, at 2.45 P.M.; Dr. TYACKE, of Chichester, in the Chair.

The dinner will take place at 4.30 P.M. precisely; charge, 5s., exclusive of wine.

All members of the South-Eastern Branch are entitled to attend these meetings, and to introduce friends.

Notices have been received of the following communications to be read at the meeting:—Dr. Tyacke: Remarks on the Condition and Supply of Drinking-Water in the District.—Mr. G. F. Hodgson: A Case of Severe Neuralgia of the Tongue.—Mr. W. J. Harris: On the Advantages of the Use of Smith's Clamp and Cautery in the Treatment of Hæmorrhoids and Prolapsus of Rectum.

Casella's improved Portable Spirometer will be exhibited.

WM. J. HARRIS, *Honorary Secretary.*

Worthing, October 21st, 1872.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the session will be held at the College Green Hotel, Bristol, on Thursday evening, October 31st, at 7 o'clock; T. G. STOCKWELL, Esq., President, in the Chair.

E. C. BOARD, R. S. FOWLER, *Honorary Secretaries.*

Bristol, October 1872.

SHROPSHIRE ETHICAL BRANCH: ANNUAL MEETING.

THE annual meeting of the Shropshire Ethical Branch was held at the Lion Hotel, Shrewsbury, on Monday, October 7th, at 1.30 P.M.; J. W. PROCTER, Esq., President, in the Chair. Twenty-two members were present. A. G. Brookes, Esq., the retiring President, having briefly addressed the meeting, resigned the chair to J. W. Procter, Esq., who thanked the members for the honour conferred upon him, and expressed his earnest wish to merit and retain the confidence they had so kindly evinced by electing him to the presidency.

The Annual Report of Council was read. It will be published next week.

The following resolutions were unanimously passed:—

Vote of Thanks.—"That the cordial thanks of the meeting be given to the late President, Vice-President, and Council, for their valuable services during the past year; also to E. Andrew, Esq., M.D., on retiring from the duties of the Financial Honorary Secretaryship, which he kindly undertook in consequence of the illness of Dr. Styrap."

Report of Council.—"That the Report of the Council now submitted for the approval of the meeting—a copy of which was transmitted to each member on the 26th ultimo—be approved and adopted as the annual report of the Branch."

Election of Officers.—"That S. Betton Gwynn, Esq., be elected President, and W. A. Davis, Esq., Vice-President; and the following gentlemen members of the Council for the ensuing year, in the place of those who retire by rotation or otherwise:—J. W. Procter, Esq., J. Bromfield, Esq., E. Hall, Esq., W. W. Jones, Esq., and J. Rider, Esq."

Representatives of Branch in General Council and on Parliamentary Committee.—"That, in accordance with the eighth General Law of the British Medical Association, J. W. Procter, Esq., S. B. Gwynn, Esq., J. R. Humphreys, Esq., and Dr. Jukes Styrap be the representatives of the Branch in the General Council for the ensuing year; and that the President, J. W. Procter, Esq., be the Branch representative on the Parliamentary Committee."

New Members.—Five new members were proposed by Dr. Styrap and duly elected.

Thanks to President.—It was resolved, "That the cordial thanks of the meeting be given to the President for the courteous ability with which he has conducted the business of the meeting."

Papers.—Owing to a protracted investigation by the Council of alleged unethical conduct on the part of a member, the general meeting was necessarily delayed beyond the appointed hour, and the reading of several papers was in consequence unavoidably postponed. Each of the following papers was succeeded by a short practical discussion.

1. On the occurrence of Partially Organised Casts of the Intrauterine Cavity as a Result of Incomplete Abortion, and a means of producing their expulsion. By J. W. Procter, Esq.

2. A case of Lithotomy under unusual difficulties. By A. Mathias, Esq.

3. Ligature of the External Iliac Artery for an Aneurism in the Groin. By J. R. Humphreys, Esq.

4. The value of Atropine as a Remedy in Obstruction of the Bowel. By E. Andrew, M.D.

5. The Hypodermic Injection of Morphia for Hæmoptysis of the third stage of Phthisis. By E. Andrew, M.D.

Dinner.—At 4 P.M., thirty-seven gentlemen sat down to an excellent dinner, under the presidency of J. W. Procter, Esq., the vice-chair being filled by S. B. Gwynn, Esq., President-elect. After the usual loyal and patriotic toasts, Dr. Styrap proposed the health of the President in terms of warm eulogy, which met with a genuine and hearty response, and was acknowledged by him in feeling and grateful lauguage. The pleasures of the evening were greatly enhanced by the strains of a select band of musicians, under the leadership of Mr. Brannin, of Liverpool.

EAST SURREY DISTRICT: SOUTH-EASTERN BRANCH.

A MEETING was held at the White Hart Inn, Reigate, on Thursday, October 17th. The Chair was taken at 4.15 P.M. by Mr. HALLOWES, of Redhill; and twenty-five members and visitors were present.

Next Meeting.—It was arranged that the next meeting should be held at Croydon in December.

The Public Health Act.—The following resolutions was proposed by Dr. HOLMAN, seconded by Mr. NAPPER, supported by Dr. CARPENTER, President of the Branch, and carried unanimously—"That the President and Secretary of the South-Eastern Branch be requested to draw up a form of petition to Government, praying that the inspectors under the new Public Health Act shall be legally qualified medical men; and that, as far as possible, the analysts under the same Act should also be persons having a medical qualification. That forms of petition be sent by the Secretary to the secretaries of the various districts of the Branch, requesting them to bring them forward for adoption at the various district meetings."

Papers, etc.—1. Mr. HALLOWES gave the history of two cases of Puerperal Convulsions with Albuminuria which had resulted favourably, and made remarks on the treatment.—Mr. Roper, Dr. Carpenter, and Dr. Holman took part in the subsequent discussion.

2. Mr. HOWSE read a paper on the Treatment of Necrosis.

The Dinner took place at 6.15 P.M. Mr. Hallowes occupied the chair, and twenty-three gentlemen were present.

SOUTH MIDLAND BRANCH: AUTUMNAL MEETING.

THE sixteenth autumnal meeting of this Branch was held at the house of Mr. C. Daniell, Esq., The Limes, Stony Stratford, Bucks, on Tuesday, October 15th, at 2.30 P.M. Luncheon had been previously kindly provided by Dr. Mackay at his house. There were present A. D. MACKAY, M.B., President, J. M. Bryan, M.D., President-elect, and sixteen other members.

The PRESIDENT gave a short address on the history of Stony Stratford.

The Minutes of the last meeting were read and confirmed.

The Public Health.—A letter was read from Mr. R. Ceely, of Aylesbury, wishing to elicit the opinion of the Branch on the tenth clause of

the Health of Towns Bill. After some discussion, it was proposed by Dr. FRANCIS, of Northampton, seconded by Dr. PRIOR, of Bedford, and carried unanimously, "That the superior officers of health and inspectors should be members of the medical profession in carrying out the provisions of the Public Health Act."

Mr. ASHDOWN proposed as a rider, "That the superior medical officer should be independent of private practice." This was carried *nem. con.*

Papers.—1. Dr. Macdonald (Woburn) read a paper on Colles's Fracture, advocating the treatment by Gordon's Splint. Specimens of splints were shown.

2. Mr. Ashdown (Northampton) read a case of Ovariotomy in a young girl, aged 17, who was operated upon by him successfully. He advised operating after once tapping, so that there may be few adhesions, and suggested that midway between the catamenial periods was the best time. He preferred the ligature to the clamp, and said that it was advisable to include the peritoneum in the sutures.

3. Dr. Francis (Northampton) read a paper on Epileptiform Neuralgia. The disease occurred in a man, aged 36, in good circumstances, who had neuralgia of the left side of the face for a considerable period, and occasionally accompanied with severe spasm of muscles of mastication, which lasted from a few seconds to a minute. On one occasion the spasm was so severe that fracture of the lower jaw was produced, and this soon became a double compound fracture; one end of the fracture projecting through the integument externally, and the other through the mucous membrane into the mouth. No remedy seemed to alleviate the symptoms, and the man died six days after the fracture. There was no disease of the bone, and no history of syphilis.

4. Mr. Goldsmith (Bedford) read a paper on a case of Perforating Ulcer of the Stomach, and produced the specimen.

5. A paper by Dr. Bryan on two successful cases of Tubercular Hydrocephalus in two children was not read for want of time.

The meeting, which was a very successful one, then separated at 5 P.M. The next annual one will be in 1873, under the presidency of Dr. Bryan.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, OCTOBER 15TH, 1872.

JOHN HILTON, Esq., F.R.S., President, in the Chair.

Hydatids of the Heart.—Dr. PEACOCK exhibited a specimen of hydatids of the heart, taken from the body of a man aged 34, who had died after a few hours' illness, having during his lifetime and up to the morning of death shown no symptom pointing to any serious lesion. The hydatids formed on the posterior wall of the heart, and burst into the right ventricle.—Dr. MURCHISON asked if there had been any examination of the liver, and whether it had afforded evidence of the correctness of a statement of Dr. Budd, that hydatid of the heart was always associated with the same affection of the liver.—Dr. PEACOCK replied that there was no hydatid affection of the liver, and mentioned, as further disproving Dr. Budd's statement, that several cases of hydatid of the heart were reported in the *Transactions* of the Society in which the liver was not involved.—Dr. DUFFIN referred to a case he had seen in Dr. Budd's practice in which the heart, but not the liver, was affected.—Dr. CRISP stated that Dr. Cobbold quotes numerous cases of hydatid of the heart, but with the liver free from the affection.

Casts of the Bronchi.—Dr. PEACOCK showed some casts from the bronchi of a patient who had had hæmoptysis for twelve days. They were discoloured solid coagula.

Melanotic Cancer of the Liver.—Mr. LAWSON exhibited a liver containing patches of melanotic cancer, into and around which was a considerable amount of extravasation of blood. The patient, a female, was admitted into the Middlesex Hospital with a tumour in the groin of three months' duration, and with constant vomiting and other symptoms, leading to the impression that the case was one of strangulated omental hernia. The tumour after death was found to be a spindle-celled sarcoma. She had had a similar tumour previously removed from her shoulder.

General Xanthelasma.—Dr. HILTON FAGGE and Dr. PYE-SMITH brought forward the details and drawings of the appearances found in two cases of general xanthelasma. Their contributions were very important. The changes found were minutely and carefully described, and a microscopic description of Dr. Fagge's case by Mr. HOWSE was read. The authors both attributed the changes in the skin and the organs to chronic jaundice.

Diseased Suprarenal Capsules.—Dr. WILKS showed for Dr. Marshall, of Preston, a specimen of Addison's disease of the suprarenal capsules. The usual symptoms were present during life. Dr. Wilks thought that the term chronic inflammation of the capsules might be used for these cases.

Specimen of Syngamus Trachealis.—Dr. CRISP showed specimens and microscopical drawings of the syngamus trachealis, the double worm that produces the "gapes" in young chickens, pheasants, partridges, and some other birds. Probably half a million of chickens were killed by it in this country, besides pheasants and partridges.

Cystic Epithelioma of the Eyelid.—Mr. SPENCER WATSON exhibited a specimen and microscopic drawings of an epithelioma of the eyelid, in which cysts were developed varying from the size of a millet-seed to microscopic dimensions. Tubular processes of epithelium were found occupying areolar spaces, which in some parts were empty, and formed the germs of the larger cysts visible to the naked eye.

Fibro-Cartilaginous Tumours Growing from the Heart.—Dr. KELLY showed a specimen taken from a woman, aged 40, who was admitted into King's College Hospital with the usual symptoms of cardiac dropsy. She had always had good health until within six weeks of her death, nor had she at any time suffered from shortness of breath or palpitation of the heart. No rub or *bruit* was heard during life, but the heart-sounds seemed muffled and distant. After death, several rounded and firm tumours were found over the heart, and chiefly around the large vessels; there were some on the parietal pericardium; they varied in size from a pin's-head to a mass an inch and a half in diameter. The cavity contained about thirty ounces of fluid, so that the opposed surfaces did not come into contact. All the tumours were rounded, smooth, faintly lobulated, and, on section, were of a yellowish-white colour, although in parts translucent. Under the microscope, islets of nearly full hyaline cartilage were seen, surrounded by other portions which had a fibro-cartilaginous appearance; no true bone was seen, but in many of the tumours calcareous salts had been deposited.—Dr. WILKS stated that there was a fibro-osseous tumour in Guy's Hospital Museum which had probably been at one time soft.—Dr. KELLY replied that there was not in the present instance any bone. It was true enchondroma.

HARVEIAN SOCIETY OF LONDON.

THURSDAY, OCT. 17, 1872.

C. HANDFIELD JONES, M.B., F.R.S., President, in the Chair.

Casual Communications.—Mr. FAIRLIE CLARKE narrated a case of Imperforate Anus in a male infant, operated on by him thirty-six hours after birth, who died two days after from exhaustion. No peritonitis was found at the *post mortem* examination; the gut terminated an inch from the anus. Mr. Clarke inquired the relative frequency with which male and female children were thus affected.—Mr. H. POWER operated on three cases at the Westminster Hospital; all were male infants; all died; one lived three weeks, another a year.

The PRESIDENT narrated two cases of Rheumatic Fever with unusual complications; in one case, followed by purpura, swellings of the thighs, back, penis, and scrotum, erysipelas of the head, and melæna; in the second, by severe purging and vomiting.

Paper.—Dr. W. H. DAY read a paper on Headache in Children. After remarking on the symptomatic value of headache, as a term, the author reviewed the commonest varieties of headache in children, and then dwelt especially on a peculiar functional form, of which he had met with several examples. These were associated, he believed, with some intricate, though undemonstrable, change, physical, structural, or chemical, going on within the cranium; giving rise to some confusion or abnormal sensation in the head, or to actual headache. This peculiar cerebral change is accompanied occasionally, but not of necessity, with enlargement of the head, wasting of the extremities, flabbiness of the muscles, and looseness of the joints; there are also pallor and debility, restlessness by night, irritability by day, a slow and sometimes irregular pulse, with dull and persistent headache; the temperature is normal. Dr. Day treated the early stage of the disease with bromide and iodide of potassium; and advocated later on the use of iron, bark, and cod-oil. Tonics did harm in the early treatment.—Dr. FARQUHARSON gave some interesting experience in relation to headache in children, based upon cases treated by him at Rugby. He referred to the importance of not overlooking headache as a symptom of slight sunstroke, and in connection with over-work; in the latter cases, the urine contained alkaline phosphates.—Dr. BROADBENT regarded persistent headache in a child as a suspicious symptom. Dr. Day's cases he considered examples of the headache of rickets or hydrocephalus. He advocated the use of small doses of mercury continued for a long time.

CORRESPONDENCE.

MEDICAL FEES.

SIR,—There is a subject intimately connected with the welfare of the medical profession, which deserves, I think, ventilation in your pages. In some localities this question scarcely presents itself, in others it presses heavily. It is—What are the legitimate claims of the families or relatives of medical men, whether retired, living, or deceased, upon the services of the profession? We may at once dismiss all cases of need, or even of straitened condition, for I may safely say that few amongst us, when it comes to that, weigh the point as to whether there is any claim but the need; but I allude to the numerous instances in which it seems to be taken for granted, that a connection with a medical man, whether near or remote, gives a claim upon the gratuitous services of every other medical man, whatever the position or means of the claimant may be. Hence we not unfrequently see the anomaly of a comparatively poor man, attending a comparatively rich one, who happens to have been a doctor's son, or has perhaps married a doctor's daughter, or such like, either for no remuneration at all, or, at least, for some paltry acknowledgment, not a tithe of the value of what would be the fees under ordinary circumstances. There are, of course, many exceptions—many who would not think of making such exactions, for they are nothing less; but there are many that do, and it is for the purpose of coming to some understanding as regards the difficulty that I bring it before you. Take instance No. 1: A medical man retires from one of the public services, or even from private practice, at home or abroad, with ample means, either of private fortune or pension, or both. Should such an individual, spending freely, and living in good style, at all events with a good income, seek for gratuitous attendance upon his family? Again, a medical man dies, leaving his widow and family in good and affluent circumstances. Should such widow or family seek for gratuitous attendance? Some young man, spending perhaps lavishly upon himself, comes to consult you, and, because his father happened to be a doctor, expects you to forego your fee. Such instances might be multiplied, but we all know them in their various forms. The abuse—for I can call it nothing else—has, I fear, been fostered by medical men themselves; by some from mistaken philanthropy, by some from policy, and by some from other motives, and so the services of the medical profession come to be undervalued in other ways, whether as hospital physicians or Poor-law surgeons, or even as practitioners, making us what we are—a poor profession. We do not find that the lawyer draws out deeds gratuitously for the man of property because his father, or even he himself, had been a lawyer; or makes the daughter's marriage settlements without a fee because of her connection. I question, indeed, whether the clergyman would refuse the fee for marrying, even if he knew that one or other of the pair had clerical antecedents; and yet the doctor must always be the one to give time and trouble, and perhaps health, as well as horse-wear and carriage-wear, and of all that constitutes his living, to those who can afford well to pay him properly, but who evade the obligation simply on the plea of medical connections. The only remedy is some well supported expression of opinion by the profession at large.

I am, etc., A PROVINCIAL PHYSICIAN.

October 8th, 1872.

PHTHISIS AND DAMP SUBSOIL.

SIR,—I had not the most remote notion, when writing my article on the Geographical Distribution of Phthisis, of doing the slightest injustice to Dr. Bowditch, by giving to Dr. Buchanan the entire credit of discovering the relation which is held to exist between dampness of soil and phthisis. I imagined that all interested in this subject would have known that the question of priority had been decided by Dr. Buchanan himself, in the last paragraph of his report, in the following words: "Until the end of my own inquiry, I was in complete ignorance of Dr. Bowditch's researches. I should not insist on this point, except for the purpose of giving to the conclusions which Dr. Bowditch and myself have obtained the additional weight that they deserve from having been arrived at by a second inquirer wholly ignorant, and therefore unbiassed by the work of the first." Secondly, I wrote of the Distribution of Phthisis in England; and, as Dr. Buchanan's investigations were made the subject of remark in the same communication, in which doubts were raised, from erroneous data, as to the usefulness of disease-maps for this country, I considered that I was justified in speaking not only of his investigations and his opinions, but also of his discovery, the result of his researches in England.

I was quite aware that such facts as the decrease in the mortality from phthisis in Salisbury and other towns after improved land drainage had directed attention to the influence of subsoil dampness as a probable exciting cause of this disease, and that they eventually had led to the investigation which was entrusted to Dr. Buchanan; and so so far as this gentleman is concerned, I think no one will complain of my saying that his results were confirmed by those of Dr. Bowditch, when it is remembered that the researches of this eminent American physician did not come into his hands until his own were complete.

With regard to Fourcault's proposition in 1838, that tubercular phthisis is found to be most frequent in localities "où l'air se trouve à son maximum d'humidité", it must be remembered that the atmosphere's capacity for moisture is greatest over continental countries within the tropics, where phthisis is rare, and that its power of retaining moisture decreases from these degrees of latitude as it passes through the temperate to the frigid zones; in fact, the air acquires its maximum capacity for humidity when the solar influence is greatest, and its condition then is widely different from the cold dampness which characterises the air overlying undrained clay lands in temperate climates. *Le froid humide* of the French medical writers is the atmospheric condition so obnoxious to animals having a tendency to tubercular diseases.

With the cold and the moisture, however, I believe we shall eventually find another element associated, when the phenomena of atmospheric and terrestrial electricity have been more systematically investigated than hitherto they have been in their etiological relations not only to phthisis, but to many other diseases in man and the lower animals.

I am, etc., ALFRED HAVILAND.

120, King Henry's Road, N.W., Oct. 14th, 1872.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

EXAMINERS.—The following gentlemen have been elected examiners for medical and surgical degrees during the present academical year:—

First M.B. Examination: W. P. Hiern, M.A. (St. John's); P. T. Main, M.A. (St. John's).

Second M.B. Examination: Regius Professor of Physic (*ex officio*); J. B. Bradbury, M.D. (Downing); and Henry Power, M.B.Lond., F.R.C.S.

Third M.B. Examination: Regius Professor of Physic (*ex officio*); Herbert Davies, M.D. (Queen's); and J. W. Ogle, M.D.Oxon.

Degree of M.C.: Professor of Anatomy (*ex officio*); George W. Callender, F.R.S.; and J. N. C. Davies-Colley, M.A., M.C.

Assessor to the Regius Professor of Physic: W. H. Dickinson, M.D. (Granville and Caius College.)

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

The Sunderland Board of Guardians have increased the salary of Dr. Foote, medical officer to the workhouse, from £120 to £200 *per annum*, and voted a gratuity of £100 to Dr. Evans, medical officer for Sunderland, for extra services during the fever epidemic.

THE SPALDING UNION INFIRMARY.

THIS Infirmary, which was enlarged about three months ago at considerable cost, was set on fire accidentally on Monday week. A considerable number of patients occupied the wards; these, however, were safely removed to the Union house, and placed in security. The centre block of buildings, consisting of the nurses' apartments, store-rooms, etc., were destroyed. The fire also ran along the roofs the wards, right and left, doing considerable damage. The Infirmary was considered a model one of its kind, being fitted up with every modern convenience, making up sixty-eight beds, having a cubic space of 700 feet for each patient. The Infirmary is under the charge of Dr. Morris of Spalding. The building is fully insured.

POOR-LAW DIFFICULTY.

SIR,—I have read with dismay that it is proposed to blend the offices of union surgeon with that of medical officer of health. In a sanitary point of view, this will be jumping out of the fryingpan into the fire of contagion. The inspector of nuisances—for such will be the duty of health-officers—is in himself liable to be a travelling source of contagion, wholly unfitted, in my opinion, to enter into a sick room or a

lying-in chamber. Upwards of fifty years' experience and observation as a general practitioner in medicine, surgery, and midwifery, warrants me in boldly entering my protest against two such offices being united. The standard of sanitary science is the prevention of disease, but such an arrrngement as is now contemplated will most assuredly have the contrary effect. Would it not be better to qualify future Poor-law inspectors officers of health, and combine both offices? Medical coroners are the best officers of that class, and medical barristers would make the very best Poor-law inspectors and officers of health. I will here add that no union surgeon, in my opinion, should attend midwifery cases; such duties should in future devolve upon women fully qualified by a course of instruction, and after the usual test of examination at the Royal College of Surgeons on that speciality.

I am, etc., WILLIAM DALTON.

Cheltenham, October 1872.

OBITUARY.

R. B. UPTON, ESQ.

THE sudden removal by death of Mr. Robert Brotherson Upton is not only a source of sorrow to a very large circle of clients and attached friends, but a great public loss. As a prominent member of one of the foremost legal firms in the City of London, he occupied a most important position in the commercial world. His knowledge of law was so extensive and accurate, his soundness of judgment so universally acknowledged, his uprightness so thorough, and his sense of honour so fine, that his name was a *primâ facie* argument in favour of any case with which it was connected. His claim on us for a special notice is threefold. He was the son of a medical practitioner; filled with distinction and ever-growing popularity for more than four decades the office of Clerk to the Society of Apothecaries; and was of late years the legal adviser of the British Medical Association. Those who were entrusted some time since with the responsible duty of preparing a draft charter for the consideration of the Association, had ample opportunities of judging of the sagacity which he brought to bear upon the various matters brought under discussion. On other and more recent occasions, the Association has been much benefited by his wise and prudent counsels. To this brief and imperfect testimony to his sterling worth and eminent professional qualities, we can only add a few words of affectionate remembrance of his genial and friendly nature, which at once converted the client into a friend, and made him feel that he was dealing with one in whom he could place implicit confidence, not only for his professional skill, but for the sympathy with which he entered into his private affairs. His large stores of information and pleasant way of imparting them to others gave a great charm to his society. We understand he is succeeded at Apothecaries' Hall by his nephew, Mr. James Upton.

J. PEARSON HUGHES, M.D., LLANDOVERY, CARMARTHENSHIRE.

DR. HUGHES entered as a student at University College in 1862, where his course was successful and highly distinguished. He graduated at the University of London as M.B. in 1866, and as M.D. in 1867. He went into general practice at Llandovery, near his native place, and soon acquired the respect and affection of his patients and friends, and was greatly successful. He died of acute phthisis, at the early age of twenty-eight.

JAMES FERGUSON, M.D., ELGIN.

It is our melancholy duty to record the death of Dr. James Ferguson, of Elgin. He died at Falmouth on October 14th. He had been ill for nearly a year. Born at East Grange in 1835, he received a preparatory education in the Elgin Academy, and attended the classes of the Aberdeen University for two sessions. In 1852, he commenced his medical curriculum in the University of Edinburgh; and graduated in due course. In the beginning of 1857 he became house-surgeon in Gray's Hospital; there, during two years, he had the advantage of the training of his uncle, Dr. Paul, who was probably one of the most distinguished men of his day in the north of Scotland. He then entered the Royal Navy. He was first appointed to H.M.S. *Hawk*. He remained on board that vessel for about a year; and, when H.M.S. *St. George* was commissioned specially for the training of His Royal Highness the Duke of Edinburgh, Dr. Ferguson was selected by the Admiralty, and appointed one of the assistant-surgeons of that ship. When the Duke of Edinburgh was ordered home, Dr. Ferguson was appointed to accompany His Royal Highness to this country. On his arrival he found that his uncle, Dr. Paul, had passed away, and he therefore resolved to commence practice in Elgin, where he devoted himself with enthusiasm and self-denial to the duties of his toilsome calling. By his death, Elgin has lost a physician in whom the public were rapidly gaining great confidence, and who, had, he been spared, would have attained to a distinguished position in the medical profession.

JAMES CHATTERTON, M.D., FUSILIER GUARDS.

JAMES CHATTERTON, eldest son of George Chatterton, J.P., was born 9th August, 1844; was educated at Sandwich School, Kent; and entered at Queen's College, Cork, in 1862. During his Arts course, he obtained scholarships in mathematics, chemistry, and modern languages. He took the degree of B.A. in 1865. He studied medicine in Queen's College, Cork, for two years; was resident pupil in the Whitworth Hospital, Dublin; and took the degrees of M.D. and M.C. of Queen's University in Ireland in 1868 He was also a Member of the Royal College of Surgeons of England, and a Licentiate in Medicine and Midwifery in the King and Queen's College of Physicians, Ireland. In 1868 he took the first place at the autumn examination for the Army Medical Service on entering Netley Hospital, and in 1869 retained the first place; in coming out he was appointed to the Staff, from which time to 1870 he did duty with several regiments, including the 1st Life Guards. In January, 1870, he was sent to Canada, and appointed one of the surgeons to accompany the Red River Expedition; on his return from which to England he was gazetted in January 1871 as Assistant-Surgeon to the 2nd Battalion Scots Fusilier Guards, in which he served until his death, at the Tower, September 1872. The cause of his death was pyæmia, following facial carbuncle.

JOHN CORSAN, M.D.,

DR. JOHN CORSAN, who was killed on the Caledonian Railway at Kirtlebridge on October 1st, was born at Mennock in Nithsdale, where his mother still resides, and received his early education at the parish school of Sanquhar. While still a youth, he visited Canada and Australia, where an elder brother lives. Returning to Canada about thirteen years ago, he there studied medicine, graduated, and commenced practice, in which he was so successful as to be regarded as a skilful and very prosperous practitioner. About six weeks ago, he arrived at Scotland on a visit to his relations, proceeded to London to see some of the hospitals, and was on his return thence to Glasgow, being expected at the house of Dr. James Morton, to whom he was related, when he met with his death. Dr. Corsan was thirty-five years of age, married, and has left a widow and three children in the State of Ontario in Upper Canada.

MICHAEL T. SADLER, M.R.C.S., BARNSLEY.

MICHAEL THOMAS SADLER was born at Doveridge, in Derbyshire, in 1801. His earlier years were spent in part under the roof of his uncle, Michael Thomas Sadler, F.R.S., some time M.P. for Newark and Aldborough, one of the earliest labourers in the cause of factory legislation. In course of time he became a student in the then united schools of Guy's and St. Thomas' Hospitals. He became L.S.A. in 1822, and M.R.C.S. in 1813. In 1824 he settled in Barnsley, where the rest of his life was spent. He was an active and successful advocate of all sanitary improvements in the town, having taken a prominent part in securing a good system of sewerage, an ample supply of pure water, a well situated extramural cemetery, and public baths, and in diminishing as far as possible the nuisance of smoke. He was Medical Officer of Health to the Local Board from its establishment in 1853 until his retirement in 1867. He was the author of two papers on Asiatic cholera, concerning the infectious nature of which he was firmly convinced. In 1869 in published *The Bible the People's Charter*, in which he endeavoured to show, that the principles of legislation laid down in the Bible as regards the distribution of wealth, and the inheritance of land, are, in accordance with the opinions of the most eminent political philosophers, and such as when applied, are most conducive to the happiness and prosperity of the bulk of the people. As a practitioner, he was judicious and philosophical in his views, ever anxious to keep himself informed of the most recent discoveries. His pupils, amongst whom may be mentioned Mr. Spencer Wells and Dr. Priestley, have repeatedly expressed the affection and respect with which they regarded him, and have thankfully acknowledged how much they owed to the influence of his precepts and example. Respected and esteemed by the rich and beloved by poor, he died without suffering, from effusion on the brain, on October 6th, 1872.

JOHN MACRAE, M.R.C.S., LEWES.

MR. MACRAE, the son of a merchant at Forres, Morayshire, was born at that town in 1811. He became a member of the Royal College of Surgeons of Edinburgh in 1832. He then went to India as a Surgeon in the Honourable East India Company's Service, but was obliged to return to England in consequence of ill-health, caused by the climate. On his return to England in 1834, he first practised his profession at Hurstmonceux, Sussex, whence he removed to Lewes in 1843. For the last twenty-nine years he carried on an extensive practice of the highest class, up to the time of his death, which occurred suddenly on September 27th, from syncope, caused by diseased heart. He was 60 years of age. He leaves a widow, a son, and seven daughters.

GLASS BLACK, M.D., M.R.C.S., TORQUAY.

IT is with deep regret that we record the death of Glass Black, M.D., of Torquay—the result of an accident. He was the son of the late Mr. Thomas Black, Surgeon, of Exmouth, with whom he entered into partnership in the year 1823, after studying at Guy's and St. Thomas's Hospitals, and passing the examinations of the Royal College of Surgeons and the Apothecaries' Society of London. After a few years, he succeeded his father in a large practice, and remained at Exmouth until 1844, when he became an extra-licentiate of the Royal College of Physicians by examination, and M.D. of Giessen. From Exmouth he went to reside at Torquay, where he retired from active practice, but freely gave up his time to minister to old friends or patients who valued his gratuitous advice. On September 30th last, whilst crossing the street, he was knocked down by a cart, and sustained such serious injuries that from that moment his medical friends who attended him had no hope of his recovery. On the following day, the symptoms became so alarming that the operation of trepanning was resorted to, with the result of causing an immediate mitigation of these; and this operation appears to have prolonged his life until Saturday, the 5th instant, when he died at the age of 71.

Dr. Black was a man of remarkably kind manners and high principle. He not only never spoke an ill word of any person, but he would never believe ill of any one. His kindness to all around him was very great, and all that he did was totally without ostentation. He was one of those who

"Do good by stealth, and blush to find it fame."

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were duly admitted Licentiates of the College, on the 18th day of October, 1872.

Bacot, W. G., Blandford
Brown, J. L. O., Richmond House, St. George's Road, Southwark
Charlesworth, J., Hanley
Clapham, W. C. S., 4, Powis Place, Great Ormond Street
Elliot, N. B., Denmark Hill, Camberwell
Finzi, J. M., 105, Gower Street
Hands, A., Inkberrow, Redditch
Lineker, E. H., Widnes, Warrington
Lubbock, M., Guy's Hospital
Parker, G. W., 1, Selby Villas, New Cross Road
Pellereau, G. E., 40, Bedford Place, Russell Square
Sheppard, T. W., 8, Oxford Gardens, Notting Hill
Stern, M., 8, Maddox Street
Wood, R., Bromsgrove

The following gentleman, having passed in Medicine and Midwifery, will receive the College Licence on his obtaining a qualification in Surgery recognised by this College.

Bedford, Robert, 201, Euston Road

QUEEN'S UNIVERSITY IN IRELAND.—At the annual meeting of the Senate, held in St. Patrick's Hall, Dublin Castle, on Thursday, October 10th, the Most Honourable the Marquis of Kildare, Chancellor, conferred degrees in Medicine and Surgery as follows:—

The Degree of Doctor of Medicine.

First Class—R. J. Anderson, M.A., Belfast; J. K. Houston, Belfast; J. Magrath, Belfast. *Second Class*—M. J. Malone, Cork; H. M. Maybury, Belfast. *Third Class*—J. Strahan, Belfast. *Passed*—J. G. Adamson, Belfast; A. Adams, Belfast and Cork; G. W. F. Armstrong, Cork; J. B. Bailey, Belfast; G. Barkley, B.A., Belfast; P. L. Benson, M.A., Cork; S. Browne, Belfast; R. E. Burges, B.A., Cork; J. Bryans, Belfast; J. Burke, B.A., Galway and Cork; R. Campbell, Belfast; N. W. Colahan, Galway; J. G. Collis, Cork; T. Crowley, Cork; R. Davis, Belfast; H. A. Davis, Belfast and Cork; J. S. Dill, Belfast; J. Fleming, Belfast; C. Forsythe, Belfast; H. A. Fogarty, Cork; M. J. Gilespie, B.A., Galway; J. Graham, Belfast; J. Hegarty, Galway; W. Hickman, Galway; J. J. Holland, Galway; J. Hurley, Cork; H. M. Johnstone, Cork; S. Johnstone, Cork; F. B. Kane, Cork; J. R. Leech, Cork; G. A. Macaulay, Galway; S. M'Cutcheon, Belfast; D. P. M'Donald, Cork; S. M'Kee, Belfast; P. J. M'Quaid, Belfast; and Galway; P. J. MacNamara, Cork; H. J. Madders, Cork; J. A. Malcomson, Belfast; W. Molloy, Belfast and Cork; T. Molony, Cork; W. E. B. Moynan, Galway; D. Mullen, Galway; R. J. Munro, Belfast; B. O'Brien, Cork; P. O'Connell, Cork; B. O'Connor, B.A., Cork; S. H. Owen, Belfast; T. Patterson, B.A., Belfast; R. Read, Galway and Belfast; J. Ring, Cork; J. N. Ryan, Belfast; J. M. J. Scott, Belfast; W. J. Smyth, Belfast; T. F. Sparrow, Cork; W. F. Spencer, Galway; W. Simpson, Belfast; W. Thompson, B.A., Galway; J. Wheeler, Cork; T. B. Whitton, Cork; H. C. Wilson, Belfast; A. Wylie, Belfast.

The Degree of Master in Surgery.

J. G. Adamson, Belfast; A. Adams, Belfast: S. Agnew, B.A., M.D., Belfast; G. Barkley, B.A., Belfast; M. Black, M.D., Belfast; S. Browne, Belfast; J. Bryans, Belfast; R. E. Burges, B.A., Cork; N. W. Colahan, Galway; J. G. Collis, M.D., Cork; T. Crowley, Cork; R. Davis, Belfast; H. A. Davis, Belfast and Cork; J. S. Dill, Belfast: W. Fleming, M.D., Galway: H. A. Fogarty, Cork; J. Graham, Belfast; J. Hegarty, Galway; W. Hickman, Galway; J. J. Holland, Galway; J. Hurley, Cork; J. K. Houston, Belfast; F. B. Kane, Cork; J. R. Leech, Cork; C. A. Macaulay, Galway; S. M'Kee, Belfast; D. P. M'Donald, M.D., Cork; S. M'Cutcheon, M. D., Belfast; H. M. Maybury, Belfast; P. J. M'Quaid, Galway; T. Molony, Cork; W. E. B. Moynan, M.D., Galway; B. O'Brien, Cork; P. O'Connell, Cork; B. O'Connor, B.A., Cork; T. Patterson, B.A., Belfast; R. Read, Belfast and Galway; J. Ring, Cork; J. M. J. Scott, Belfast; W. F. Spencer, Galway; J. Strahan, Belfast; W. Thompson, B.A., Galway.

Diplomas in Midwifery.

J. G. Adamson, Belfast; S. Agnew, B.A., M.D., Belfast; P. L. Benson, M.A., Cork; J. Bryans, Belfast; J. M'M. Browne, M.D., Cork; M. Black, M.D., Belfast; R. E. Burges, B.A., Cork; N. W. Colahan, Galway; J. G. Collis, Cork; T. Crowley, Cork; R. Davis, M.D., Belfast; H. A. Davis, Belfast and Cork; H. A. Fogarty, Cork; J. Graham, Belfast; F. Healy, M.D., Cork; J. J. Holland, Galway; J. Hurley, Cork; J. K. Houston, Belfast; W. E. Johnson, M.D., Belfast; G. Johnston, M.D., Belfast; J. K. Kerr, M.D., Belfast; J. Knox, M.D., Belfast; C. A. Macaulay, Galway; R. M'Bride, M.D., Belfast; S. M'Cutcheon, M.D., Belfast: D. P. Macdonald, M.D., Cork; S. M'Kee, Belfast; H. J. Madders, Cork; J. A. Macolmson, Belfast; W. A. Maybury, M.D., Galway; H. M. Maybury, Belfast; W. E. B. Moynan, Galway; B. O'Connor, B.A., Cork; P. O'Connor, Cork; S. H. Owen, Belfast; T. Paterson, B.A., Belfast; J. Ring, Cork; J. M. J. Scott, Belfast; E. E. Sloane, M.D., Belfast; J. Strahan, Belfast; W. Thomson, B.A., Galway; A. Young, M.D., Belfast.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND. At examinations held on October 8th, 9th, and 10th, the following candidates obtained both the licence to practise Medicine, and the diploma in Midwifery:—

Booth, Brabazon Shiels
Counsellor, William Parkinson
Daniel, James
Weld, James Charles

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 17th, 1872.

Brodribb, Francis Benjamin, Well Street, Hackney
Fletcher, George, Bromsgrove, Worcestershire
Humphreys, Henry, Amhurst Road, Hackney

As an Assistant in compounding and dispensing medicines.

Davies, Peter Hughes, March, Cambridgeshire

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK INFIRMARY—House-Surgeon: £105 per annum, furnished apartments, attendance, coals, and gas.
ASSOCIATION OF MEDICAL OFFICERS OF HEALTH—Treasurer.
CHORLTON UNION, Lancashire—Assistant Resident Medical Officer at the Workhouse at Withington: £10 per month, and residence.
CLIFDEN UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Rinvyle Dispensary District: £100 per ann., and fees.
COVENTRY AND WARWICKSHIRE HOSPITAL—Dispenser: £80 per ann.
DAILLY, Ayrshire—Parochial Medical Officer: £40 per annum, with the probability of being appointed Medical Officer to two Collieries in the parish.
DONCASTER GENERAL INFIRMARY and DISPENSARY—House-Surgeon: £100 per annum, board and lodging.
DOWNPATRICK DISTRICT LUNATIC ASYLUM—Assistant to the Resident Medical Superintendent: £100 per annum, furnished apartments, fuel, light, washing, first-class rations, and attendance.
EYE INFIRMARY, Newcastle-upon-Tyne—Surgeon.
GLASGOW ROYAL INFIRMARY—Extra Physician to the Dispensary.
HASTINGS UNION, Sussex—Medical Officer and Public Vaccinator for District No. 3: £90 per annum, and extra fees.
HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square—Two Consulting-Physicians.
KIDDERMINSTER INFIRMARY—House-Surgeon and Secretary.
LANCASHIRE—Surgeon to County Prison at Kirkdale: £160 per annum.
MIDLAND MEDICAL SOCIETY, Birmingham—Two Honorary Secretaries.
NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Newman Street—Consulting Physician.—Junior Physician.
NEWCASTLE-UPON-TYNE BOROUGH LUNATIC ASYLUM—Assistant Medical Officer: £70 per annum, board, lodging, and washing.
NEWTON ABBOT UNION, Devon—Medical Officer for the Newton Abbot District and the Workhouse: £70 per annum.
PORTSEA ISLAND UNION—Medical Officers for the Southsea and Landport Districts: each £70 per annum, and midwifery fees.
ROYAL COLLEGE OF SURGEONS OF ENGLAND—Member of the Court of Examiners.

ROYAL MEDICAL BENEVOLENT COLLEGE, Epsom—Treasurer.
SALOP INFIRMARY, Shrewsbury—Two Physicians in Ordinary.
SHEFFIELD PUBLIC HOSPITAL and DISPENSARY—Assistant House-Surgeon: £65 per annum, apartments, washing, and board.
SOUTH CHARITABLE INFIRMARY and COUNTY HOSPITAL, Cork—Resident Surgeon, Apothecary, and Secretary: £100 per annum, residence, coal, gaslight, attendance, etc.
SUNDERLAND HOSPITAL for SICK CHILDREN—Three Medical Officers.
UCKFIELD UNION—Medical Officer and Public Vaccinator for the Maresfield District: £85 per annum, and extra fees.
UNIVERSITY COLLEGE HOSPITAL—Assistant-Physician.—Assistant Surgeon.—Assistant Medical Officer in the Skin Department.
WALSALL, Staffordshire—Medical Officer to the Borough Police.
WALSALL UNION—Medical Officer for the Stafford Street District: £70 per ann.
WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon: £80 per annum, board, lodging, and washing.
WEST SUSSEX PRISON, Petworth—Medical Officer: £100 per annum.
WINCANTON UNION, Somersetshire—Medical Officer and Public Vaccinator for the Wincanton West District: £62 per annum, and fees.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*Oglesby, Robert P., Esq., appointed Honorary Ophthalmic and Aural Surgeon to the Leeds General Infirmary.
Woods, Oscar T., M.B.Dub. (late Clinical Clerk, West Riding Asylum), appointed Assistant Medical Officer to the Warwick County Asylum, *vice* *J. B. Ward, M.D.Cantab., appointed Superintendent of the Warneford Asylum.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

Hardesty.—On October 3rd, at Balgay Terrace, Lochee, Dundee, the wife of J. Jeffrey Hardesty, L.R.C.P. & S.E., of a daughter.
Jones.—On October 18th, at Brookside, Llanfyllin, Montgomeryshire, the wife of *J. T. Jones, Esq., Surgeon, of a son.
Thurston.—On October 18th, at Ashford, Kent, the wife of *Edward Whitfeld Thurston, L.R.C.P.Lond., of a daughter.
Tomkins.—On October 21st, at 11, Euston Place, Leamington, the wife of *A. Wellesley Tomkins, M.D., of a daughter.
Wright.—On September 22nd, at Fort Buxar Shahabad, Behar, Bengal, the wife of Staff Assistant-Surgeon R. Temple Wright, M.D., F.R.C.S.Eng., of a son.

MARRIAGE.

*Bingham, John J., L.R.C.P.Ed., of Alfreton, Derbyshire, to Kate Laura, only daughter of John Robinson, Esq., Ethelbert House, Margate, at Holy Trinity, Margate, by the Rev. Gerrard Lewis, M.A., on October 17th.

DEATHS.

Bodington. William, Esq., Surgeon, at Kenilworth, aged 82, on October 17th.
Lister.—On October 23rd, at Newton-le-Willows, in her 40th year, Ellen Jane, wife of *E. Lister, L.R.C.P.Ed., of Haydock Lodge, near Newton-le-Willows.

Testimonial.—Dr. R. V. Fletcher has been presented with a silver salver and other substantial tokens of esteem, by the attendants at the Downpatrick District Lunatic Asylum, on his leaving to take charge of the Waterford District Lunatic Asylum, as Resident Medical Superintendent.

Manchester Royal School of Medicine.—The following is the award of scholarships and prizes at the Manchester School for the session of 1871-2. *Third Year Scholarship* (£20), J. T. Hall, Ashbourne, Derbyshire; first prize (£5 5s.), J. Green, Bolton; second prize (£3 3s.), F. W. Jordan, Manchester; third prize (£2 2s.), C. Kitchen, Newark; fourth prize (£1 1s.), E. A. Birch, Manchester. *Second Year Scholarship* (£15), T. Newsham, Great Eccleston; first prize (£5 5s.), J. M. Rhodes, Manchester; second prize (£4 4s.), W. Smith, Ashton-under-Lyne; third prize (£3 3s.), G. G. Tatham, Manchester; fourth prize (£2 2s.), C. E. Smith, Preston. *First Year Scholarship* (£10), J. B. Stelfox, Manchester; first prize (£5 5s.), F. H. Grosholz, Bowdon; second prize (£4 4s.), T. Anningson, Manchester; third prize (£3 3s.), J. J. K. Fairclough, Manchester; fourth prize (£2 2s.), W. P. Brown, Warrington.

BOOKS, ETC., RECEIVED.

On the Functions of the Sympathetic System of Nerves. By Edward Meryon, M.D. London: 1872.
Ensaio sobre o Beriberi no Brazil. Pelo Dr. J. F. da Salva Lima. Bahia: 1872.
Hæmaturia Endemica dos Paizes Quentes. These de Concurso do José Luiz de Almeida Conto. Bahia: 1872.
A Manual of Microscopic Mounting, with Notes on the Collection and Examination of Objects. By John H. Martin. London: 1872.
The Public Health Act, 1872; with Special Reference to Plymouth, Stonehouse, and Devonport. By C. Bulteel, F.R.C.S. London and Plymouth: 1872.
Syphilis: its Nature and Treatment. With a chapter on Gonorrhœa. By Charles Robert Drysdale, M.D. London: 1872.
A Summary of the Principles of a Comprehensive Measure for the Improvement of the Sanitary Laws. By Henry W. Rumsey, M.D. London: 1872.
The Pathology, Diagnosis, and Treatment of Diseases of Women; including the Diagnosis of Pregnancy. By Graily Hewitt, M.D. London: 1872.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY .....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.
WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Spencer Watson, "Foreign Body in the Eyeball, necessitating Enucleation;" Dr. Edwards Crisp, "Two Cases of Hæmorrhagic Small-pox." The paper of the evening by Dr. John Cockle, "On the Connexion between Occlusion of the Left Carotid Artery and the Existence of Laminated Clot in the Sac of Aortic Aneurism."

NOTICES TO CORRESPONDENTS.

Correspondents not answered, are requested to look to the Notices to Correspondents of the following week.

We cannot undertake to return Manuscripts not used.

Correspondents, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

Communications respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

Leeds General Infirmary.—There is no vacancy in the post of Resident Medical Officer at this Institution. The announcement of a vacancy made last week was erroneous.

Vaccinator.—A pamphlet on Vaccination, with an examination of some of the arguments advanced against its employment, has just been published by Mr. Wm. Draper of York. It presents a complete *exposé* of the absurdities of antivaccination, and an interesting account of the history of Jenner's great discovery.

Jonathan.—1. There is no impropriety in using the initials L.R.C.P. in the way indicated. 2. Unattached students at Oxford must matriculate and pass examinations like other students, but are not required to reside in college. Full information may be obtained by writing to the Registrar of the University. None of the diplomas mentioned would give any *ad eundem* privileges. A part of the medical and clinical courses would possibly count in the curriculum.

Ingrowing Nail.

I see in your pages many notices of remedies, rather than notices of many remedies, for ingrowing nail, and my personal experience quite agrees with that of your correspondents, that lint and patience are generally sufficient for the cure of this distressing ailment. Let me add one line as to the preventive treatment. If we took as much care of our toes as of our fingers, we should hear little of ingrowing nails. Corns will often melt away, and nails will generally cease to grow in, by attention to the shoes and the daily use of a Hard Nail Brush.

Nature of Chloroform Accidents.

Sir,—In a case of accident from Chloroform in the *Journal* of the 5th, we are told the Silvester method was tried, as also electricity to the heart. Then in the *post mortem* examination we have very full details, but the part of "Hamlet" left out, the condition of the right side of the heart; nor are we told if the head was opened after the heart, or before, which is essential to accuracy. These are accidental omissions, but render the case of no value as a precedent. I am, etc.,
Sackville Street, October 7th. Charles Kidd, M.D.

P.S.—We want, I would humbly submit, a steady uniform trial of electricity to the lungs, not heart; no Silvester or Marshall Hall methods, but a gentle turning of the patient on the side; trial of electricity for at least two hours, acupuncture of the heart as a last forlorn hope. A fine needle should be introduced in the intercostal space so as to reach the heart's apex, the auricle to be avoided; and then where unhappily there is a *post mortem* examination the pericardium and front of the heart should be first noted, not after the heart cavities have emptied themselves, as I have seen it, by the assistant first opening the head two hours before the chest. In one typical most perfect instance at St. Thomas's, I saw the dissecting room porter open the head in preparation for the clinical clerk four hours before the examination. The case was described as having the auricle empty; but the right cavity of the heart had emptied itself by drainage, though previously full to bursting, and no entreaty could have the error corrected in this or three or four more mistakes of that nature, so that nearly all the old chloroform accident cases are of little real value, if not altogether mischievous.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

LOCAL PAIN IN PREGNANCY.

I.—In answer to your correspondent "H.", in the JOURNAL of October 19th, Dr. Tyler Smith says: "The distension of the diaphragm and abdominal muscles by the gravid uterus is occasionally the source of severe pain in these muscles. The muscular pain may be felt especially in the diaphragm, in the situation of its insertion into the ribs, in the course of the rectus, or in the bellies of the oblique muscles. It is relieved by an occasional warm bath, the use of frictions with olive oil to the abdominal surface, an anodyne embrocation, and especially by wearing a suitable bandage so as to support the strained muscles. I have sometimes seen these pains, after bleeding and leeching had been tried in vain, relieved at once by a well adjusted bandage." For myself, I have seen more benefit derived from rest and a bandage than from anything else.

THOMAS SAVAGE, M.D., Surgeon to the Hospital for Women.

Bordesley, Birmingham, October 19th. 1872.

II.—Your correspondent "H", whose letter on the above subject appeared in the JOURNAL of October 19th, will find a good account of the symptoms, ætiology, and treatment of this most distressing complication of pregnancy, in Roberton's *Essays and Notes on the Physiology and Diseases of Women.* His explanation of the cause of the pain—viz., pressure of the gravid uterus against the liver—I believe to be correct; for relief is immediately experienced by a change of position from sitting to standing, and by leaning towards the left side, or lying on it.

Small doses of hydrargyrum cum cretâ, combined with soda, and followed occasionally by more active aperients, are the internal remedies which I have seen of most avail. Externally, pledgets of lint soaked in laudanum seem to give most relief. I have never found it necessary to employ leeching.

Tavistock, October 19th, 1872. R. W. CRIGHTON.

III.—In answer to your inquirer, "H", in reference to local pain in pregnancy, and in sympathy for the lady in question, I beg to say that, during an active practice of more than thirty-five years, I have met with several such cases, and in the times of depletion used to resort to the lancet with considerable success; but of late I have been in the habit of employing with benefit the following liniment.

R. Liquoris ammoniæ fort. ʒiij ; tincturæ belladonnæ, tincturæ opii, sing. ʒiij ; liniment. sapon. ad ʒiv.

I am, etc., J. N. STEVENS.

10, Princess Square, Plymouth, Oct. 21, 1872.

P.S.—The exact cause, I am of opinion, must remain an enigma, in those who are the sufferers during pregnancy of this unpleasant effect of a natural and healthy function of the uterus. Why it should be so in the minority, and not in the great majority of cases, it appears to me very difficult to understand.

IV.—I would venture to suggest that the local pain in the right hypochondrium, mentioned by your correspondent "H." as occurring in the latter months of pregnancy, is probably due to irritation of and pressure on the hepatic nerves, which are chiefly derived from the solar plexus. Having had several similar cases lately, which have derived marked benefit from the following formula, I would recommend him to make trial of it, and shall be glad to know the result.

R. Potassii bromidi ʒj ; tinct. hyoscyami ʒss ; spiritûs chloroformi ʒj ; aquæ ad ʒviii. A sixth part to be taken three times a day.

Reading, October 22nd, 1872. H. H. PHILLIPS, M.B.

STOLEN.

SIR,—There was stolen from my consulting-room, on the evening of October 4th, a dark green morocco surgical instrument pocket-case, with bright green elastic band. If any of your readers happen to have purchased such a case, presented to their notice probably with some plausible story, and would communicate with me, on identifying the same I would indemnify them for all expenses incurred, and it might lead to the conviction of the offender, and thus be of benefit to our brethren in the metropolis, who are continually exposed to the same sort of robbery. I am, etc., JAS. C. BYLES.

2, Victoria Park Road, E., Oct. 19, 1872.

MANAGEMENT OF SEWAGE.

SIR,—In the paper printed in the JOURNAL of the 19th, Mr. Stevens of Plymouth states, with regard to the downward intermittent filtration of sewage, as it is now carried on Merthyr Tydfil, that the filtration requires to be "repeated several times". This is entirely erroneous. The filthy sewage stream passes on to the prepared land, through six feet of the drained soil, out into the effluent drains, and thence, purified from every polluting matter, into the River Taff. The minute portion of oxydised organic matter (one part in two hundred thousand parts) which passes off in the rapidly flowing outfall stream would afford but scant nourishment to the most greedy of aquatic plants. Thus no second filtration is needed. Admirable as was your abstract of the paper I read at Birmingham, still the details could not be brought out so plainly as they would had the whole paper been printed. Those who desire to read the address in full will see in your advertising columns where it may be had. I am, etc., T. J. DYKE.

The Hollies, Merthyr Tydfil, October 21, 1872.

AIR-FILTERS.

SIR,—In Mr. Eassie's description of various modifications of Dr. Stenhouse's charcoal air-filter as applied to purify air escaping from sewers, one is figured (No. 30, p. 452) which does not appear to be a filter at all, but only an arrangement for compelling the air to pass over, not through, the charcoal. Now, though it is true that if air containing but a small proportion of offensive gas or vapour is made to pass very slowly over a large surface of freshly burned charcoal, a large part, possibly all, of the offensive matter it contains may be absorbed, but there is not nearly the same security that it will be so, as if the air were properly filtered by being compelled to pass through a layer of charcoal; moreover, if it be true, as many believe, that it is not offensive gas or vapour itself, but living organised beings floating in foul air that we have most to fear, it is evident that merely absorbing that which makes air offensive may not be sufficient to render it safe, while passing it through a porous substance will prevent anything passing that is not smaller than its interstices.

I had occasion lately, when preparing a report to the Secretary of State on a proposed novel application of the air-filter to coffins, to put that invention to a very severe test, and found that air, mixed with the products of putrefying offal, drawn by an aspirator through charcoal, though containing abundance of carbonic acid, contained scarcely a trace of oxidisable matter, less indeed than the air of an ordinary room. The question may well be asked why should we change a form of filter thus proved to be efficacious for one the effect of which is at best doubtful. Of course, the plan of passing the air over, instead of through charcoal, has been adopted either in ignorance of the mode in which the charcoal acts, with the idea of offering no obstruction to the passage of air by a filter, lest it should act as a stopper and force the air to escape elsewhere, a danger to be sedulously guarded against. It is, however, easily guarded against by the very simple expedient of making the filter so large, in proportion to the air to pass through, that its passage will be so slow as not to meet with any appreciable resistance, and the motion of air should be very slow to ensure the filter's perfect action.

The cost of charcoal, and of making a box to hold it a little larger, is so trifling, that there is no need to limit the size so as to incur any risk of causing sensible obstruction, or of having less charcoal than enough to ensure the decomposition as well as absorption of the organic matter, so that the same charcoal, if kept dry, will continue active an indefinite time until it gets clogged with dust.

I am glad you pointed out that Dr. Stenhouse generously gave his valuable invention for the public benefit; no one can secure its monopoly by patent, all any one can secure being the mere design of his own particular arrangement, if, indeed, that be original. I am, etc.,

P. H. HOLLAND, *Medical Inspector Home Office.*

DENGUE FEVER.

SIR,—While reading the paper which appeared on the 5th instant on the above disease, by Mr. Dunkley of Stoke-on-Trent, I was much surprised to observe the total silence he keeps about the treatment of this complaint by quinine. During a visit which I made lately to Calcutta, the epidemic was at its height, and I therefore had the opportunity of hearing the opinion of medical men who were at the time actively employed in its relief. The treatment by a febrifuge mentioned by Mr. Dunkley was that which was most followed, but it was also found that quinine in rather large doses certainly relieved the high fever, the temperature being very frequently at the commencement of the attack as high as 103 degrees, and in some cases even higher. The quinine, however, did not relieve the pain, except in a few cases. Iodide of potassium was also given in large doses, for the relief of the acute pain which is always present, on the supposition that the dengue might have some relationship to rheumatism; this drug in most cases failed. One gentleman conceived the idea of uniting sulphate of quinine with the iodine of potassium in a mixture (of course this mixture was incompatible, the two drugs reacting upon each, forming, as he supposed, iodide of quinine); two or three doses he found generally to relieve the pain, if it did not go altogether away, and if continued, the fever appeared to be cut short, and relapses very seldom occurred. He tried the iodide of quinine by itself, but did not find any advantage from it; he therefore thought that the nature of the combination gave some peculiar effect to the drug.

I have had no personal experience of the last method of treatment; for, knowing the fever will run its course in most cases, if due care is taken, in about three days, I have generally pursued the expectant treatment, giving a febrifuge, I may say merely for the sake of the patient's peace of mind. I think it would be advisable for practitioners who have cases of this fever in hand to give the mixture of quinine and iodide of potassium a further trial. I am, etc.,

W. J. BARKAS, L.R.C.P.Lond., etc.

Dental Hospital, Soho Square, October 10th, 1872.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Oct. 19th; The Manchester Guardian, Oct. 23rd; The Bath Express, Oct. 19th; The Orkney Herald; The Kirkwall Guardian; The Irish Times; The Pembrokeshire Advertiser; The Scotsman, Oct. 14th and 15th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. J. Matthews Duncan, Edinburgh; Dr. Cayley, London; Dr. J. Burdon Sanderson, London; Dr. Bryan, Northampton; Mr. Higginbottom, Nottingham; Mr. Ashdown, Northampton; Dr. H. T. Lanchester, Croydon; Dr. J. Crichton Browne, Wakefield; Mr. Crighton, Tavistock; Dr. E. Crisp, London; Dr. A. P. Stewart, London; Dr. Burder, Clifton; Mr. Reed, Cheltenham; Dr. Savage, Birmingham; Mr. Symmons, Ledbury; Mr. Briscoe, Chippenham; Mr. Byles, London; Mr. Garman, Wednesbury; Dr. Fraser, Edinburgh; Dr. Haussman, Berlin; Dr. Styrap, Shrewsbury; Mr. Lawrence, Bath; Dr. Home, Edinburgh; Mr. Oglesby, Leeds; Mr. Barrett, Lynn; Dr. McGowan, Millport; L. A. M., Dublin; Mr. A. B. George, Whitchurch; Mr. Rivington, London; Dr. Barter, Bath; Dr. Compson, Leicester; Dr. J. N. Vinen, London; Dr. A. Mackintosh, Callington; Dr. Robertson, Buxton; Mr. Woods, Wakefield: Mr. Balmanno Squire, London: Mr. Holland, London; Mr. McGill, Leeds; Dr. Bradbury, Cambridge; Mr. Dyke, Merthyr Tydfil; Dr. Elliott, Hull; Dr. Molony, Waterbeach; Mr. Stevens, Plymouth; Mr. Hyde, Leominster; Mr. Worth, Nottingham; Dr. Morris, London; Mr. Huish, Jersey; M.D.: Dr. Morris, Spalding; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Ransome, Manchester; The Secretary of the Royal College of Physicians; Mr. H. C. Lawrence, London; Dr. G. Johnson, London; Mr. W. J. Harris, Worthing; Dr. J. Rogers, London; Dr. Conrade, Pesth; Dr. G.F. Bodington, Sutton Coldfield; Mr. Groves, London; Mr. Moore, London; Mr. Turner, Edinburgh; Mr. C. Brook Smith, London; Mr. William Draper, York; Mr. Henry Searle, London; Mr. Jessop, Leeds; Dr. H. H. Phillips, Reading; Mr. Furneaux Jordan, Birmingham; Mr. Haviland, London; Mr. Briscoe, Chippenham; Mr. Stevens, Plymouth; Dr. J. W. Ogle, London; Dr. Arthur Farre, London; Dr. A. Meadows, London; Mr. R. W. Parker, London; Mr. J. T. Jones, Llanfyllin; Mr. Van Praagh, London; Miss Jex-Blake, Edinburgh; Mr. J. W. Langmore, London; etc.

LECTURE

ON

THE ANTAGONISM BETWEEN THE ACTIONS OF ACTIVE SUBSTANCES.

Delivered before the Royal College of Physicians, Edinburgh.

BY

THOMAS R. FRASER, M.D., F.R.S.E., F.R.C.P.E.

LECTURE II.—(*Concluded.*)

Limits to the Antagonism between Atropia and Physostigma.—As both atropia and physostigma possess a number of separate actions, it was not unreasonable to anticipate that several of them are not mutually antagonistic; and, therefore, that combinations of certain doses of the two substances may be administered whereby the non-antagonist actions will be produced in sufficient degrees of energy to be able to cause death. The possibility of a fatal result ensuing after the combined administration of the two substances in certain doses is also rendered probable by many facts which show that several of their actions are of a similar nature. When a dose not greatly above the minimum-lethal of the one is counteracted by a moderate dose of the other, these similar actions are not produced in sufficient intensity to become, even in combination, important toxic actions. When, however, a dose considerably above the minimum-lethal of the one substance is given along with a large dose of the other, the similar actions may be produced in such intensity as to assume the importance of lethal actions.

Guided by these considerations, I anticipated that the counteracting influence of atropia upon the lethal action of physostigma is successfully exerted only within a limited range of doses, and that this range may be determined by experimental research. The task of making this determination was undertaken because it seemed likely that results would thereby be obtained of the greatest interest and novelty, in connexion not only with this special instance of counteraction, but also with the general subject of physiological antagonism and its important and direct bearing on the principles of therapeutics.

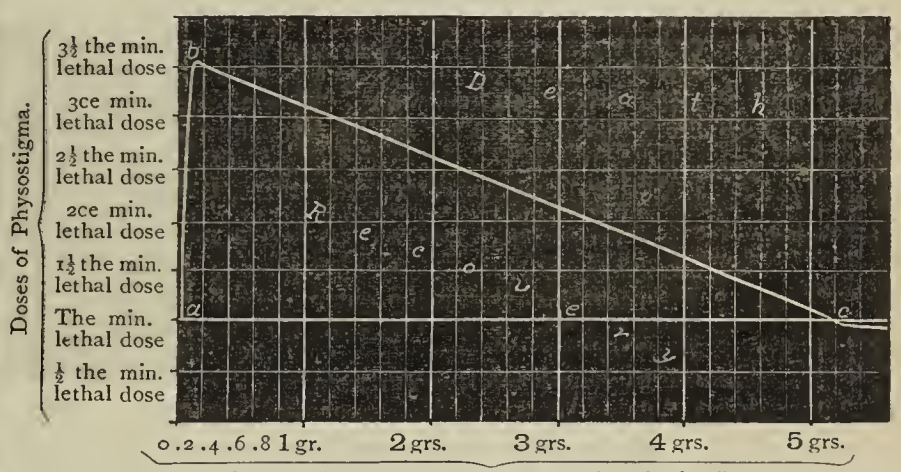
In order to define the limits of the counteracting influence of atropia upon the lethal action of physostigma, three series of experiments were made. The chief objects of the first two of these were to ascertain the maximum dose of physostigma that can be successfully antagonised by atropia, and the range of doses of atropia that can successfully antagonise lethal doses of physostigma. In each series, a constant interval of time was maintained between the administration of the two substances; but in the first atropia was administered five minutes before physostigma, while in the second physostigma was administered five minutes before atropia. In both of these series, experiments were made, in the first place, with the minimum-lethal dose of physostigma; and, in combination with it, various doses of atropia were administered, ranging from one that was too small to prevent the lethal action, through a number that were able to prevent death, until a dose was found whose administration resulted in death. Similar experiments were made with a dose of physostigma one-and-a-half times as large as the minimum-lethal, then with one twice as large as the minimum-lethal, and so on, at the same rate of progression, until a dose was reached that was too large to be successfully antagonised by any dose of atropia.

The chief object of the third series of experiments was to ascertain within what limits of time between the administration of the two substances successful antagonism occurs. In the experiments of this series, a constant dose of physostigma was given along with various doses of atropia; and with each dose of atropia several experiments were made, which differed from each other by a difference in the interval of time between the administration of the two substances. On this plan, two sets of experiments were performed, in one of which atropia was given before physostigma, and in the other after it; and subsequently these two sets of experiments were connected together by a third, in which atropia in various doses was administered simultaneously with the same dose of physostigma as was given in the two other sets of experiments. I found it necessary to make all the experiments of these three series on rabbits, as it was impossible to obtain a sufficient number of dogs or other convenient animal. The rabbits used were as nearly as possible three pounds in weight; but, when they were lighter or heavier than three pounds, a correction was made, so that each dose represented three pounds weight of animal. The two substances were administered by subcutaneous injection.

In the first series of experiments—where the atropia was administered five minutes before the physostigma—it was found that, when the minimum-lethal dose of physostigma was administered, 0.005 grain of sulphate of atropia is too small a dose to prevent death, but that 0.015 grain is sufficient to do so; and that with any dose ranging from 0.015 grain to 5.2 grains, the lethal action of this dose of physostigma may be prevented; while, if the dose of atropia be 5.3 grains or more, the region of successful antagonism is left, and death occurs. With one-and-a-half times the minimum-lethal dose of physostigma, successful antagonism was produced by doses of sulphate of atropia ranging from 0.02 to 4.1 grains; with twice the minimum-lethal dose of physostigma, with doses of sulphate of atropia ranging from 0.025 to 3.2 grains; with two-and-a-half times the minimum lethal dose of physostigma, with doses of sulphate of atropia ranging from 0.025 to 2.2 grains; with thrice the minimum-lethal dose of physostigma, with doses of sulphate of atropia ranging from 0.06 to 1.2 grain; and with three-and-a-half times the minimum-lethal dose of physostigma, with doses of sulphate of atropia ranging from 0.1 to 0.2 grain. Successful antagonism could not be obtained above this dose; and accordingly three-and-a-half times the minimum-lethal dose of physostigma is the largest quantity whose lethal action can be prevented in rabbits by atropia administered five minutes previously.

To aid your comprehension of these results, I have prepared a diagram (Diagr. 1) in which they are shown in a graphic form. In this

DIAGRAM 1.



diagram, the doses of atropia are represented by the distance, in a horizontal direction, from the perpendicular line forming the left margin; and they increase at the rate of two-tenths of a grain for every subdivision of the horizontal lines. The doses of physostigma increase from below upwards; the minimum-lethal dose being represented by the thick horizontal line; a dose one-and-a-half times as large as the minimum-lethal, by the thin horizontal line immediately above the thick one; a dose twice as large as the minimum-lethal, by the next thin horizontal line; and so on until a line is reached near the top of the diagram, which represents a dose of physostigma three-and-a-half times as large as the minimum-lethal. The curved line, *a b c*, separates the fatal experiments from those that terminated in recovery;* and accordingly the space enclosed by it represents a region in which recovery always occurs, while the space on its outside represents a region in which death always occurs. With these explanations, the results of the experiments will be rendered apparent by a mere glance at the diagram. It may again be pointed out that the more obvious of these results are, that the maximum dose of physostigma which, in rabbits, can be rendered non-lethal by atropia administered five minutes previously, is about three-and-a-half times the minimum-lethal dose; and that the range of doses of atropia which are able to render non-fatal various otherwise fatal doses of physostigma, diminishes as the dose of physostigma increases. The general nature of these results is well illustrated in the diagram by the triangular form of the region of recovery after lethal doses of physostigma (*a b c*), of which the apex, *b*, indicates the maximum antagonisable dose of physostigma; and the gradual increase in breadth from the apex to the thick horizontal line, *a c*, the gradual increase in the range of doses of atropia that can prevent the fatal effect of doses of physostigma from diminishing from three-and-a-half times the minimum-lethal to the minimum-lethal.

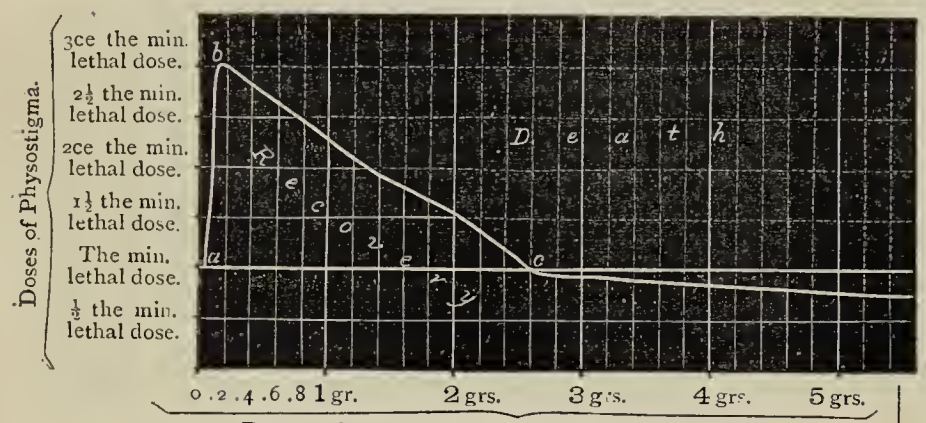
The considerations which led me to anticipate that the counteracting influence of atropia upon the lethal action of physostigma is successfully exerted only within a definite range of doses, and that death may

* In the diagrams exhibited during the lecture, the fatal experiments were marked by crosses, and the non-fatal by dots; but this has not been done in the reduced copies that are here inserted, as the required space is wanting.

be produced when a lethal dose of physostigma, which is capable of being rendered non-lethal by atropia, is given in combination with a somewhat large non-lethal dose of atropia, also led me to anticipate that death may be produced by the combined administration of non-lethal doses of the two substances. I accordingly made some experiments in which half the minimum-lethal dose of physostigma was administered five minutes after various doses of atropia. It was shown by these experiments that death occurs if the dose of atropia be one that is equivalent to about ten grains per three pounds weight of animal, or a larger dose. This result appears a very remarkable one, when it is considered that successful counteraction is produced by much smaller doses of atropia against the poisonous action of doses of physostigma greatly in excess of the minimum-lethal, and that the minimum-lethal dose of sulphate of atropia itself is about twenty-one grains. It, however, may be simply explained by supposing some action or actions of both physostigma and atropia between which there is no mutual counteraction.

The second series of experiments—in which, as you may remember, the physostigma was administered five minutes *before* the atropia—yielded essentially the same results as the first series, excepting that the region of successful antagonism was found to be a more limited one. This difference is apparent when the diagramatic representation of the experiments of the second series (Diagr. 2) is compared with that of the

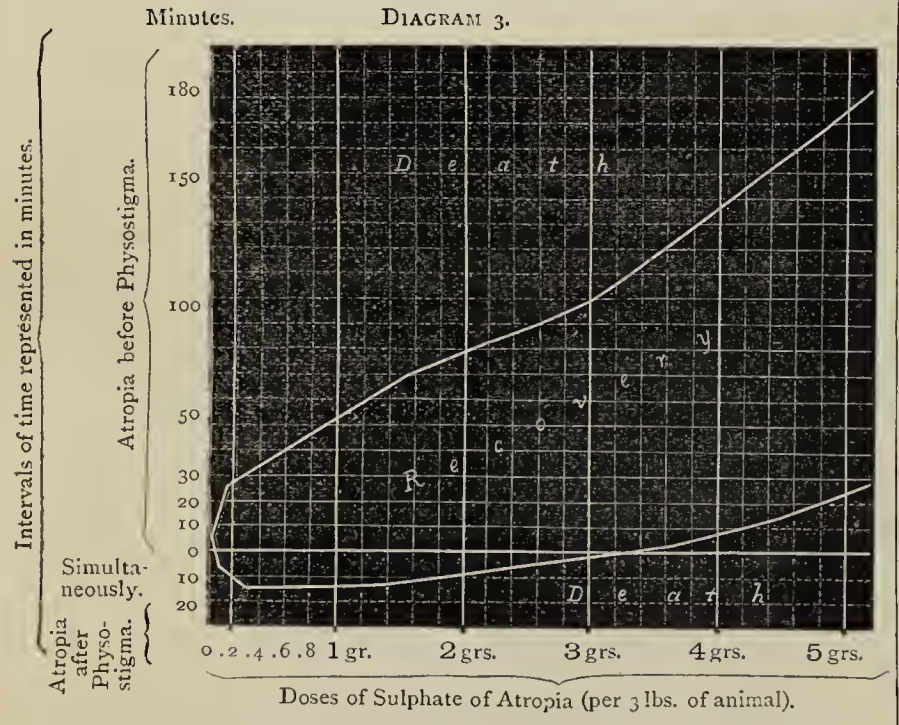
Diagram 2.



first (Diagr. 1). In both series, the general result was obtained that the range of the doses of atropia capable of preventing the lethal action of physostigma diminishes according as the dose of physostigma is increased.

In the third series of experiments, I endeavoured to determine what influence the interval of time separating the administration of the two substances exerts upon the production of successful antagonism. I contented myself with making this determination in the case of one constant dose of physostigma (one-and-a-half times the minimum lethal), given in conjunction with doses of atropia ranging from the

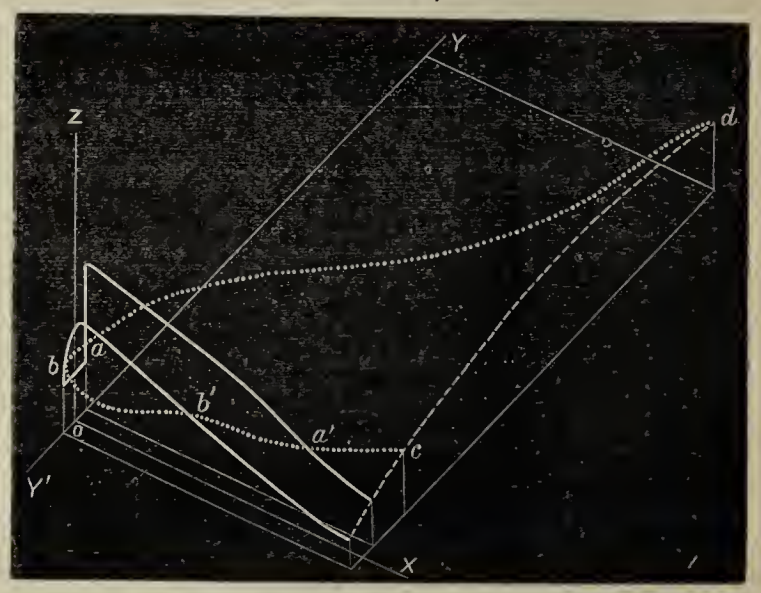
Minutes. Diagram 3.



one-hundredth of a grain to five grains. The general results of this series are represented in the diagram (Diagr. 3). Without occupying your time with details, I would merely point out that successful antagonism was found to occur with a greater range of doses of atropia, and with a greater range of intervals of time, when atropia is given before physostigma, than when it is given after it (shown in the diagram by the much greater extent, laterally and vertically, of the region of recovery above the thick horizontal line representing simultaneous administration, than below that line). In the latter case, the length of the intervals of time is obviously limited by there being a limitation to the time within which the dose of physostigma that was given itself produces death. In the former case, the intervals are not subject to a similar curtailment, seeing that the doses of atropia administered were all considerably below the minimum-lethal dose.

In the three series of experiments that have now been described, I have pointed out the limits of antagonism—firstly, when atropia is administered five minutes before physostigma; secondly, when atropia is administered five minutes after physostigma; and, thirdly, when atropia in various doses is administered at various intervals of time before and after one-and-a-half times the minimum-lethal dose of physostigma. You will observe that in each series, of the three quantities (namely, dose of physostigma, dose of atropia, and interval of time),

Diagram 4



In this diagram, doses of physostigma are indicated by the distance (parallel to the axis of z) from the plane, YOX; doses of atropia, by the distance (parallel to the axis of x) from the plane, ZOY; and intervals of time between the administration of the two substances, by the distance (parallel to the axis of y) from the plane, ZOX, points on the Y side of this plane indicating atropia administered *before* physostigma, and points on the Y′ side indicating atropia administered *after* physostigma. I am indebted to my friend Dr. Crum Brown for the drawing from which this woodcut has been made.

only two vary; and, therefore, that the results of any one series may be represented by a diagram on a plane, as in the diagrams I have brought under your notice. A combined representation of the results of the three series of experiments, involving, as it does three variable quantities, will, however, be best effected by a model in three dimensions, such as I now show you. Diagram 4 is an orthogonal projection of this model, in which the three variables are represented on a scale somewhat different from that of Diagrams 1, 2 and 3; but this difference does not cause any difficulty in the recognition of the corresponding parts. The continuous line, *a a′*, represents the boundary of the region of recovery in the experiments where atropia was administered five minutes *before* physostigma (Series 1); the continuous line, *b b′*, the boundary of this region where atropia was administered five minutes *after* physostigma (Series 2); and the dotted line, *c a′ b′ a d*, the boundary of this region where atropia was administered in various doses and at various intervals of time before and after one-and-a-half times the minimum-lethal dose of physostigma (Series 3). It is obvious that these lines lie upon a curved surface, on whose one side every point represents conditions leading to death, and on whose other side every point represents conditions leading to recovery. The surface, of course, cannot be fully known from the three sections of it that have been obtained by these experiments. It could be known only by greatly increasing the number of the experiments, so as to obtain a number of other curves parallel to and on either side of *b b′* and *a a′*, and of horizontal sections parallel to and below and above *c a′ b′ b a d*. To obtain a sufficient number of such curves, however, the labour and expenditure of time would be very great, seeing that so large a number of experiments as two hundred and seventy-six were made in order to obtain the curves represented in the diagram. Besides, a tolerably

accurate conception of the form of the curved surface may be gained from the curves of the three series of experiments that have been made.

The region included within this curved surface represents every possible variation in the doses of atropia and physostigma, and in the intervals of time separating the administration of the two substances, that is compatible with the production of successful antagonism between physostigma and atropia. Its existence shows us how an investigation on antagonism may lead to very fallacious results, even when every care has been taken in obtaining a large amount of experimental data. I have already pointed out that, almost without exception, the instances of lethal antagonism asserted to exist cannot be regarded as certainly established, because sufficient care has not been taken in proving that recovery took place after an undoubtedly lethal dose of one of the substances concerned. In attempting to *disprove* the existence of any asserted instance of lethal antagonism, a fallacy of equal importance may originate from ignorance of the fact that the antagonism does not necessarily occur throughout an unlimited range in the doses of the two substances, or in the intervals of time separating their administration: in short, that there is a region of death as well as a region of recovery in connection with probably every instance of lethal antagonism. Unless, therefore, the factors I have mentioned be greatly varied in a large series of experiments, it cannot be positively asserted that the antagonism does not exist. It appears to me that the fallacy to which I have now drawn your attention, has not been sufficiently attended to in much that has recently been written on the subject of antagonism.

Bearing of Antagonism between Active Substances on Therapeutics.—An eminent authority in pharmacology has recently published the statement, that the only method by which the injurious action of a poison can be made to terminate is by the employment of such means as will cause or hasten the elimination of the poison. This statement, fortunately, does not accurately describe our remedial resources. The existence of so undoubted an example of physiological antagonism as that which I have brought before you shows that the toxic action of a morbific agent may be directly opposed by the physiological action of an antidote or remedy; and, therefore, that recovery may be produced not only by removing the cause of the abnormal conditions, but likewise by directly influencing these abnormal conditions themselves in such a manner as to cause their return to a normal state.

It does not seem, however, that, in order to effect this return, the dose of the remedy must necessarily be increased in proportion to that of the morbific agent. This general principle has hitherto been somewhat vaguely recognised as a guide for treatment. The greater the severity of the symptoms, the greater the need for administering the antidote in large doses. When it is remembered that the action of poisons—whether these be the known substances with which toxicology is concerned, or those unknown substances on which the symptoms of many diseases are dependent—is rarely a simple one, but a series of independent actions directly involving many structures, and that the action of the antidote or remedy is in like manner the aggregate of several independent influences, we at once see how improbable it is that each of these several actions should be mutually antagonistic. In the case of the antagonism between atropia and physostigma, only a limited number of the different actions produced by each substance are of an opposite, and therefore counteracting kind; while others of these actions—either of a similar or of a different nature—are not mutually counteracting. Successful antagonism occurs when the doses are so proportioned that the non-counteracting actions are not permitted to acquire an undue prominence. When, however, they are permitted to acquire this prominence, death, and not recovery, occurs; and this result may be induced by an increase, beyond certain proportional limits, of the dose either of atropia or of physostigma. When the dose of physostigma is a large one, therefore, we find that a comparatively small and not a large dose of atropia is the proper one to administer; and, when the dose of atropia is a large one, we find that it can successfully antagonise only a small, and not a large, dose of physostigma.

I cannot avoid thinking that, were our knowledge of the conditions produced by disease as accurate as that of the conditions produced by many active substances, it would, for similar reasons, be found that a remedy which exerts so perfect a counteraction to a disease as to be able to prevent its fatal effect, would aid, and not prevent, the lethal action, when given in a somewhat large dose, even when this dose is considerably below the minimum-lethal. Just as we have seen that the actions of atropia which are not employed in counteracting those of physostigma, may increase the fatal power of a dose of the latter substance to such an extent that death occurs, even when the dose of neither substance is of itself sufficient to cause death.

The occurrence of this anomalous result is well worthy of consideration for another reason. The symptoms that are produced by a dose of physostigma *slightly* below the minimum-lethal are of so serious a character, that it is impossible to predict from their evidence alone whether death or recovery will occur. This can only be done by previously defining the minimum-lethal dose; and, unless this precaution be taken, the greatest errors may arise in judging of the effects of antidotes. Do we not find an analogy between this cause of error and that which frequently characterises the inductions of therapeutists? A disease that produces symptoms of the most serious import, does not necessarily terminate in death, even although this termination be a frequent one. The *dose of disease* present may not be so large as a minimum-lethal one, and still the symptoms may be sufficiently urgent to induce us to consider that they are caused by such a dose. If a remedy be applied in these circumstances—and, in the present state of our knowledge, they are probably always present—what surety can there be that the remedy has cured the disease? or that any remedy which may have been employed is not an efficient counteragent to its fatal effects? or even that the so-called *vis medicatrix naturæ* is not alone sufficient to counteract its lethal action? In presence of these uncertainties in reference to the exact degree of diseased action which is necessary to produce death—the exact dose of the disease that constitutes the minimum-lethal—there is little cause for wonder that scepticism regarding the power of remedies should exist, or that the unfortunate irrationalism of an indiscriminate expectancy should be revived as a therapeutic dogma.

I venture to think, however, that even the few facts which I have this evening brought before you are sufficient to show that a series of abnormal actions which, if unchecked, would inevitably terminate in death, may be so modified by an antidote or remedy, that the tendency to death is averted, and recovery produced. The existence of such an antagonism as that between atropia and physostigma encourages the hope that the power of directly counteracting disease is far from unattainable; and it supplies a strong incentive to efforts designed to determine the conditions of disease and the actions of remedies with an exactitude sufficient to show how the remedial action may be applied as a counteracting influence to the diseased condition.

REMARKS ON THE PROGRESS OF HELMINTHOLOGY, AND ON DR. HAUSSMANN'S OBSERVATIONS RESPECTING TÆNIA IN INFANTS.

By T. SPENCER COBBOLD, M.D., F.R.S.,
Professor at the Royal Veterinary College.

ALTHOUGH I hope shortly to publish a course of lectures embodying some of the most important recent discoveries in helminthology, the progress of research is so rapid, that I crave indulgence for space sufficient to indicate the source and character of such of these scientific inquiries as may be supposed to have an especial interest for the profession.

Dr. Haussmann's observations in the JOURNAL for October 26th are extremely ingenious in the view of supplying a possible explanation of the alleged occurrence of tænia in the new-born infant; but I fear they are altogether inadequate. He makes it appear possible that the segments or proglottides of a tapeworm might actually pass from the maternal perinæum into the mouth of the partially expelled infant; and then, after these portions of the worm have sojourned four days in the baby's intestinal canal, they might be finally discharged on the fifth day—as is supposed to have happened in Mr. Armour's case. Such a circuitous route for these cucurbitini appears to me impossible, when all the circumstances are duly weighed, without laying any stress upon the likelihood of their being partially digested in the infant's stomach. But it is possible that the notice, as recorded in the JOURNAL for August 17th, may, by reason of its brevity, have misled Dr. Haussmann. Here, therefore, I may mention that, through the kindness of Dr. W. S. Playfair of King's College, my attention was early called to the particulars of this case, as given in the *Medical Press and Circular* for February 14th of the present year. Since then I have had an opportunity of consulting the original communication itself; and, from a careful study of Mr. Samuel G. Armour's letter, it is quite clear that the facts are of a very different order from that implied by Dr. Haussmann's conception of them. Thus it is said that, commencing on the fifth day, the child "continued to pass segment after segment for five or six days"

in succession. To any one who knows the ordinary behaviour of proglottides during their migratory passage from the human bearer, it will appear simply incredible that, during the act of childbirth, enough of these segments should have gained access to the infant's mouth to ensure such an eventual secondary wandering, so to speak, from the baby's rectum. Dr. Haussmann will now perceive that his explanation, in the face of these additional facts, cannot be reasonably entertained.

From a passage quoted by Dr. Haussmann from his own treatise (*Die Parasiten*, etc.), it is evident that, in other cases of infantile parasitism "now and then recorded in literature", he thinks an explanation of such phenomena may be sought and found in the fact of his having himself detected the ova of parasites in the mouths of infants. Dr. Haussmann's experiences in this relation are most interesting ; but, notwithstanding his discovery of all sorts of strange things, including "the eggs of *Tænia solium*", I will not do him the injustice of supposing that he thinks there could be any tapeworms formed in the intestinal canal of a baby only a few days old, from such a source. However, I fear some persons will have interpreted his quotation in the sense to which I refer.

Be this as it may, it is quite clear that Mr. S. G. Armour supposes that some such explanation is possible. He says, "How did the tænia or the parasitic embryo gain entrance to the intestinal canal of the fœtus *in utero ?* for the child was fed on nothing but the mother's milk." He evidently supposes that the tapeworm in the infant might have been developed in a direct manner from the eggs or their contained embryos within the space of a few days. By no possibility could this be the case. The researches of Von Siebold, Leuckart, Küchenmeister, Haubner, Röll, Möller, Mosler, and others, which I have myself both verified and extended in certain directions incontestably prove that the sexually mature tapeworm can only be developed from the so-called cysticercal phase of tapeworm-life. To assert, or even to assume, that a tapeworm can be developed in a few days from eggs or embryos introduced into the infant's mouth at the time of birth, is to hazard an explanation which utterly ignores every legitimate conclusion deducible from experimental inquiry. The sequence of phenomena observable in the life-history of any human tapeworm is, in its larger phases, as invariable and uniform as are those more striking changes which we recognise in the succession of the seasons. In the case of the tapeworm, something like three months is necessary for the perfection of the cysticercal stage alone ; whilst a similar period is requisite for the development in the body of the ultimate host of the perfect sexually mature tapeworm colony, whether it be the form called *Tænia solium*, or the still commoner species termed *Tænia mediocanellata*.

Leaving this vexed question, I will remark upon the high interest attaching to certain recent observations by other foreign writers. In a *brochure* (*Aus den Sitzungberichten der physikalisch-medicinischen Societät zu Erlangen*), Dr. Arnold Heller records a most attractive *post mortem* "find" which he made in the middle of May last. In the small intestines of an imbecile (*Geisteskranken*) fifty-two years of age, he discovered eighteen examples of juvenile round worms ; these being, without doubt, referable to the common *Ascaris lumbricoides*. The largest of these measured about half an inch in length (more strictly, 13.0 *millimètres*) ; whilst the smallest gave only a long diameter of 2.75 *millimètres*, or let us say, roughly, about the ninth of an English inch. Dr. Heller's record of the microscopic examination of these minute round worms, though brief, displays rare precision in reference to the facts of internal organisation ; but the special value of his communication lies rather in another direction. As he correctly points out, between the embryos, as they appear at the time of their expulsion, and the smallest round worms hitherto observed in the human subject—including in this reckoning the recorded experiences of Leuckart, Vix, Küchenmeister, and Laennec—we have, as regards size, an immense gap to bridge over. Dr. Heller's observations, therefore, serve to supply almost all the missing links in the chain of developmental evidence necessary to prove the true nature of the life-record of *Ascaris lumbricoides*. In other words, it becomes almost certain that this common round worm completes its life-cycle without the necessity of its having to pass through or infest the body of any intermediary animal bearer. This is what obtains in the case of *Trichocephalus* and *Oxyuris*, as has recently been made known to us, chiefly through the admirable researches of Leuckart, Vix, and Dr. Heller himself.

At the Erlangen Society's meeting on the 3rd of last June, Dr. Heller also exhibited a specimen of *Ascaris mystax*, taken from the human body by Dr. Böhm at the Gunzenhausen Pathological Institute. On the occurrence of this fact, Dr. Heller remarks : "Es ist dies der vierte Fall von Vorkommen des Katzen- oder Hundespulwurms beim Menschen." In this calculation, however, I infer that he takes no account of the instance brought forward in this country by Dr. Thomas Morton. There have been five, if not six, instances placed on record of the occurrence of this parasite within the human body.

In the present communication, I can do no more than allude to other advances in helminthology. The observations very recently brought under my notice by Dr. Krabbe of Copenhagen (*Aftryk af Tidskrift for Veterinairer ; 2 den Række :* II) ; by Mr. Fedtschenko, the eminent Russian traveller, in reference to the structure and development of *Dracunculus* and *Gnathostoma ;* further information concerning the prevalence of *Stephanurus* in the United States by Professor Fletcher of Indianapolis; and especially also certain statements by Dr. Wucherer, now in Stuttgart, in respect of the memoir and leading article on *Bilharzia* and its associated hæmaturia, which appeared in one of the July numbers of this JOURNAL ;—these observations, I repeat, all and severally, are full of interest for myself and others. Drs. Wucherer and Fletcher will, I am sure, accept this apology for my not having given their valued information more immediate attention.

Lastly, one more sentence, to acknowledge the criticisms of my friends Dr. Leared and Dr. Crisp. The vigour with which the last named writer strikes out—as recorded in the report of the Pathological Society's meeting in last week's *Medical Times and Gazette*—is thoroughly characteristic, and will secure my respectful attention on a more suitable occasion. To Dr. Leared my thanks are due for pointing out Dr. Hannover's priority in relation to the discovery of peculiarly appendaged ova attached to the eyes of turtles (BRIT. MED. JOURN., Aug. 3, p. 140). I have great pleasure in recognising this priority on the part of that profound anatomist ; the more so because, when Dr. Hannover visited Edinburgh in 1850 or 1851, I remember to have disputed the correctness of his views respecting the structure of the vitreous humour —basing my remarks on original investigations which were partly embodied in my prize thesis on the Eye. Having said thus much, I must, on the other hand, add that I do not think that Dr. Leared has shown that I fell into any "inaccuracy" of statement in my paper on *Bilharzia.* Quite independently of the question of priority, Mr. Canton's as well as Dr. Leared's own observations were valuable ; and I alluded to the former rather with the view of fixing attention to a morphological fact of remarkable significance, than with the purpose of exhaustively analysing the literature of the subject. This must be my apology for apparently not having done justice to Dr. Leared's contribution in the same direction.

REMARKS ON THE TREATMENT OF MALIGNANT DISEASE OF THE UTERUS.*

BY ALFRED WILTSHIRE, M.D., M.R.C.P.Lond.,
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ANYTHING which promises alleviation in cases of cancer, no matter what may be the part affected, deserves our earnest attention. Past experience and observation warn us to be careful of accepting the accounts of vaunted cures as trustworthy. The relief, however, when practicable, of those afflicted with cancer commends itself to our notice ; and, moreover, it is our bounden duty to compass at least this much, if it be possible, for a class of sufferers whose afflictions are indeed grievous. Pre-eminently is this the case with those who are afflicted with cancer of the womb, to which disease my remarks have reference, and specially in connexion with the plan of treatment proposed by Professor Simon of Heidelberg, whose method is illustrated by two cases in which it was adopted.

My acquaintance with Dr. Simon's practice I owe to Dr. Munde of Newhaven, Connecticut, who introduced it to my notice. Dr. Munde, who is an accomplished gynæcologist, having been for three years and a half assistant to Dr. Scanzoni, and having been for six months assistant to Dr. Simon of Heidelberg, was requested by the latter to introduce his method to his English *confrères*, and to show the instrument he has devised—a facsimile of which I here present. At my suggestion, Dr. Munde introduced the subject, and showed the instrument at the June meeting of the Obstetrical Society.

Simon's plan consists in lightly scraping away the loose and fungating portions of the invaded tissues, thus leaving a healthier and less painful surface, which is also less prone to bleed. Simon thinks this plan preferable to the hot iron in certain cases—viz., where the tissues are largely invaded, and there are fungating and spongy masses, and in cases where, from the extent of surface, it is thought inadvisable to apply other

* Read before the Midwifery Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

cauterants. It is thought that this plan of lightly scraping materially lessens hæmorrhagic and other discharges.

Unhappily, both hospital and private practice afford but too many opportunities for testing new methods of treating cancer of the womb; and I accordingly asked Dr. Munde to operate after Simon's manner on a patient who was sent to me by my friend Mr. Churton of Erith, with whom I attended her. She had already been greatly benefited by the application of chromic acid, but I thought there were still some loose portions of tissue which might well be removed by the scoop, and therefore asked Dr. Munde to operate. Some scrapings of partly disintegrated tissue were removed; the patient felt very little pain; there was but trifling bleeding, and the after consequences were of a satisfactory character, as far as they went, but I am bound to say that the patient did not appear to be much benefited. She was certainly not worse, and I think was rather better; the change, however, was not marked: this, perhaps, was owing to the decidedly beneficial effect already exerted by the chromic acid upon the disease.

Another case being about the same time in my service at the West London Hospital, I asked Dr. Munde to operate on her also. He removed a considerable amount of very soft tissue, exposing a large cavity. The operation was performed with extreme care, and only such portions as were quite soft and easily detached were removed. There was free but not excessive bleeding. A tampon of wool, soaked in solution of perchloride of iron, was inserted, as a matter of precaution, and to prevent any undue loss. The course of the case was as follows. Symptoms of peritonitis, of a severe form, presented themselves, and for some days the patient's life was threatened. She had a high temperature, quick and frequent pulse, distended abdomen, and all the signs of a serious attack of septic peritonitis. There was no hæmorrhage, but a free muco-purulent discharge. Pain and vomiting were troublesome. By dint of great care and skilful treatment on the part of our able senior house-surgeon, Mr. Bridgman, now of Burton-on-Trent, the patient was pulled through the attack, notwithstanding its apparent hopelessness; and great credit is due to Mr. Bridgman, and I here wish very cordially to acknowledge the ability with which he conducted the case to a successful issue. One day, after the patient had got over the more serious symptoms, Mr. Bridgman informed me, on my visit to the hospital, that she had passed a mass of something *per vaginam*. Before seeing it, I suggested that it might be a clot of blood moulded in the diseased cavity. Mr. Bridgman thought it too firm for a clot, which caused me to remark that it might be that the serum was expressed, and only the firmer portion of the clot remaining, as not unfrequently happens in intrauterine coagulation. However, on examining the mass, there could be but little doubt that it consisted of the whole of the body of the womb, shorn of the broad ligaments and ovaries. Dr. Munde, whom I apprised of this, could scarcely credit the possibility of what had occurred, but, on examining the specimen for himself, was convinced of its correctness. He also visited the patient, who had meanwhile greatly improved, and found scarcely any evidence of disease, as far as the finger could reach; but as we could not then touch the summit of the cavity, and, as the patient was too weak to allow of the speculum being used, we could not accurately determine the state of the upper part of the vagina. I have, however, since examined the parts, and find that almost complete cicatrisation has taken place, there being scarcely any puckering and very little induration. The finger passes into a kind of transverse hollow, almost like an os uteri, but with rather roughened surfaces. By the speculum, too, the parts looked very like an os, but there remained only a *cul-de-sac*, through which neither a sound nor a small flexible bougie could be passed with such force as seemed justifiable. A bimanual exploration declared the absence of any body corresponding in size, shape, or position, to the womb; and, indeed, it seemed evident from such physical exploration as it was prudent to make that the organ was absent. Generally as well as locally the patient has greatly improved, but I cannot conceal from myself the fear that the roughened state of the cicatrising surfaces may be indicative of remaining malignant disease. The pain, too, of which she sometimes complains increases my fear. However, I shall carefully watch the case, and, should occasion arise, will adopt such measures as appear called for to conduct the case to an entirely successful issue—in other words, to establish, if it be possible, which is very doubtful, and indeed not to be expected, seeing that the retro-peritoneal glands are presumably infected, a complete cure.* I exhibit the specimen, which I think no one will doubt is the uterus. I wish to say that not the smallest blame can be attached to the operator, whose judgment and skill are beyond praise, or to the operation. The same result might have happened from spontaneous sloughing, though probably before that point had been arrived at the patient would have sunk from exhaustion. As it was, doubtless sloughing helped towards the result, and such attachments as were left might have been thus destroyed; indeed, only in this way can we account for the absence of the broad ligaments and ovaries, which puzzled us much. Neither Dr. Munde nor myself dreamt of such an issue, for, to the best of our judgment, the supports of the womb were not unduly encroached upon.

With reference to the extrusion *en masse* of the womb, it must not be forgotten, as Gaillard Thomas remarks, that Scanzoni, Rokitansky, Kiwisch, Virchow, and Klob, all acknowledge the possibility of the uterus sloughing away, and recovery following in cases of carcinoma of that organ. A case of this kind is recorded by Dr. Habit of Vienna, an epitome of which will be found in the Sydenham Society's *Year-Book* for 1864; and Aran quotes a case from Estevenet, where a cancerous uterus was spontaneously separated from its attachments and expelled in the act of defæcation. Indeed, Dr. Munde told me that Professor Simon himself has proposed to scrape away all the tissues of the uterus, except a bare shell of peritoneum: and Dr. Munde suggests that something of this kind might have happened in our case. Of this, however, I am doubtful, for it appeared to me that the whole of the organ, though shorn of its ligaments and appendages, had escaped bodily. Corresponding to the openings of the Fallopian tubes are two holes, which appear to indicate the point of severance of the oviducts from the body of the organ. The specimen was placed in chromic acid, and has accordingly undergone much hardening and shrinking. Sections show the curling arteries peculiar to the organ, and microscopical examination demonstrates the usual uterine tissues. Only the cervical portion appears to have been invaded by the disease, the body being free.

Cases of malignant disease of the uterus are, in my experience, unhappily, very common; and although few are susceptible of great improvement, yet some are amenable to, and derive much benefit from, well direccted treatment. Ablation, when possible, of diseased masses by the galvanic cautery or *écraseur*, the application of the hot iron or chromic acid, and scraping after Simon's method, are all very serviceable methods of treatment. When there is much bleeding, or the discharges are copious and offensive, nothing in my experience equals chromic acid, the astringent and deodorant properties of which far transcend anything with which I am acquainted. As an instance of this, I would mention that on one occasion a pledget of wool soaked in a solution of chromic acid was, through inadvertence on the part of the patient suffering from cancer of the cervix uteri, left in the vagina for a week, and on its removal there was not the smallest fœtor detectable. This case was seen with me by Dr. H. Savage. On two other occasions a like accident has happened through fear of a patient in withdrawing a tampon, and neither time was there the smallest degree of offensiveness in spite of, at other times, fœtid discharges.

Chromic acid should be used in solution, and with great care, lest it attack sound tissues. Half a drachm of the crystals to one ounce of water makes a very strong solution. It may be used as a vaginal injection in the strength of a drachm to ten or twenty ounces of water, or even weaker. I have thought that it might be an improvement on Simon's method of scraping, if the diseased parts were previously dressed with a strong solution of chromic acid. This, however, as yet lacks the test of experience. I am inclined to think favourably of the plan of scraping, if cautiously done, in suitable cases. The remarkable and very exceptional case which I have related, while it is eminently instructive, should yet make us very cautious in our procedures, and is not one which we should lightly seek to imitate, or at any rate is not one which in our present state of knowledge it would appear desirable to imitate; seeing that, although the internal organs are usually not affected in epithelial cancer, which is the form most commonly affecting the uterus, the retroperitoneal glands are sooner or later involved, and therefore it is only in the earliest stages of the disease, when a serious operation would hardly be justifiable, that any attempt at ablation of the organ is likely to be attended with permanent success.

My friend, Dr. Fordyce Barker of New York, has kindly given me a copy of some observations of his on the subject. He thinks very highly of early ablation of the diseased structures. He also gives an account of some cases in which a cure followed the application of acid nitrate of mercury.

The principle of Simon's method is by no means new, though perhaps his instrument may be. It was long ago practised by Récamier, who used a scoop or *curette* for scraping cancer of the body of the womb. Dr. Marion Sims, I believe, has also employed the same plan, and so I think has our distinguished Associate, Dr. Barnes. Indeed. whatever may be our views as to the pathology of malignant disease of the uterus,

* This surmise has, I regret to say, proved but too accurate. Though the process of erosion is not rapid, the parts surrounding the top of the vagina are now invaded, and the blind excavation at the extreme upper end of that canal will now admit half a walnut. The patient suffers a considerable amount of pain around the loins, leading me to infer extensive implication of the lumbar glands, etc.

the plan o treatment in question commends itself to our notice, and it is one which, cautiously used, may be capable of rendering valuable service.

It is not desirable to stop here to discuss the different pathological doctrines as to the true nature of the various affections which, clinically, we all recognise as more or less malignant, since that, deeply interesting as it is, would lead us too far from our present purpose. On this subject, the work of my friend Mr. Henry Arnott will be found full of instruction; suffice it to say, that the cases to which I have referred are instances of what is called epithelial cancer or epithelioma, the least malignant of the cancers, owing probably to the rarity or tardiness with which it affects the internal organs.

One word, however, on the etiology of uterine cancer. Setting aside hereditary influence—on which point the most conflicting statements have been made—it is difficult to arrive at any satisfactory conclusion as to the causation of malignant disease of the womb. On the one hand, there is much in favour of Rokitansky's view, that cancer probably originates in a peculiar state of the blood, which consists mainly in a preponderance of albumen with a hypinotic condition, or diminution of fibrine, seeing that the disease chiefly affects persons who are subject to miscarriages, over-suckling, and other pre-existing depressing conditions, such as menorrhagia and like exhausting discharges occurring before the disease has arisen.

But in opposition to this view, it may be urged that thousands of women suffer in like manner and never become cancerous, implying the existence of some more recondite cause than mere exhaustion of the vital fluids. On the other hand, the view of those who, like the late Mr. Moore, hold cancer to be originally a local affection, and to be excited by blows and such like, is supported by the fact that the womb is certainly exposed to the chance of injury in parturition, abortion, etc. Scanzoni's tables, which show that cancer of the womb is more frequent in multiparæ than in nulliparæ, may be quoted indifferently by the advocates of either hypothesis.

There is just one possible cause of malignant disease of the uterus which I should like to mention—it is syphilis. I have seen undoubted syphilis of the tongue of long standing develope into true cancer, so recognised by Sir James Paget, who saw the patient; and the possibility of a like occurrence in the uterus appears worthy of consideration.

Before concluding, one word seems called for on general therapeutic treatment in carcinosis, as Billroth calls the cancerous cachexia. I am convinced from observation that cancerous patients derive great benefit from judiciously directed general treatment, and am of opinion that it should never be omitted. Iron (especially the astringent forms), ergot, iodide of potassium, arsenic, cod-liver oil, and such like, for the improvement of the general health (besides opium, cannabis Indica, chloral, etc., which latter are obviously indicated for the relief of pain), are all highly serviceable, and should never be omitted in dealing with malignant disease.

ON PYÆMIA.*

By EDWARD COPEMAN, M.D., F.R.C.P.,
Senior Physician to the Norfolk and Norwich Hospital.

THE occurrence of several deaths, during the past year, in our hospital from pyæmia (so called), induces me to bring before you a few remarks upon the subject, in the hope of being able to elicit by discussion some more definite ideas as to the nature and treatment of this very unsatisfactory disease. When fully established, it appears to resist treatment, and cannot be controlled; at least, such is the conclusion at which most of us must arrive from what we have recently seen. One of the theories with respect to its causation, is that pus is absorbed into the blood, poisons this vital fluid, and leads to secondary deposits in some of the important organs of the body. But my own firm belief is that the theory is without foundation, and that pus is never absorbed into the blood. Pus is a bland fluid, unirritating, healing, and the result of one of the natural processes for the cure of inflammation. In a healthy individual, I do not believe that pus ever does any harm unless it be confined in a space which will not give way to it, and make injurious pressure upon other organs. How often do we see abscesses, when favourably situated, become absorbed without any injurious consequences; how disappointed we feel if wounds which do not heal by the first intention do not suppurate; we augur from it that in such a case the patient's strength is not sufficient to allow the formation of pus, and we have little hope of recovery. How often do large wounds, after operations of various kinds, continue to suppurate for days, weeks, or months, and we have no fear of ill consequences arising from it so long as the pus is *laudable*. My own opinion is that the true cause of pyæmia, which I would rather call cacæmia, rests in the constitutional condition of the patients, and that the disease is by no means confined to cases of surgical operations. We all know that the blood always contains the ingredients, so to speak, of pus, and can at any time form it when Nature seems to require it for the cure of inflammation. Whenever inflammation occurs, there is what Cullen called *spasm of the extreme vessels;* and this frequently results in the formation of abscess. In inflammation, whether acute or chronic, active or passive, there is congestion in the inflamed part, and generally there is matter formed for the relief of this congestion. We see it in the formation of matter in the glands under the jaw in scarlet fever, in the skin in small-pox, in the liver in hepatitis, in the lungs in certain forms of pneumonia, in the prostate gland, in the eyeball, in the cellular tissue in carbuncle and erysipelas, in various organs in different kinds of fever—in fact, in any part attacked by inflammation; and I look upon the occurrence of secondary abscesses after operatians as instances of partial stagnation of the blood (passive inflammation) when it is in an unhealthy state, and unable, for want of nervous influence, to eliminate any morbid elements it may contain. This is especially the case with respect to the liver, which contains more blood than any other organ, and so abscesses are often found there; and I do not think it would be stretching the point too far if we were to say that the same thing occurs in the lungs in cachectic subjects, where a number of small abscesses form around passively inflamed bronchial tubes, eventually forming what we call tubercle, the absorption of the watery part of the pus leaving the residue in a semi-solid form. I do not say that this is actually the *rationale* of the formation of tubercle, but it seems to me as reasonable as any other, and quite in accordance with the ordinary rules of morbid phenomena terminating in abscess.

Speaking of an accumulation of blood in an organ—the spleen, for instance—and the consequent formation of tubercle, Dr. Carswell says: "In one cell you may perceive simply the blood coagulated; in another, it may be coagulated and deprived of its colouring matter; and, in another, converted into a mass of solid fibrin, having in its centre a small nodule of tubercular matter. And speaking of the fact that the superior and posterior portion of the upper lobe is the spot in which tubercles, if any exist, are almost sure to be found, and where they first begin to suppurate and soften, he adds that, in his experience, there is no deviation from this rule, except when some other portion of the lung may have been the seat of an inflammatory attack, which has determined the priority of tubercular disease in that portion." (Sir T. Watson's *Lectures*, 5th edition.)

We must all have remarked the extraordinary similarity of the symptoms leading to death in all diseases which lapse into a typhoid state, whether from fevers or inflammations, or after surgical operations; the rough dry tongue, the rapid feeble pulse, the relaxed skin, obtuse sensorium, colliquative perspiration, panting breathing, powerless muscles, relaxed sphincters, and very frequently vomiting of green or grumous fluid. Surely some common cause for this must be at work; and that cause I deem to be a morbid condition of the vital fluid—the blood; and this whether attended with secondary abscesses or not. There can be no doubt that this fearful condition of things may be very much promoted, if not actually caused, by air impregnated with a *materies morbi*, and that pure air and good ventilation are most desirable and necessary adjuvants in the treatment; but it should be borne in mind that such cases occur often in great malignancy in country districts as well as in hospitals; and, as far as my experience will guide me, a well regulated hospital is more healthy than many country villages during the prevalence of an epidemic which terminates in what we always used to call typhoid symptoms.

A word as to treatment in cases of so-called pyæmia after surgical operations. No doubt the principal points are good nourishing food, good pure air, and such an amount of stimulants as will *strengthen* without *accelerating* the pulse; such as will *diminish* and not increase the rapidity of respiration. But surely medicine may lend its aid, and in some instances turn the scale in the patient's favour, although the general state of things appears almost hopeless. I do not intend to weary you with any long detail of the treatment in general; there are several points so evident to all of us as to the use of tonics, aperients, and opiates, that they need not be enumerated. But there is one agent to my mind of great value, and which I have seldom seen fairly tried in cases of pyæmia after surgical operations. Once, on passing casually through a ward at the hospital, I met with Mr. — at the bedside of a patient who was apparently in a hopeless typhoid condition, and in whom, if he had died, it would have been probable, from analogous cases, that internal abscesses might have been found. I suggested to him the use of oil of turpentine. Mr. — replied that he thought the man would die; and, as he had nothing more to suggest for his relief, he

* Read before the Norwich Medico-Chirurgical Society.

would order him turpentine. The man recovered. You all know the analogy which exists between cases of puerperal fever and surgical fever; and I have, at various times, shown to you how beneficial the use of turpentine has been in many of the former cases; indeed, in this and in the adjoining counties, there is a rapidly growing belief in its efficacy; and I have been requested by several practitioners, conjointly as well as individually, to make my further experience known to them. This I intend to do shortly; and shall bring before this Society a sufficient number of cases, in addition to those I have already published, to corroborate the opinion I have so often expressed about it. Now, why should we not give it a trial in these cases of surgical fever? The patients die as it is. Why not make the experiment of turpentine? Speaking of fever, the late Dr. Graves (the greatest physician of his day) remarks as follows: "I have seen people's lives saved by a few doses of the oil of turpentine, and have watched its tranquillising effect on the nerves with pleasure and surprise." The mode in which he gave it was: oil of turpentine, 1 drachm; castor oil, 1½ drachm; water, 1 ounce; to be taken every sixth hour. I should very much like to find that our surgeons are disposed to give this valuable medicine a trial when their operated patients are *going*, not only when they have *gone*, into a typhoid state. Should it succeed, well; should it fail, no harm could have arisen from putting it to the test of experience in cases which almost always die without it.

SECONDARY UTERINE HÆMORRHAGE.*

By JOHN BASSETT, Esq.,
Professor of Midwifery in Queen's College, Birmingham.

In a midwifery experience extending over a period of five-and-twenty years, I have met with thirteen cases in which there has been severe hæmorrhage from the womb during the period of childbed, but at a later date than eight-and-forty hours from the time of delivery. These cases have happened in about equal proportions amongst my own patients and those of other gentlemen. In all the instances the hæmorrhage was severe, and in two a fatal result followed from secondary conditions. The time of the coming on of the hæmorrhage varied from the third to the thirty-second day after delivery. Before relating briefly the particulars of these thirteen cases, I may premise that by the term secondary uterine hæmorrhage, is understood a loss of blood occurring after the discharge which accompanies delivery has moderated into the ordinary amount of the lochia.

The cases which have fallen under my observation may, for the convenience of description, be placed in three groups. The first group contains five cases, in which the cause of the hæmorrhage was irregular and inefficient contraction of the womb, with coagula in the interior. In four of these cases, hæmorrhage more or less severe followed the birth of the child; the patients were feeble women, of relaxed fibre and defective uterine power. In the fifth case, nothing particular was noticed at the time of the delivery. In two of them, which were first confinements, some laceration of the perinæum took place; but it was ascertained that the hæmorrhage did not come from this source. Two had been subject to hæmorrhage in their previous confinements. The remedies employed were pressure, ergot, local and constitutional astringents. All the patients recovered except one, which presented signs of local and constitutional inflammation, from which she died in the third week of her illness from the so-called phlebitis.

The second group contains four cases, in which the cause of the hæmorrhage was a portion of retained placenta. In one of these the hæmorrhage, which was profuse at the time of delivery, continued at intervals until the twelfth day, when the interior of the uterus was examined, and a piece of placenta about the size of a walnut was detached from the posterior wall; after this the symptoms subsided, and the patient made a favourable recovery. In the second case, the child was expelled suddenly after two severe pains some twenty minutes before my arrival at the house; no uterine action followed, and none could be produced by friction or stimulants. The placenta was lying in the vagina; the insertion of the cord being readily felt, the absence of the usual after-pains was explained on the ground of debility. The placenta was extracted without unusual force, but without the concurrent action of the uterus. Nothing particular was noticed in this case until the tenth day, when, on rising from her bed, a severe hæmorrhage set in. This quickly subsided on resuming the recumbent position, but returned on the fourth day. An examination was made, and a substance was detected within the anterior lip of the os uteri. This I tried to detach with my finger; but, as it was hard and would not yield, I consulted Mr. Berry, who agreed with me as to the nature of the case, and also that it must be broken off. This was done by the exercise of some force, after which the patient had no unfavourable symptoms. In the third instance, nothing particular occurred at the time of the confinement; subsequently some unusual weight and bearing down was thought to be present. On the fourteenth day, severe hæmorrhage set in, and continued until the seventeenth, when I saw her; she was then blanched, and her life appeared in imminent danger. The interior of the uterus was examined, and a portion of placenta was detached from the anterior wall, near the bottom of the middle zone: the hæmorrhage ceased at once, but for months she remained pallid and weak. In the fourth instance, the delivery took place on the 11th February, 1869; the labour was premature; the child was stillborn and somewhat decomposed; the placenta was said to have come away naturally. This person had been liable to hæmorrhages at her previous confinements, and had been greatly reduced in health by frequent child-bearing. Nothing unusual happened until the 15th March, or thirty-two days after delivery, when profuse hæmorrhage set in; this was arrested by local treatment, but returned on the fourth day, at which time I saw her; she was then blanched and pulseless. I made a careful examination of the uterus, and, passing my finger through the os and up the cervix, I detached a portion of fleshy substance, which had a placental appearance, and was about the size of a marble. The mucous membrane was rough and elevated for some distance around its attachment. I was informed that no further hæmorrhage took place, but that she died in about a fortnight after my visit, from exhaustion, and that no *post mortem* examination was allowed.

The third group contains four cases, in which the cause of the hæmorrhage was different in each case. In the first instance, that of a widow, who had recently buried her husband under painful circumstances, the labour was tedious from irregular pains. Hæmorrhage and prolonged syncope followed the birth of the child. On the fifth day, febrile symptoms with pain in the uterus came on. On the seventh day, hæmorrhage supervened; and on the eighth, a piece of membrane the size of the palm of the hand, coated with lymph, was expelled. After this the hæmorrhage ceased, and the patient made a slow recovery. In the second case, a large fibrous tumour developed itself during pregnancy: it was associated with placenta prævia. The delivery took place about the eighth month. The labour came on spontaneously a few hours after the occurrence of pain and hæmorrhage, and was (the pains being rapid) unassisted, except by the detachment of the placenta and rupture of the membranes. After the termination of the labour, in consequence of the hæmorrhage continuing, when the uterus appeared to be contracted, the hand was passed into the vagina, and a large non-pedunculated growth was detected, attached to the posterior lip of the uterus. The hæmorrhage was controlled without much trouble, but returned in varying proportions during the month that she was kept in bed, preparatory to the *écraseur* being applied. An operation was undertaken as soon as it was thought desirable after her confinement. The tumour, about the size of a breakfast-cup, was removed by the chain *écraseur*; the part attached to the uterus being the broadest portion of it. The recovery was favourable, and no uterine symptoms have since appeared. In the third case, a partial inversion of the uterus attended labour, and this, from the insufficient efforts of the womb to rectify its position, became complete. To relieve the pain and hæmorrhage which harassed the patient, the *écraseur* was applied, and the dependent portion was removed. The recovery was complete and satisfactory. In the fourth case, the confinement in a woman forty years of age had been perfectly natural, and no untoward symptoms supervened until the twenty-seventh day, when hæmorrhage set in, and continued for four days with severity, notwithstanding plugging and constitutional styptics were resorted to. Nothing was learned from an examination as to the cause of the hæmorrhage; it was therefore ascribed to imperfect involution and enlargement of the uterine vessels from frequent impregnation. The recovery was favourable, and, I believe, that no subsequent unnatural discharge followed.

We are indebted to the celebrated Dublin School of Midwifery for nearly all the literature we possess on the subject of secondary uterine hæmorrhage. It may be briefly summarised as leading to a similar conclusion to that which the history of the cases I have related does—viz., that the causes of secondary uterine hæmorrhage are various; that the time of its setting in is uncertain; that it may consist of one or a succession of attacks; and that it is not, under ordinary circumstances, fatal. The three factors on which it seems to depend are—inefficient contractions of the womb, morbid states of the placenta, and incompetency or rashness on the part of the accoucheur. When we remember the very peculiar way in which the uterus sometimes behaves after it has emptied itself of its contents, in the size and shape it assumes we

* Read before the Midwifery Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

cannot be surprised that some of its vessels are left unplugged or imperfectly constricted by its muscular fibres : then, if we look at the frequency with which we can trace pathological processes in the placenta, we need not wonder that the muscular fibre which has been developed *pari passu* with the placenta should itself be imperfect and irregular, and incompetent to maintain that firm and regular contraction which is nature's safeguard against hæmorrhage. How far morbid states of the placenta contribute to bring about the result now under consideration, is a question not very easy to answer. No doubt in many instances where the placenta is diseased it separates more readily from the side than naturally ; but is it ever so adherent that it breaks in separating, so that a portion may be left behind where the accoucheur has not intervened? Further, the history of the cases related favours the conclusion that, when the placenta is situated low down anteriorly, it does not so readily separate, and that the accoucheur has less power over it by external pressure ; and that, from feeling the insertion of the cord and the bulk of the placenta, he may be deceived as to its entire detachment, and thus be led to use extractive force prematurely.

THE HOT SAND-BATH.

By Dr. CONRADE.

SAND, like most minerals, is a bad conductor of heat—the more so from being composed of small incoherent particles. It possesses a high specific heat—that is to say, a large capacity of retaining heat, without allowing it to escape but slowly. Hence in hot climates the sand is apt to form the hot-bed for certain species of amphibious animals, which, not being able to produce sufficient heat within their own bodies for the development of the embryo, simply deposit their eggs in the sand and leave the sun to perform their parental duty. The use of hot sand for baths forms a part of popular medicine in southern countries in which the mineral is abundant. By embedding the whole body or some of its parts in hot sand, we expose them to the action of the heat stored up in that medium. If not exposed to contact with substances of a low temperature, the quantity of sand required for a bath may be expected to retain its heat nearly unchanged for more than an hour. In the hot sand-bath, the layers used for surrounding the body are generally covered by other sand of much higher degrees of temperature (120 to 130 deg. Fahr. or more). These not only steady the heat round the body, but increase it gradually, without inconvenience to the patient. Over all is laid a blanket, which prevents too rapid cooling by the influence of the outer temperature.

The known effects of high temperatures on the body consist chiefly of the relaxation of all tissues and the enlargement of the blood-vessels, which become more filled with blood without any increase in the pressure. The flow of the blood in the neighbouring structures is therefore directed to the heated parts, relieving the former ones of as much of their contents as the increased space in the enlarged vessels will allow. By-and-by the same relief is imparted to more distant regions, until a balance is obtained. At the same time the parts become more succulent, larger quantities of fluid than usual being secreted from the blood ; hence perspirations break out more or less copiously, according to the amount of the heat applied, and to the individual disposition. On the other hand, the blood is forced to make up its loss of fluid which it has sustained on its way through the hot parts, and no sooner does it reach the adjacent regions than it deprives them of as much of their watery contents as it is allowed to do. It is obvious that the extent to which the described change in the distribution of the blood takes place, is entirely dependent upon, and proportionate to, the size of the surface upon which the application of heat has been made and the healthy condition of the blood-vessels. If the whole skin be subjected to the heat, the circulation is drawn to the surface and the inner organs get rid of certainly not a small quantity of blood during the bath, provided the elasticity of the interior blood-vessels be normal. This relief, however, can no longer take place when the heat gets easy access to the inner parts as well. The influence of the heat soon becomes universal, and disturbances in the respiration and in the action of the heart will unavoidably follow. The described effects may be properly divided into—A, those exercised on the heated parts ; and B, those produced on the neighbouring parts.

A. The heated parts (1) become more filled with blood, and (2) have an increase in the secretion of liquid matter from the blood ; consisting chiefly, but probably not entirely, of water.

B. In the adjacent parts (*a*), those nearer to the heart, the blood-vessels are relieved ; (*b*) in those remote from it, the fluidity of the blood is diminished.

To a certain extent it depends on the method of treatment adopted which of these results will be obtained in the first place. In case of high degrees of heat being resorted to, much perspiration will follow ; while lower temperatures, applied for a longer time upon a large surface, are more apt to spread towards the inner parts, and thus the described effect upon the distribution of the blood and its consequences may be presumed to be the most prominent result. In taking sand as a vehicle for the application of heat, no other complications will arise ; the respiration remains undisturbed, the heat not entering the lungs ; the circulation, too, goes on as usual, the action of the heart not being interfered with. No congestion of any kind will intervene ; no palpitations, no headache, etc., follow. The skin, not being excluded from contact with the air, perspires freely, does not become softened, and does not lose its former resistance to the influence of the weather, and is still protected from draught and cold. The patient, whilst undergoing his treatment, may enjoy in the meantime the comforts of rest and sleep.

The advantages of the use of hot sand consist simply in its allowing the application of heat entirely free from any of the complications which more or less accompany all other methods. Water excludes the air hermetically, prevents perspiration, and overcharges the kidneys during the stay in the bath. It cannot be supported as hot as sand can without feelings of uneasiness, and, besides, it has a weakening and softening influence upon the skin. Steam and hot air baths are not very fit for patients at all ; they require already a certain strength to resist the influence which they exercise upon everybody at the beginning. They interfere too much with respiration and circulation to allow their continuance for the purpose of cure. Delicate persons and children are entirely unable to make use of them. They increase the general temperature of the body by two degrees and more, thus causing a sort of artificial fever. None of these inconveniences occur in the hot sand-bath, if applied with sufficient care and experience. Doubtless electric currents are developed, as is generally the case whenever a high temperature acts on solid substances ; but, as to the part they take in the action, nothing whatever is known as yet : they may have some influence on the nerves or other organs, but it cannot be asserted that any remarkable result is to be ascribed to them.

From the foregoing, it will appear that the diseases in which the application of heat by the aid of sand can be tried with hope of success are of two classes : in the first class, to bring about a large perspiration is the chief object ; in the second class, perspiration is better avoided, and the effect of the heat to be directed towards correcting the circulation and restoring the vital processes. Under the first head are comprised rheumatism and gout (in which Trousseau appears to have employed this treatment long since), exudations, and œdemata from previous disorders, which will probably all derive benefit from heat. Under the second head we will enumerate morbus Brightii (the acute stage of course excepted) ; cases of recent paresis, which may be improved if the lesion be not the result of some disorganisation on the part of the nerve, be it by removing some injurious swelling pressing upon the nerve, or by improving its vegetative condition. That of course the diagnosis must decide, and the case has to be treated according to it. The same remarks apply to recent cases of partial atrophy, of not too long duration. In cases of scanty catamenia, in irregularities in the flow, dysmenorrhœa, and similar complaints, if not due to coexisting anæmia, experience has shown in many instances that cases of that sort improve much better under the hot sand-bath than after any other treatment. Scrofula and rickets derive great benefit from carefully administered hot sand-baths. Torpid ulcers and badly healing wounds improve wonderfully sometimes after a few applications.

Perhaps in some kinds of chronic exanthemata the hot sand-bath might be of good service, although no experiments have been made on this topic as yet. It speaks very much in favour of the hot sand, that, whenever judiciously given, the patient likes it, and has recourse to it in many cases.

Further information on the subject will be found in the following : Dr. Schwabe, *Deutsche Klinik*, 1869, No. 33 (being a report of a medical man, himself a patient). Dr. Flemming, *ibid.*, 1868, Nos. 12, 14 ; 1870, Nos. 35-38. Dr. Sturm, *Zeitschrift für Medicin*, by Küchenmeister, 1867, p. 293 *et seq.*; and 1868, p. 241. Trousseau's *Clinique de l'Hôtel-Dieu*, ed. ii, vol. iii, pp. 380, 381. *Archives Générales de Médecine*, 1856, p. 307. Schmidt's *Jahrbücher der Medicin*, vol. 133, p. 62. Dr. Flemming of Dresden enters into a minute comparison of the different methods of utilising heat as a therapeutic agent.

Aberdeen Place, St. John's Wood.

REPORT OF A SUCCESSFUL CASE OF OVARIOTOMY.

By GEORGE ASHDOWN, M.R.C.S.,
Surgeon to the General Infirmary, Northampton.

Miss A., a delicate young lady, aged 21, of short stature and fair complexion, enjoyed moderately good health until the spring of 1871, when she first began to notice an enlargement of the abdomen. In November of the same year, her general health began to fail; and she consulted me at the close of the following December. I found her very weak and feeble, much emaciated, with considerable abdominal swelling. I diagnosed right ovarian dropsy, and advised one tapping, to ascertain the connexions of the sac, and to allow her health to improve, the stomach being able to retain very little nourishment.

On January 2nd, 1872, I saw her at home with her usual medical attendant, Mr. Williams, of Olney, and removed eight pints of gelatiniform fluid. No bad symptoms followed; her appetite returned, and she gradually acquired strength, so that on March 14th her health was sufficiently improved to justify the operation of ovariotomy, which I performed, assisted by Mr. Williams, in the following manner. The patient was placed deeply under chloroform by Mr. Cogan. I then made an incision, six inches in length, below the umbilicus, dividing the abdominal wall on a broad director, and evacuated the fluid, amounting to eight pints and a half. The sac had no adhesions. The pedicle was easily brought into view, and was secured by a double strong carbolised silk ligature. The ends were cut short, and it was returned to its normal position. The opposite ovary was found healthy, and there was no hæmorrhage. The wound was stitched with carbolised catgut ligatures, and carbolic plaster and oil applied, covered with chloralum-wool and a suitable bandage. The pulse and general condition were very favourable; and, before her removal to bed, a morphia suppository (half a grain) was inserted. The temperature of the room was 68 deg., and was maintained at this for some days, taking care that there was a free admission of pure air into the apartment. Vomiting came on during the night, without pain, and was checked by hydrocyanic acid.

The temperature on the following day rose to 104.5 deg., and the pulse to 168, causing us some anxiety. On the 16th, the pulse fell to 132; temperature to 100. She gradually recovered from this date; and, on the 30th of March, she was in good health.

The catheter was used for the first few days, and the most absolute rest enjoined. The weight of the cyst was fourteen ounces. There were five smaller cysts embedded in the walls of the primary one. The catamenia appeared five weeks after the operation, and her general health was excellent.

CLINICAL MEMORANDA.

ON THE INFLUENCE OF LIME IN DRINKING-WATER ON THE PRODUCTION OF STONE IN THE BLADDER.

In the Journal of September 28th, Dr. Murray, of Newcastle, attributes the frequency of calculous disorders in Northumberland and Durham, with a host of other dire disorders, to the use of drinking-water containing lime and magnesia. On this theory, it seems to me that it would be very difficult to explain the almost complete immunity from stone in the bladder enjoyed in this neighbourhood (near Frome). We have in this district a great variety of strata, most of them calcareous—*e.g.*, chalk, lower oolite, and mountain-limestone; and the drinking-water (obtained from wells and springs) is, therefore, almost always very hard; yet stone in the bladder is a disease all but unknown. I have inquired of all my medical friends in Frome, several of whom have practised in the neighbourhood for thirty years, and I can hear of only a single case. Cases of renal calculus and nephritic colic occasionally occur; and I have tested calculi of uric acid and of oxalate of lime that have been passed. The uric acid diathesis is also sometimes seen; but I never saw a case of phosphatic deposit, except in connection with inflammation of the bladder. In the colliery district of Somerset, calculus seems more common; Dr. Waugh, of Midsomer Norton, tells me that he has seen three cases in the course of eight years. I am not able, however, to state whether the water in that neighbourhood is hard or not. It may be that the combination of lime with magnesia is more prejudicial than lime alone. I find, however, that magnesia is present in the calcareous deposit that forms in kettles here. Beer and cider are here the usual drinks of adult men. Dr. Murray says nothing about any other beverage than water. Are we to infer that this is the usual bevcrage in the North? Cases of goître are sometimes met with here. I have found them improve under the use of iron. It appears to me important, for several reasons, that water, otherwise pure, should not be condemned merely on account of its hardness, especially as we know that lime is an important constituent of the human body.

H. Franklin Parsons, M.D., Beckington, Somerset.

THERAPEUTIC MEMORANDA.

GALVANO-EMESIS.

A few days since, some children were brought to my house, having eaten poisonous fungi. Two of them were in a state of collapse, almost pulseless, unable to swallow, with the jaws set, and frothing at the mouth. None of them had vomited. One of them was apparently dying; and I was preparing to try to assist failing respiration by galvanism, when the thought struck me that, if I could by the same means excite contraction of the stomach, vomiting would probably ensue. I therefore passed one of the poles by a suitable conductor to the top of the œsophagus, and applied the other by a wet sponge to the epigastrium, using the interrupted current. Vomiting was immediately produced in both cases, and a quantity of the fungus was rejected. The children are now well. I am not aware that what I may call "galvano-emesis" has been before made use of, but should think, from the success which attended my first trial of it, that it will prove a valuable agent in similar cases. I omitted to mention that the children were insensible to the vapour of the strong liquor ammoniæ; it could not, therefore, have been the mechanical irritation which caused the vomiting.

Charles Fox, M.D.

Birmingham, September 1872.

TRAUMATIC TETANUS TREATED WITH HYDRATE OF CHLORAL: RECOVERY.

R. R., aged 19, fell with his left knee under the wheel of a heavily laden waggon (about three tons). I was called to him November 20th, 1871, at 11 P.M., and found extensive laceration of the soft parts, extending from the inner side of the middle third of the thigh across to the outside of and far below the knee, crushing open the knee-joint, and exposing the articular surface of the outer tuberosity of the tibia. There was no bleeding when he was first seen by me, though his friends said he had lost a great deal of blood at the time of the accident. The wound having been well sponged to remove dirt and grit, was brought together with sutures and strapping, the leg was put on a back-splint, and carbolic acid lotion constantly applied by means of wetted lint. Two grains of opium were given internally. On November 21st, he had slept fairly well. The pain was not so severe as expected. On the 23rd, extensive suppuration had set in; large quantities of most offensive, green, frothy purulent matter swelling up from the joint. A large piece of integument in front of the thigh being dead and black, the sutures were removed. The patient now suffered intense pain, which was relieved to some extent, and sleep at night procured by opium. Up to December 12th, the case progressed well; but now tetanus set in, fixing the jaw, extending down the neck, back, round the chest and abdomen, rendering micturition most painful and difficult, with frequent spasm. Hydrate of chloral in fifteen-grain doses was ordered to be taken every two hours. The second dose produced two hours' sleep; the same effect followed each dose, the patient awaking every two hours almost to the minute. Port wine and beef-tea were given with each dose of chloral.

December 13th.—He had slept well, with the exception of the periodical wakings during the night, remaining awake but a few seconds each time. Spasms continued frequently during sleep, but were less severe. On being roused, he could open his mouth and protrude his tongue.

December 23rd.—Opisthotonos was severe for the first time. The spasms were very frequent. He still slept from dose to dose of chloral. He now was attacked with measles.

January 7th, 1872.—The measles ran a severe course. The tetanic spasms were much less frequent and severe. He took nourishment well, and could masticate. He was said to have passed the night without a spasm. The tongue had cleaned, and could be easily protruded. He was ordered to take the chloral every four hours. From this time the dose was gradually decreased, with no return of tetanus.

September 20th.—The wound had now entirely healed. There is a movable joint; the patient can walk without a stick, with but slight lameness. J. F. LOVEGROVE, M.R.C.S., Ightham.

IS HERNIA CURABLE?

IN answer to a "Metropolitan Surgeon" respecting the curability of hernia by truss-pressure, I will briefly relate the particulars of three cases which have come under my own obervation in my practice. The last two I have carefully examined since the above question was asked in the JOURNAL, and find them as described below. The inguinal canal does not seem obliterated, but the pillars of the internal ring are possibly bound down by chronic inflammation.

I. W. S., aged 60, a farm-labourer, observed a right inguinal hernia nine years since (his brother and sister likewise had hernia). He wore a truss four years; when, feeling the inconvenience of the pressure, and chafing during the first few days of harvest, he ventured to throw it on one side and work without it. The hernia on that side has never returned; but, a year since, after being confined to the house with rheumatism six weeks, he found himself ruptured on the left side. Up to this date, the right side has remained perfectly sound.

II. J. B., aged 24, a farm-labourer, suffered from right inguinal hernia when fourteen years of age. After wearing a single truss two years, he was also ruptured on the left side, and had to wear a double truss. Three years ago, not seeing anything of the hernia, he left off wearing the truss, and both sides are now perfectly well and strong.

III. J. P., aged 40, a small farmer, had left inguinal hernia when aged 15 or 16. He neglected to attend to it, and it soon became scrotal. From that time, he continued to wear a truss until two years since, when, feeling stronger, he left it off, and, although habitually taking much active exercise, has never hitherto had occasion to resume it.

I will add here I believe the cure of hernia would be more frequent if the patient would undertake to invariably apply the truss before getting into an upright position, which I am sure many neglect to do. The spring, also, should be so constructed as to cause the pad to press well downwards as well as inwards.

CHARLES SPRIGGE, M.D., Great Barford.

IS HERNIA CURABLE?

ABOUT twenty years ago, a son of mine, then four years of age, was playing in the hay field. On lifting with a fork a pitch of hay he suddenly began to cry, was taken up and carried to bed. On my return home, the boy was still crying and complaining of pain in the right groin. On examination, a tumour was discovered about the size of a walnut, tense and very tender. I immediately put him under the influence of ether, and succeeded in returning the bowel. A truss was worn for two years; and, although he has since taken the strongest exercise in boating during his residence at Cambridge, and in cricketing also, the hernia has never returned.

I may place on record the radical cure of hernia by a blow, causing (presumed) rupture of the intestine and abscess.

H. C., aged 50, an agricultural labourer, had suffered for years from a reducible inguinal hernia, on the right side, for which he occasionally wore a truss, but was very careless about it. On the day in question, he omitted to put on his truss, and the hernia, of large size, "was down," as he expressed it. He was lifting a large heavy basket on to the tail of a cart, when the basket slipped and the sharp rim of its bottom fell with great force on the hernia. The man fell down, and was removed to his cottage. On my visit I found him almost pulseless, pale, and sick, complaining of great pain over the lower part of the abdomen and right inguinal region. Here there were marks of bruises, but the inguinal canal was quite free. By application of warmth and stimulants reaction came on, and he passed a tolerably comfortable night. The next day peritonitis set in, and, after two or three days, a defined hardness occupied the space between the umbilicus, right iliac fossa, and inguinal region. Opium was freely administered; the bowels had not acted, and the case was considered hopeless; the tongue and teeth were covered with a dark fur; pulse 130, and feeble; and hiccup was showing itself. On the sixth day, some sanious fluid passed the bowels, followed in the evening by a copious discharge of fœtid pus. This continued for a week, attended by an amelioration of all the symptoms, and the man is at the present time hearty and well. He has had no return of hernia, and all that can be felt in the groin is some hardness and thickening of the structures there. The injury happened ten years ago, and the man has mown corn and grass every year since, without inconvenience.

L. OWEN FOX, M.D., F.R.C.S., Broughton, Winchester.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. MARY's HOSPITAL.

CASES OF HEART-DISEASE: WITH REMARKS.

(Under the care of Dr. BROADBENT.)

THE following cases of heart-disease were in the hospital under Dr. Broadbent at the same time, affording an excellent opportunity for demonstrating the differential diagnosis of the various valular affections, and for pointing out prognostic indications. Dr. Broadbent habitually insists that no complete diagnosis has been made, when it has simply been ascertained that obstruction exists or regurgitation occurs at this or that valve. It is essential that an approximate estimate should be formed of the degree of obstruction or amount of regurgitation, of the existing derangement of the circulation, and of the reserve power still possessed by the heart to meet the contingencies of exertion, pulmonary complications from cold, or other strain. It is on this account that the changes in the walls and cavities of the heart are of great moment, and an estimation of them of much importance. Speaking generally, but subject to many qualifications and exceptions, the greater the dilatation and hypertrophy, the more serious the disease; but it is not exact to say, as is often said, that the danger arises from these changes, any more than that the weathercock determines the direction of the wind. Valvular lesions would be more quickly fatal, but for the dilatation and hypertrophy consequent upon and compensatory of them. A dilated ventricle can send forward an adequate amount of blood in addition to that which an imperfect valve allows to pass backward, and is thus compensatory, as well as the hypertrophied wall which overcomes obstruction. Supposing, then, by the compensating operation of dilatation and hypertrophy, functional equilibrium to be established for ordinary purposes, the degree of these changes necessary for the end will measure the degree of valvular imperfection, and thus be an indication without being the cause of the danger. Of course, dilatation from degeneration of muscular fibre, or spurious hypertrophy from excess of connective tissue, may complicate valvular disease; and this may have to be borne in mind, but usually calculations have to be made independently of these contingencies. It is well, therefore, before applying the stethoscope, to ascertain the area of dulness and the position of the apex-beat, so as to form an opinion as to the size of the heart, and as to the seat of any alterations, enlargement of the right ventricle carrying the apex to the left downwards. The force and character of the impulse should be noted, since from this may usually be gathered some indication of the condition of the walls and of the nature of any change in them. It is scarcely necessary to say that the pulse should also be carefully studied. Its diagnostic import is sometimes more definite than that to be obtained from the physical signs of change in the heart; and, even diagnostically, the evidence it affords may outweigh that derived from auscultation. For example, in a case now under observation, a loud systolic murmur was heard at and around the apex of the heart, indicating, of course, mitral regurgitation. No other murmur was audible while the patient was in bed, except in the neck; but the pulse was regular, full, and strikingly collapsing in character, visible and audible—the pulse, that is, of aortic regurgitation. The position of the apex-beat and the character of the impulse, together with the absence of the second sound in the neck, corroborating the indication of the pulse, no doubt was entertained that insufficiency of the aortic valves was the predominant condition; and, when the patient was able to walk about, direct evidence of this presented itself in a diastolic murmur along the left edge of the sternum. In another case of more complicated character, also under observation, the murmur, taken alone, would point to aortic disease; but other signs lead to the conclusion that the serious mischief is mitral.

CASE I.—*Pericarditis and Pleurisy, with General Symptoms of Acute Rheumatism, but no Joint-Affection, in a Case of pre-existing Aortic Regurgitation: Recovery,*—W. B., aged 20, a footman, well grown and muscular, was admitted on December 7th, 1871. He had had acute rheumatism three years before, but had been well since, and had had no symptoms of heart-disease. Two days before his admission, after exposure to cold, he had pains in his chest and limbs, and was unable to do his work. On admission, the general pains had subsided, and his joints were free from rheumatic inflammation. The pain in the chest continued. His face was pale, and the expression rather anxious. The general symptoms were those of mild rheumatic fever. Pulse col-

lapsing, visible and audible, 90. The heart-region was full, and the area of dulness increased; the impulse heaving and extensive; the apex-beat was felt in the vertical nipple-line, about an inch below the nipple. Over the aorta was heard a distinct double murmur, systolic, louder from the midsternum upwards and to the right, diastolic, louder downwards and to the left. At the apex was a faint double murmur (probably conducted from the aorta). About two finger-breadths to the left of the lower part of the sternum, a slight to-and-fro brush was heard, especially on pressure. It was concluded, from the effect on the heart-walls and pulse, that the aortic regurgitation was of some standing, and that apparently pericarditis was setting in. The latter conjecture was speedily confirmed; for a few hours later, at 6.30 P.M., a loud to-and-fro friction-sound was heard over the whole heart, masking the murmurs completely; it was loudest an inch to the inner side and a little below the level of the nipple. Six leeches were applied, followed by poultice. Twenty grains of citrate of potass and thirty minims of spirit of nitrous ether were given every four hours.

December 15th. He was relieved by the leeches. The face was slightly flushed, anxious; pulse 90, but with the characters noted above; respirations 30 to 40; temperature 100 deg. The cardiac dulness was bounded above by the third left cartilage, to the left by the nipple-line, and extended an inch to the right of the lower sternum; the apex-beat an inch and a half below the nipple in the fifth space. Friction-sound was extremely loud over the body of the ventricle at the level of the nipple, diminishing suddenly above this line, scarcely audible in the left third intercostal space, inaudible in the second space; it was heard distinctly in the epigastrium. Systolic and diastolic aortic murmurs were distinguishable in the neck, where, on the other hand, there was no second sound. Later, there was evidence of slight effusion into the pericardium in increased dulness to the right of the lower part of the sternum and in the second and third spaces to the left of this bone. There was a change also in the seat of friction, which, while still audible over the body of the heart, was most rough in the second and third left spaces; and in the third space, close to the edge of the sternum on each side, it had a peculiar triple or broken character, reminding one of the sound of weaving, due probably to auricular friction.

December 20th. He felt better; but, while the pericardial friction, though general, was less rough, pleuritic friction was audible over a great part of the left chest, most marked in the neighbourhood of the pericardium. To the friction succeeded effusion, which occasioned great distress till a blister was applied with most striking effect by Dr. Cheadle, who had charge of my patients during Dr. Broadbent's absence for a short time.

January 3rd, 1872. There were still dulness and imperfect entry of air at the lower part of the left lung; and now all the signs of extensive effusion into the right pleural cavity were present. There was no pericardial friction. A blister was applied over the right side.

January 8th. He was much better; slight deficiency of resonance posteriorly, and imperfect entry of air into the lower part of the lungs, being the only evidence of pulmonary complications. The cardiac dulness no longer extended to the right of the lower sternum. The apex-beat was forcible in the fifth space, two inches below and to the left of the nipple. There was no great impulse between the nipple and the sternum. A systolic murmur was audible at and to the left of the apex, and nearly lost between the apex and the lower part of the sternum, where a faint and doubtful diastolic murmur was heard. There was double murmur at the right second space, both lost a little lower down. A systolic murmur was heard in the neck, and no second sound. The pulse was markedly collapsing in character.

From this time the improvement was uninterrupted, and he left the hospital on February 9th, the only change in the physical signs being a greatly increased intensity of the aortic murmur when he was up and walking about the ward. He came to the hospital on April 20th, after being in the country, looking very well, in good muscular condition, and with good colour. The heart's impulse was heaving and powerful; the apex beat in the fifth space an inch to the left of the nipple, and rather above the usual situation; regurgitant aortic murmur and collapsing pulse were very marked.

In this case, the character of the pulse was much more significant of the aortic regurgitation than the murmur, especially when the latter was more or less masked by the pericardial friction, and diminished in intensity by long lying in bed. The absence of an aortic second sound in the neck was also an important element. The prognosis, notwithstanding the excellent appearance of the young man on his return from the country, is doubtful, and is to be considered more grave than if his history had been less perfectly known. Apparently, compensation for the valvular insufficiency had been reached with a moderate degrec of hypertrophy; but probably adhesion of the pericardium had been superadded to the aortic disease, which, while it rendered the hypertrophy less conspicuous, constituted an additional impediment to the heart's action, and would be a serious source of embarrassment when any stress was put upon the heart.

CASE II. *Disease in three Valves of the Heart, Aortic, Mitral, and Tricuspid: Contracted Granular Kidney: Congestion of Liver: Dropsy appearing very late: Death.*—Chas. J., aged 30, a hawker, was admitted on December 30th, 1871. He had had rheumatic fever four times, first when very young, last six or seven years before, since which he had suffered from "rheumatic gout". He was under Dr. Broadbent as an out-patient in March 1871, though this was not known till notes of his case were found after his death. He had then bronchopneumonia, with mitral and aortic disease, and obtained speedy relief from the following draught, taken every four hours: ℞ Ammoniæ carbon. gr. v; spirit. chloroform. ♏xv; tincturæ hyoscyami ♏xv; infusi digitalis ℥ss. When he entered the hospital, he had been ill three weeks, after exposure to cold, and was complaining of cough, shortness of breath, and pain in the chest. His face was flushed; he had a deep red patch on each cheek; no expression of anxiety; eyes bright; voice remarkably good; the pulse scarcely perceptible, extremely irregular, many beats not reaching the wrist at all; respirations 48. The cough was violent, with no expectoration. He was unable to lie down. The heart's action was frequent, about 104; the impulse consisted in a general heave of the cardiac region; the apex-beat was not powerful, but was felt along the fifth space for some distance to the left of the nipple and an inch and a half below. The area of dulness was large, from the third rib down the outer side of the nipple. Over the entire cardiac region was heard a croaking sound with the systole, most intense near the apex, modified by the respiratory movements; also a smooth systolic murmur at and to the left of the apex. The lungs were resonant anteriorly on both sides; but there was imperfect entry of air into the left, and bronchial coo. Posteriorly, there was dulness below the angle of the right scapula, and a patch of dulness in the left infraspinous region, where also fine crepitation, bronchial breathing, and bronchophony, were heard. The liver was enormously enlarged, and very tender to the touch; the lower edge was at the level of the umbilicus, and extended across the entire epigastrium. The abdomen was full and tense.

The interpretation put on these signs was, that the right side of the heart was so distended as to be unable to drive the blood through the lungs into the left ventricle in adequate quantity, and, indeed, too weak to cause any great amount of pulmonary apoplexy. Venesection is usually the most prompt and efficient remedy for this condition, and is not contraindicated even by pulselessness; but, as there was here aortic as as well as mitral disease, and the severe symptoms had been present for three weeks at least, it was not considered prudent to resort to it. Twelve leeches, however, were applied over the liver, and followed by poultices. Ammonia and senega, which had been already ordered, were continued; and the pill of mercury, digitalis, and squill, was given three times a day.

The patient experienced considerable relief; the liver diminished in size, the spleen remaining large. The breathing was less hurried, and the lungs more free. The peculiar sound heard over the heart disappeared, and a systolic mitral and systolic aortic murmur became distinguishable, as well by the difference in pitch and character as by the situations in which they were heard. The temperature stood at 98 deg. The pulse varied both in frequency and in force, but only became distinct on January 13th, when also, in addition to a soft smooth murmur at and to the left of the apex, a louder and coarser murmur was heard between the apex and the sternum, and upwards as far as the third left space.

January 17th. Pulse 100, weak, small, varying. The apex of the heart beat in the fifth space, an inch below the nipple, not far from its normal situation; the impulse was not excessive. Three distinct murmurs were made out, all systolic in time, mitral at and to the tip of the apex, diminishing in intensity on passing inwards, replaced near and over the lower part of the sternum by a murmur of different character, considered to be probably tricuspid in origin; while an aortic murmur was heard from the right second space along the vessels in the neck. The liver was smaller; the lungs clearer. An ophthalmoscopic examination showed the optic discs to be small, well defined, pale in the centre, with a deep pink ring and pale pink border. The retinal veins were large; the arteries small.

He improved so far as to be able to sit up on the 27th; and from that time till February 14th he walked about the ward. The blue pill and digitalis pills were reduced to two a day on January 10th, and to one on the 20th, iron being now given. While in the standing posture, the mitral murmur was louder than it had been when he was in bed. The tricuspid was graver, and similar to that heard over the aorta and in the neck, but much longer. The pulse was about 70, stronger and

more regular, but still weak and variable; there was a long interval between the heart's impulse and the wrist-pulse. The urine was copious, had a specific gravity of 1020-1025, and did not contain albumen. The liver was scarcely felt below the ribs. It seemed for a time as if he would recover sufficiently to leave the hospital; but, on February 12th, rheumatic pain and swelling of the joints came on, and lasted for two or three days.

February 14th. The liver was again large; the lower edge was midway between the edge of the ribs and the umbilicus. The urine was less abundant. The pulse was very irregular as to frequency, less so as to force, 66 to 84; the apex beat below and to the left of the nipple. The different murmurs were distinguishable; that produced in the aortic valves was louder than before, and was heard over a great part of the right chest, as low down as the fifth rib.

February 17th. The liver reached the umbilicus; the apex beat in the fifth space an inch below and an inch and a half to the left of the nipple. The tricuspid and aortic murmurs were confounded together; the mitral was distinct. His urine was scanty, and contained albumen and bile. The mercury and digitalis pills were resumed, and fifteen minims of tincture of perchloride of iron with half an ounce of infusion of digitalis were given every four hours.

February 18th. Respiration was more embarrassed; the face was flushed, with a sallow yellowish background. The liver was large and tender. The urine was scanty and albuminous. The breath was ammoniacal. The optic discs were small, more deeply pink than usual, very little different in colour from the retina, and not well defined, especially on the outer side, apparently bulging. The retinal arteries and veins had about the same colour, dark, not large. The veins were tortuous. Eight leeches were ordered to be applied over the liver; then poultices. He was greatly relieved for a time, and had no dyspnœa; the liver diminished in size, and was less tender; the heart was less distended; and the pulse improved. The urine, though scanty, contained no bile and very little albumen, specific gravity 1019. The bowels were very loose. The improvement, however, did not last long; and on the 28th all the unfavourable symptoms had returned, with congestion of the bases of both lungs, and vomiting, which in these cases is a symptom of evil omen. Œdema now began to appear in the legs, and fluid to accumulate in the peritoneal cavity.

March 2nd. Ammonia was now given instead of the digitalis and iron, which had failed to check the development of the consequences of the heart-disease; and it seemed to relieve the pulmonary symptoms for a short time, but the further progress was steadily downwards, and the patient died on April 10th.

It was not always easy to distinguish between the tricuspid and the aortic murmurs, especially when the latter was loud; but at times there could be no doubt as to the existence of two separate murmurs in addition to that in the mitral valve, which was always quite distinct, and different both in pitch and character from either of the others.

On *post mortem* examination, the heart was found to be very large, weighing twenty ounces; its cavities were greatly dilated; and the walls, especially of the right ventricle, were hypertrophied. The aortic valves were very much thickened, and of almost cartilaginous hardness, narrowing the orifice greatly, and apparently incompetent to close it. The mitral valves were also thickened and contracted, and the chordæ matted together and shortened. The tricuspid valves were less obviously altered than the others; but the thin free margin of the cusps was thick and shrunken; the chordæ tendineæ were contracted so as to bind down the valves; the orifice was greatly enlarged. There was fluid in the pleural cavity, and condensation and softening of the lungs; not much pulmonary apoplexy. Much fluid was present in the abdomen. The liver was not large; it weighed four pounds and one ounce, and was in an early stage of cirrhosis. The spleen was large, weighing ten ounces. The kidneys were small, firm, red, and contracted.

Remarkable features in this case, in addition to the simultaneous existence of disease in three valves, were the very slight distress evinced by the patient, either in the expression of the features or by way of complaint, when he had no pulse at the wrist, and the respirations were 48 in the minute; and the very late period at which dropsy set in.

[*To be continued.*]

ST. THOMAS'S HOSPITAL.

Operations, Sept. 4.

Excision of Hip-joint for Disease.—The patient was a boy, aged 14. The disease was of twelve months' standing. Mr. Sydney Jones performed the usual operation, except that the diseased portion of femur was sawn off within the wound before disarticulation. The head of the bone was extensively the subject of subarticular caries. The limb was kept in position by a long outside bracketed splint.

Necrosis after Excision.—Mr. Jones removed a portion of necrosed bone after an old excision, where disease had been very considerable.

Varicocele.—Mr. Jones transfixed the veins in two places by pins three-fourths of an inch apart. A figure-of-8 ligature was passed around the pins sufficiently tight to prevent circulation; and the veins included between them were divided subcutaneously.

Non-union after Excision of Elbow.—Excision of the elbow-joint had been performed in this case about three years ago in India. Up to the present time no attempt at union had taken place, and the ends of the bones were somewhat atrophied; the forearm hanging quite loosely like a flail. Mr. Jones exposed the bones by a linear incision; the ends were then sawn off, and the bones approximated and held in position by means of an iron pin passed through the head of the ulna and the lower portion of the humerus. The ends of the pins were then connected by copper wire to keep the bones *in situ*. The arm was placed on a rectangular splint.

Excision of Knee.—The patient was a female aged 24. The disease had been going on for seven years. Mr. Jones incised the joint by the usual incision, and the articular surfaces of the femur, tibia, and patella. Several sequestra were found in the head of the tibia, and the joint was considerably disorganised.

Excision of Elbow.—Mr. Mac Cormac excised the elbow-joint of a boy for disease. The usual linear incision being made, and the soft parts with some difficulty removed from around the joint, the olecranon was sawn off, and the joint opened. Extensive disease both in the head of the ulna and the condyles of the humerus was found and removed. The parts were kept in position by a gutta percha splint at an obtuse angle.

Popliteal Aneurism cured by Digital Compression in Eight Hours.—This case was shown to the students during the afternoon. The patient in this case, who was under the care of Mr. MacCormac, was aged 65, with evident atheromatous disease of his arteries. The tumour was about the size of an orange, and was the result of a sprain seven days before treatment. The compression was kept up by relays of two students every hour. During the operation the patient was kept slightly under the influence of morphia. Signoroni's tourniquet was then applied for twelve hours to modify the circulation.

CANCER HOSPITAL.

Case of Medullary Cancer Cured by the Arsenical Mucilage Treatment.

(Under the care of Dr. Marsden.)

The notes of this case have been furnished by Dr. Crombie, House-Surgeon.

The following is a good example of the kind of cases for which the arsenical mucilage treatment, introduced by Dr. Marsden, is most preferred. The tumour being a medullary cancer of comparatively small size, situated on the exterior of the body, and not penetrating deeply into the tissues at its base, all the conditions as to nature, size, situation, and connections, combined to favour the use of the remedy, and the result was as successful as could be desired.

The tumour grew from the skin over the trapezius muscle near its anterior edge, about midway between the head and shoulder. It was quite circular at its base, with a diameter of nearly an inch, and rose about three-quarters of an inch above the level of the skin at its highest point in the centre—closely resembling, in fact, a large strawberry in size and shape as well as in colour, the whole surface having a red fleshy appearance, cut up by fissures of various depths, and thickly covered by large round granulations. It was so closely encircled by skin, that it overlapped a little at the edges; the skin, however, around the base was not otherwise perceptibly altered except in colour, there being here simply an areola two or three lines in breadth, of a purplish hue, in the direction of which the veins were visibly increased and enlarged. It bled on the slightest touch, and, being extremely sensitive, was the source of constant pain. The history of the case showed that, about three years before, a small tumour appeared at the site of the present one, and, on being lanced, discharged blood freely. It continued to bleed more or less occasionally until the wound closed, when, in consequence of its increase and the pain arising from it, it was excised; soon afterwards it reformed, and was again excised, but still kept on growing; and, at the time of the patient's admission into the hospital, on February 22nd, 1872, presented the characters described. The patient was a moderately healthy woman, 42 years of age.

As the patient was in tolerably good health, there was no occasion for delay on that ground; and accordingly, on February 23d, the arsenical paste (consisting of arsenious acid and mucilage of acacia, in the proportion of two drachms of the acid to one drachm of the mucilage,

made into a thick paste) was laid over the whole surface of the tumour, and covered with cuttings of lint in the usual way. In three days, the diseased mass was quite movable, and a sulcus lay between it and the skin, leaving it attached only at a small portion of the base. Bread-and-water poultices were then applied and changed every three or four hours; and on the fourth day (February 27th) the whole mass came away in a lump, leaving in place of the tumour a conical cavity with slightly indurated edges. The wound was poulticed in the same way as before for a few days, and then dressed with weak spirit lotion. Healthy granulations sprung up over the whole surface of the cavity, and by the 23rd of March its size was reduced to about a third, and the induration of the edges was much less. On April 9th, the wound was quite healed, the induration had entirely disappeared, and the only indication of the former disease left was the cicatrix and an increased vascularity in the skin around it. The patient remains quite well up to the present date (October 8th).

Another case with a tumour, as near as possible in resemblance to the above, situated on the chest near the middle line immediately above the breast, is at present in the hospital under the care of Mr. Porter, for which the same method of treatment is being employed. This patient is a feeble old woman, 70 years of age, and has had the paste twice applied; the first application, although it appeared to remove the whole of the disease, being followed by a slight return of the growth when the wound was nearly healed. It is now, after the second application, progressing favourably, without any symptom of a return of the disease. Dr. Crombie remarks that, during his residence at the hospital, he has seen other cases of recovery by this treatment continuing well at considerable intervals afterwards, although in one instance the disease removed from the cheek had appeared on the tongue about three years afterwards.

LONDON HOSPITAL.

THE TREATMENT OF PHAGEDÆNIC CHANCRES BY CONTINUOUS IRRIGATION.

By JONATHAN HUTCHINSON, F.R.C.S., Senior Surgeon to the Hospital.

IN the treatment of phagedænic chancres, Mr. Hutchinson has for some time, with very good success, used the continuous bath. The patient is ordered to sit in a hip-bath with tepid water for the greater part of the twenty-four hours, a few hours being allowed for sleep. The water is changed as often as it becomes uncomfortably cool. This treatment is kept up until all phagedænic action ceases, and the sore shows a perfectly healthy surface. It may or may not be necessary to apply fuming nitric acid to the sore in addition to the bath, but in some cases the cleansing action of the water alone is quite enough. Mr. Hutchinson attaches great importance to a frequent change of the water in contact with the sore, and lately he has directed the patient to keep a continual stream of water from an irrigating apparatus playing on the ulcerated surface while in the hip-bath. By this means, every particle of contagious phagedænic discharge is removed as soon as it is secreted, and the formation of a healthy surface is much accelerated.

In a case lately under care, the patient, a man aged 40, was admitted with a chancre which had probably existed about a month, and been phagedænic for about ten days. It was a very large sore ($2\frac{1}{2}$ inches by $1\frac{1}{2}$), situated on the upper surface of the prepuce; its base was ashy, its edges overhanging, and a large slough was attached to part of its surface. It was evidently spreading fast. The patient was put into the continuous bath, with orders to keep a jet of water from the nozzle of an irrigator constantly playing over the sore. After a little more than three days (eighty hours) of this treatment, without any other local application, all trace of sloughy discharge had ceased, the ulcer showed a healthy surface and had begun to heal at the edges. Its after-course was equally satisfactory, and he left the hospital twelve days after admission, quite cured as regards the chancre.

ST. BARTHOLOMEW'S HOSPITAL.

ANEURISM OF THE LEFT FEMORAL ARTERY: PRESSURE ON THE EXTERNAL ILIAC ARTERY: DEATH: CLINICAL REMARKS BY MR. SAVORY.

R. H., aged 73, an organ-builder by trade, was admitted into the Abernethy Ward, on June 18th, with aneurism of the left femoral artery. For the last twelve months he had suffered from occasional œdema of the left leg; but four months ago, while running to catch a train, he felt a sharp pricking pain in the left groin, which was in a short time followed by a pulsating swelling. Twenty years ago, he had an abscess in the left groin, but he had not noticed any mischief in this part since. Eight weeks before admission, he was subjected to treatment in the country, a tourniquet having been applied above the aneurism for an hour at a time. After this, a seven-pound weight was applied over the swelling for four or five hours at a time; then a four-pound weight was applied; but, although this treatment reduced the size of the tumour considerably, it failed to cure the aneurism.

On admission, he was well nourished, and apparently healthy; the cardiac sounds were normal, and, although the radial and temporal arteries were somewhat tortuous, there was no evidence of marked disease of the blood-vessels. There was, however, a well marked double arcus senilis. In the left groin was a tumour about the size of an orange, situated for the most part below Poupart's ligament, about one-fourth only extending above that line. On palpation, a strong expansile pulsation and a well marked thrill were felt; a murmur was also heard on auscultation. When pressure was applied to the left external iliac artery, the tumour diminished very much; but on removal of the pressure, pulsation and expansion recommenced. It was decided that the left external iliac should be ligatured, as all the conditions seemed favourable, the textures being healthy and the man having a good family history; one brother over eighty years of age being alive and well. But on the day before that for which the operation was fixed, the patient was found to have caught a cold, and to be complaining of some rheumatic pains in the limbs. The operation was, therefore, deferred. It was urged that in the meantime compression should be tried, and, in the event of that failing, ligature might be done. Accordingly, on June 26th, at 2.30 P.M., a Signoroni's tourniquet was applied to the external iliac artery, and compression by this means was kept up more or less constantly for four hours; but, on account of the patient complaining of great pain, the tourniquet was removed. Digital compression was then at once applied, and kept up for about nineteen hours, when all compression was discontinued, having been kept up altogether for twenty-three hours. For some time after this the patient took nourishment freely and slept well. On June 28th, the tumour was much harder and the pulsation very feeble, but the thrill remained. On June 29th, the tumour was more diffused, especially towards the outer part, where the skin was slightly œdematous and dusky. The patient, however, took his food and slept well during this and the following day. On July 1st, the pulse was quick, and the patient complained of pain under the left nipple; here friction-sounds and *rales* were heard, yet the area of pulsation was not increased in the aneurism; the thrill, however, was well marked. On the next day the pulsation had almost ceased, but still the thrill was present. On July 3rd, the patient slept well after a hypodermic injection of morphia. There were numerous *rales* to be heard in the chest. The left leg began to swell, but all pulsation in the sac had ceased; the thrill, however, being distinct. He still took plenty of nourishment: but from this time he gradually sank, and died in the evening of the 5th, the pulsation in the sac having entirely ceased for forty-eight hours before death.

Post Mortem Examination.—There were signs of pleurisy in the left side; both lungs were congested at the bases; there were large firm coagula in the pulmonary arteries. The aneurism formed a tumour of the size of a large lemon, the greater part of which was situated below Poupart's liagament. Some sero-purulent fluid was found in the tissues external to the sac, but there had been no leakage of blood. At the posterior part was a large oval orifice leading into an oval sac. All the coats of the vessel were traceable for an inch or so on the walls, but were then lost; the remaining part of the wall of the sac being made up of the condensed surrounding tissues. The aneurism was therefore of the mixed variety, part of its walls being made up of the coats of the vessel and part of the surrounding tissue. One-third of the sac was covered with a layer of laminated fibrine; there was also a large quantity of loose fresh coagulum. The femoral vein opposite and below the tumour was much thickened in its coats, and in the interior was some clot which had undoubtedly existed some time before death.

REMARKS.—Mr. Savory, in speaking of this case, said that aneurism of the arteries of the limb was not very common, and certainly very uncommon at the age of the patient; partly because there were not many persons living at this age, but chiefly because if the arteries were diseased the larger vessels, as the aorta, were more likely to be affected than the smaller ones. In this case there was a remarkable thrill which is sometimes found in aneurism; but here it is especially interesting, as in a previous case it had been conjectured by Mr. Savory and Dr. Andrew that when the thrill was present the aneurism sprang from the posterior part of the artery, the anterior part remaining sound, so that the channel of the artery was between the palpating hand and the aneurism. The same conjecture was made in this case; and, after death, it was found that the aneurism actually did spring from the

posterior part of the vessel. This, then, proves, as far as one examination can, that this conjecture of the mechanism of the thrill is correct. This case further teaches that the treatment of aneurism by pressure is not the safe and simple proceeding that it is sometimes stated to be. It is, however, difficult to weigh the respective merits of ligature *versus* pressure. There are no very definite surgical principles to guide in the choice of treatment in any individual case; some surgeons trusting solely to ligature, and others as warmly advocating the exclusive application of pressure. It is best to avoid either extreme. With the London surgeons, pressure is not in such favour as it formerly was. Mr. Savory is not an advocate of pressure as opposed to ligature. It has been said that if pressure do no good, it will do no harm; but this case shows, as others have shown, that this statement ought to be received with some reserve. By this it is not implied that ligature of the artery would have saved this patient: it probably would not, as old people have not sufficient "constitutional capital", as it were, to stand the shock of an operation, although they may easily bear up against the wear and tear of an ordinary quiet life. The patient sank under a mode of treatment which was sufficient under ordinary circumstances to cure the disease, and which did cure it.

Although there was not much local mischief, yet what there was may have been due to the application of pressure so near to the diseased part of the vessel, which in such cases often gives rise to inflammation and suppuration of the sac or surrounding tissues. It is a very different thing when pressure is applied to a healthy part of the artery at a distance from the aneurism.

LEEDS GENERAL INFIRMARY.

BRONCHOCELE GIVING RISE TO DYSPNŒA; TRACHEOTOMY; SUBSEQUENT DEATH FROM PHTHISIS; TRACHEA COMPRESSED BY THE ENLARGED THYROID BODY.

(Under the care of Mr. JESSOP.)

KATE S., aged 14, was admitted into the Leeds Infirmary, on April 18th, 1872. She was in good health up to two years ago, when she began to have occasional attacks of difficult breathing, especially after violent exercise; and on stooping, besides dyspnœa, she suffered from pains in the neck, and her face became livid. From the first she had been unable to lie with her head low, for fear of suffocation. Six months after the commencement of these symptoms a little fulness of the neck was observed on both sides of the mesial line, and at the same time the difficulty of breathing increased. Anything tight around the neck brought on both pain and dyspnœa. Her eyes had been prominent for the last two years, and especially during severe attacks; but she had had no palpitation of the heart. Her grandfather and grandmother on the father's side died of phthisis. Her maternal grandmother had an enlargement in the neck when she was young, which passed away after several years without causing much inconvenience. Her mother also had a swelling in the neck at the age of fifteen, which caused a little dyspnœa, but gave no pain, and disappeared at the age of twenty-two. In November, 1871, the swelling was painted with tincture of iodine, and thereby, she thought, made larger. In February, 1872, having caught cold, she became much worse, was unable to lie down even for a moment, and for three weeks was watched by her relations night and day on account of impending suffocation.

On admission into the hospital an elastic, smooth, non-fluctuating swelling was situated in front and at the sides of the trachea and larynx, that part of the tumour on the right side being larger than that on the left, to which it was connected by means of a transverse portion, about an inch and a half broad, placed below the level of the cricoid cartillage, and in front of the four or five upper rings of trachea. The circumference of the neck, taken over the centre of the thyroid body, measured fifteen inches. She had a troublesome brassy cough, and frequent severe attacks of dyspnœa compelled her to maintain the erect position. Deglutition and speech were but slightly affected.

It was intended, on taking her into the hospital, to perform tracheotomy at once, that operation having been permanently successful in a case precisely similar to this one, treated at the Leeds Infirmary in the year 1862; but a few days were allowed to pass over for the purpose of ascertaining the effect of complete rest. In the meantime, bromide of potassium and belladonna were given. The attacks were neither less frequent nor of diminished severity.

On May 2nd, the trachea was cut down upon below the enlarged isthmus, and at considerable depth the cartilaginous rings were found narrowed, so as to present a surface not larger than that of an ordinary goose-quill. When opened, some difficulty was experienced in the introduction of a tube into the trachea. A good recovery was made after the operation, and the thyroid body gradually diminished in size. On May 22nd, the neck measured thirteen and a half inches in circumference; on the 29th, thirteen inches; and, on June 15th, when she was made an out-patient, it appeared to be but very slightly larger than natural. On stopping the orifice of the tube, she could breathe freely through the larynx.

After she left the Infirmary, the tube became dislodged, and, when seen on July 3rd, she was breathing easily through the larynx. The cannula was allowed to remain in the wound, which was thus kept open, and served the purpose of a seton. In August she was sent into the country for change of air, and whilst there she died quite suddenly from an attack of hæmoptysis.

On the arrival of the body at home, permission was granted for the removal of the affected parts. The wound in the trachea was quite patulous, and must have permitted the free ingress and egress of air. The thyroid body was hypertrophied throughout. The lateral lobes were conical in shape, and each was about the size of a duck's egg, reaching as high as the free margin of the epiglottis and as low as the fifth ring of the trachea. In front they were not very prominent, but posteriorily they extended deeply, and were separated on the bodies of the vertebræ by the width only of the œsophagus. The isthmus was also enlarged and occupied its usual position. On examining the interior of the trachea, its upper rings were seen to be compressed from side to side, leaving only a narrow antero-posterior chink through which air could pass from the larynx. The cricoid and the lower portions of the thyroid cartilage were also compressed, but the glottis and upper parts of the larynx were not interfered with. The goitre was chiefly due to an increase in the areolar tissue, of which the thyroid body was principally composed. To the touch it was hard and unyielding, in appearance yellow and granular, and, on section, tough and fibrous.

A more extended examination could not be made, but the apices of both lungs were solidified from tuberculous deposit.

MANCHESTER ROYAL EYE HOSPITAL.

TRAUMATIC ANIRIDIA AND APHAKIA.*

(Under the care of Dr. SAMELSON.)

WHILST instances of the traumatic extrusion of the crystalline body are observed with comparative frequency, and, more recently, also the loss of the entire iris has several times been noticed as the result of injury, the observation of simultaneous evulsion of the whole of the lens and iris is perhaps sufficiently rare to warrant the publication of the following case.

John Kelly, an Irish labourer, 66 years old, when chopping wood on June 28th last, received a blow by a piece of the timber on his right eye. When he presented himself, the day after, at the Manchester Royal Eye Hospital, the sclerotic was found to have been ruptured all round the inner limbus of the cornea; the membranes were protruding; there was hæmophthalmus, and the perception of light was extinct.

Eleven years before, the left eye had, under quite similar circumstances, likewise been struck by a piece of wood, and, on that occasion, the nature and direction of the blow must have been such as to cause the escape of the lens and the iris from the eye. A narrow greyish line of about a third of an inch in length, just above the limbus corneæ, marks the place where the rupture of the sclera must have occurred. The whole corneal area of the eye presents an aspect of unrelieved dullish blackness. In the situation of the lower ciliary margin of the iris, there is a faint trace of a serrated darkish seam, apparently a memento of the iris. Of the ciliary processes no vestige can be discovered. The ophthalmoscope shows the optic papilla of somewhat deadly white appearance, the retinal vessels much attenuated, a very scanty provision of choroidal pigment, and, at the same time, the existence of extreme hypermetropia. The catoptric test confirms the absence of the lens. The observer's unassisted eye, following the rays of the candle-light almost in their own direction into the iris and lensless space, perceives with great distinctness the optic disc, the retinal vessels, the whole detail of the fundus. The patient, with +2, reads No. 1 Jaeger, whilst his acuity of vision with +3 is 2-5. The field of vision is normal, and of very considerable extent. Provided with reversible broad-rimmed lenses of about four lines diameter, and respectively two and three inches focus, the patient, thanks to the reinstatement of his left eye, is not very much the worse for the loss of the right.

Mr. Dixon, according to his reference in Holmes's *System of Surgery*, appears to have observed two cases of a similar nature, the first of which, as recorded in the first edition of his *Diseases of the Eye*, seems to have been very much like the one here described. In the

* Presented at the Ophthalmic Congress in London.

September number of the *Klinische Monatsblätter f. Augenheilkunde*, M. Galezowski is said to have stated at the Ophthalmological Congress that he also met with two cases of the kind.

COLUMN FOR THE CURIOUS.

BUXTON WATERS.—The following fact, which can be well authenticated, may serve as an illustration of the paragraphs on August 31st and September 7th. Some years ago, a Mr. and Mrs. C., of R., who had been married several years without any prospect of a family, came to Buxton, and went through the usual course of bathing and drinking the waters. In the following winter, Mrs. C. gave birth to a daughter. They were absent several years, and had no increase, when they again came to Buxton. This visit was followed by another daughter in the March following. There was another space of three years without an event, when they came again. The result was a son in the spring of the following year, who, in commemoration, was christened "John Buxton C."—THORNCLIFFE, BUXTON.

TREATMENT OF BITE OF A MAD DOG.—The following very singular entry—singular, at least, in such a book—occurs in the first page of *Heighington Church Book of Accounts, etc.* "Doctor Trowt Becks Receipt for the Bite of a Mad Dog, etc. Take six ounces of Rue clean'd, pick'd and Bruised, four ounces of Garlick, peeled and Bruised, four ounces of Venice Treacle, four ounces of filed Pewter or Scrapt Tinn, boil these in two quarts of the best ale in a pan cover'd close over a gentle fire for the space of one hour, then strain the Ingredients from the Liquor, give eight or nine spoonfuls of it warm to a Man or Woman three Mornings fasting and Cold to any Beast fasting. Eight or nine spoonfuls is sufficient for the strongest. A less quantity to thos younger or of a weaker constitution as you may Judge of their strength. Ten or Twelve spoonfuls to a Horse or Bullock. Three four or five to a Sheep, Hog, or Dog. This must be given within nine days after the Bite. And it never fails if you can conveniently Bind some of the Ingredients upon the Wound. Probatum Est." No name is given by the writer of this precious receipt; but I suppose it, from the handwriting, to have been inserted by W. Armstrong, whose name occurs as "Minnister", about 1720.—R. T. MANSON, Howden.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SANITATION OF WATER-CLOSETS: BAKER'S "UNFAILING" DISINFECTOR.

MEDICAL men are often puzzled how to deal with closets, constructed as many and even most are in modern houses in the interior of the house, and so situated that it is almost impossible to prevent a certain proportion of foul gases from being sucked into the well warmed passages and dwelling-rooms. To meet this almost universal difficulty, we have met with no device so simple and effectual as Baker's, constructed by the Patent Disinfector Company, 6, Billiter Street, London. The arrangement is one of a reservoir, filled with a gallon of Condy's Green Fluid: each time the handle of the water-plug is depressed after being lifted, a measure of disinfecting fluid flows into the pan, and communicates a pink colour to the water left in it. It is simple, easily worked, free from all the ordinary faults of such arrangements, one gallon of fluid suffices for 950 discharges, and the cost of this is five shillings. Immunity from foul odours and from chances of disease is thus cheaply purchased.

DIFFERENTIAL DIAGNOSIS OF ANÆMIC FROM ORGANIC MURMURS OF THE HEART.—Dr. James H. Hutchinson (*Philadelphia Medical Times*, August 15th, 1872), in a lecture on anæmia, states that he has found a peculiarity in cardiac murmurs arising from anæmia, which is but obscurely alluded to by some writers on auscultation. The murmur will be found to be much more intense when the patient is in the recumbent position than when he is either standing or sitting. Having never failed to detect this greater intensity in the recumbent position in every instance in which he has auscultated anæmic patients, Dr. Hutchinson believes it is a characteristic of some importance in the differential diagnosis of anæmic from organic murmurs.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

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SATURDAY, NOVEMBER 2ND, 1872.

ETHER *v.* CHLOROFORM.

THE considerable mortality from chloroform, which we have brought to light by perseveringly seeking the records of all contemporaneous cases of fatality, has necessarily strongly impressed the minds of professional chloroformists and of medical men generally. On the one hand, we have sought to elicit the facts on which researches for preventing such mortality may rest; but, on the other, we cannot be insensible to the strength of the appeal which such a list of fatal accidents makes to all to desist from the use of so dangerous an anæsthetic, if any other less perilous substitute can be found, even if that substitute be less convenient in some other respects. The records published in our columns have attracted the attention of foreign as well as of British surgeons; and from these sources there comes an earnest renewal of the recommendation of ether, which it is at least our duty to place before the surgeons and before those who make it a specialty to administer anæsthetics for them. Ether has always retained the first place amongst surgical anæsthetics in America, the country of its introduction for that purpose. Here we have been fascinated by the rapidity, certainty, and ease with which the vapour introduced by our great countryman Simpson produces not only anæsthesia, but complete muscular relaxation; and its use has become almost universal. Dr. Joy Jeffries of Boston used the occasion of his visit to London during the session of the Ophthalmic Congress to attempt the demonstration of the virtues and uses of ether, and to rehabilitate it in the esteem of English surgeons. He administered it with very satisfactory results seventeen times at various hospitals, including the London Hospital, King's College Hospital, the London Ophthalmic Hospital, and St. George's Hospital; and he read a paper at the Congress advocating its use. He maintained that it is as effectual as chloroform, and not dangerous to life. Nausea, vomiting, and headache may, he affirms, be avoided or mitigated by the patients taking no supper or but a light one the evening previous to the operation, and absolutely *no food whatever* the morning of the operation, which should, if possible, be done not later than 9 or 10 A.M.

"Ether, at the worst," he said, "is but a profound intoxication, and not unlike a drunken fit. On the other hand, thousands inhale it without trouble, as proved by their anxiety to take it a second time if necessary. A towel rolled into a cone, with a napkin or sponge pushed to the top of the inside, is all we need to pour our ether on; whilst our fingers can mould it over any mouth and nose. Some years ago, I often heard in Europe medical gentlemen say, 'But there are so many people who cannot take ether.' I have yet to see one. The truth is, I believe, that surgeons who use chloroform are afraid of ether, and do not dare to give enough of it at once in the commencement. Now, if the patient is warned that the ether will choke him, and told when this occurs to take long breaths to relieve it, and not

to struggle and endeavour to push away the sponge, many will go to sleep quietly and without trouble to themselves or the surgeon. I have but one other point to speak of in reference to giving ether. When the patient, whether old or young, struggles and asks for a respite and fresh air, do not yield. Hold them down by main force, if necessary; and, at any rate, keep the sponge tight over the mouth and nose till they finally take long breaths and then soon go off into ether-sleep. Doing this prevents their remembering anything about their struggles. It is absurd to stop the ether and try to reason with adults excited by the anæsthetic, and cruel not to push on quickly with children. This may sound almost puerile to my American brethren; but my personal experience tells me that those who use chloroform have somehow a sort of dread of ether, as if it was to be suddenly fatal, and hence fail to give a patient enough to intoxicate him quickly. This arises from lack of familarity with its use and administration."

In a paper which he has contributed to the *Boston Medical and Surgical Journal* of October 3rd, Dr. Jeffries writes:

"My experience in England—I mean what I saw and heard—proved conclusively to me that, whatever may have been the reasons in the past, at present English and continental surgeons do not use ether principally because they are unacquainted with it, and rank it with chloroform, of which very many have a wholesome dread. Not being in any way an *etherist*—I mean as in England a *chloroformist*—I entered into no crusade against chloroform, but endeavoured to show how simply and readily ether could be administered, and how perfectly harmless it was in any case where an anæsthetic was in place. It should be remembered that but very few of those who saw me give ether were not thoroughly convinced, from experience or otherwise, that ether was not a *practical anæsthetic*. I did not, and do not here, discuss the reasons for this; but I was as thoroughly determined to convince them, through their own senses, to regard ether as I do. Truth will finally come out; and I foresaw the day when our English brethren, awakened to the danger of chloroform and the safety of ether, would naturally blame us Bostonians especially for not having enlightened them in spite of themselves. I found only incredulity to overcome in introducing ether into the London hospitals; and I will give the gentlemen there the credit of first very properly not believing till they had seen for themselves, and, secondly, frankly acknowledging they had not understood or appreciated ether as a *practical anæsthetic*. Before I left London, its administration had been followed up as I taught them, and, of course, with the same success.

"It is rather curious that the danger of chloroform had prevented ether from having been properly administered: I mean that it was equally feared with chloroform, and hence not enough given at once in the commencement. Public opinion and public ignorance greatly hamper medical men in England, as elsewhere in the world. When I asked the object of measuring the chloroform used, I was told, with a smile, 'for the benefit of the coroner's jury.' This explained to me the looks and expressions of astonishment when I lavishly poured out ether on my towel-cone, which I purposely did, to prove there need be no fear of the anæsthetic; the important point being how much the patient got, not how much was in the sponge or other apparatus.

"As may be well imagined, I had to answer many questions from the English and foreign gentlemen grouped about me. To the very frequent one as to relative expense, I replied by showing them that, if ether were manufactured and sold only as cheaply as in the United States, and not wasted in administration, its cost was little, if any, above that of chloroform. Politeness, of course, prevented my adding what was naturally in my mind—namely, that probably any gentleman who had had one fatal case from chloroform would gladly deduct from his fee any difference in price of the anæsthetic to avoid another.

"Till my audiences were convinced by their own observation, I was repeatedly questioned, with more or less of incredulity, as to the time required to etherise a patient ready for operation. This, I found, was universally thought to be so great as to practically exclude the anæsthetic in hospital practice, where in the amphitheatre perhaps a dozen operations must rapidly succeed each other, one surgeon waiting impatiently for the preceding one to finish. Now, in reality, when administering ether in London, the question of time never once entered my head, and I never hurried with the anæsthetic, yet several times I turned to the operator within fifty to one hundred seconds, and told him the patient was ready. In looking up at my audience, the comparison of watches amused me as much as it surprised them. I judge the question of time was pretty definitely answered.

"As to the relative disagreeabilities of ether and chloroform, I frankly told them I was not in a position to judge, for I had never administered the latter, and was not an etherist—in fact, we had, and needed none among us, since surgeons in America gave ether themselves when operating, or it was exhibited by a surgeon assisting, or by a medical student; experience having taught us that it was not a dangerous anæsthetic like chloroform. I saw there was evident surprise on finding, from inquiry, that I was simply an ophthalmic surgeon, and not in any way an etherist, as they have chloroformists. It was a good argument in favour of ether.

"My previous and recent experience both showed me there was a strong and firmly rooted incredulity in England and on the Continent as to the practical value of ether as an anæsthetic, and in England especially as to its safety as compared with chloroform. Now, with all due deference, I really feel that English surgeons are to blame for this. My only argument in proof will be to quote the words of Dr. Benjamin W. Richardson, at our last interview in London, which were, 'Why, Doctor, I repeatedly told them, years ago, that ether was safer than chloroform'."

We purposely give Dr. Jeffries's statements at length in his own *naïf* but forcible words, because they have thus an individuality derived from the force of conviction which is likely to make them more impressive. The *Boston Medical Journal*, in an editorial article, wholly endorses Dr. Jeffries's views. It asserts that the complaints against ether by English operators, that ether produces insufficient relaxation of the muscular system and but partial insensibility, can only be explained by want of knowledge; and it is convinced that when these objections are removed a reversal of opinion will take place, and ether will be more freely used "across the water"—as no doubt it would be if they could be removed. It maintains that in the legitimate use of ether by inhalation, no *bonâ fide* case of death is on record, or ever has taken place; that it is, therefore, whether given for a brief space of time or for days together, *absolutely safe*, while the deaths from chloroform are numbered by hundreds. The failures in administering ether are attributed to dread of it; to the practice of administering it *guttatim* on a thin cloth, with a free admixture of air; to the removal of the towel on the struggle which announces the first stage of anæsthesia; and to the dread of stertorous breathing and other signs of full etherisation. This, however, is not the American practice; and our contemporary believes that, if Dr. Jeffries has impressed on us the true method of using ether by his practical demonstrations, he has without doubt paved the way to its speedy substitution for chloroform in England.

An equally strong appeal comes from another quarter. It is made by M. Diday, the eminent chief of the school of surgery of Lyons. After quoting the details of the last three cases of deaths from chloroform, contributed to these columns, M. Diday continues:

"At Lyons, we have for a long time generally abandoned

chloroform for ether. We have found it answer well, and our patients prefer it. But our example hitherto has not been followed; and not without reason we are told, 'You have abandoned the use of chloroform too soon, too short a time after its discovery, and at a time when, still unskilful in managing it, surgeons ought to attribute the disastrous consequences attending it less to its use than to their want of practice in using it.' It is, then, opportune for the success of the demonstration, that the experiment should be recommenced in the opposite direction; so that now, after all the perfection brought into the preparation of chloroform, into the mode of inhalation, the quantity of the dose, and into the physiological analyses of the accidents which accompany it, it would be well to see, chloroform still continuing to destroy life, if ether were as often fatal, and if it allowed of as few means of preventing or remedying the misfortune. We can only invite the surgeons of Great Britain to listen to the appeal we make to them, and to furnish to the already convincing Lyonese statistics counter-proofs which would give them their full value. Public opinion, it is said, is awaking in England. For my part, I am not astonished at it; nor do I deplore it. I should not consider the question unwise, if a patient, who was about to be put to sleep, should ask if it were likely that he should wake again; and I should not think that he had exceeded his right, if, whilst knowing the dangers he ran, he should impose ether on the operator, in place of chloroform; and, if he should prefer to suffer the pain of the knife in preference to the agonies of the uncertainty of re-awakening, it would still not be I who would disapprove. Generally, this interference of patients in their affairs is hardly admitted. They are told, and not without a motive, 'If you consult me, it is because you have confidence in me. Leave it to me alone to decide all these questions in the best way for your interest.' But when science strays; when she obstinately continues in a false path; when, perfectly free and able to attain the same end with a less dangerous agent, she chooses the most dangerous—then, sooner or later, the light breaks in, confidence is shaken, and the subject of experiment resumes the direction of his own interest. If—to suppose an impossibility—there should be found a physician who should employ inoculation in lieu of vaccination, which should one blame—the physician who proposed that perilous method, or the patient who refused to submit to it? The same question arises concerning ether and chloroform. Do not let us lament, then, at seeing patients begin to occupy themselves with the choice which we make between the one and the other anæsthetic. This intervention serves us more than we suppose."

We avoid reproducing the final sentence of Dr. Diday's warm pleading, because it almost implies a threat, such as would avail nothing to the cause of which he is the convinced advocate, and might injure it in the minds of English thinkers, who are accustomed to judge everything calmly and impartially, and, above all, without reference to extraneous considerations or fear of ulterior consequences.

The joint appeal of the editors of the *Boston Medical and Surgical Journal* and of the *Lyon Médical* ought, we think, to be heard in this country, and should carry with it enough weight to induce the deliberate re-opening of the subject in our hospitals, and a complete trial of the American method of administering ether. Chloroform-accidents, such as we have of late often recorded, must weigh heavily on the minds of surgeons, and oppress with pain the whole surgical community. Even if the immunity from accidents which ether affords be not so complete as is claimed for it by our American contemporary, it is at least much less open to fatal exceptions than its rival and more favourite sister chloroform. It is quite clear that the few minutes of delay involved in using ether, as compared with chloroform, can by no means enter into the consideration; nor can the greater costliness of ether, which is, after all, a mere trifle. Two objections are urged against ether, which, if they were unanswerable, might suffice to explain its unpopularity. English surgeons have found that, as ether is usually administered in this country, it fails to produce that complete relaxation of the muscles which is an essential element of success in many surgical procedures. And, again, the sickness following etherisation has been alleged to be more persistent and more severe than after chloroform. It was on these grounds that chloroform rose so rapidly into favour here and in most parts of the Continent, entirely superseding ether in the surgical theatre. Dr. Diday and Dr. Joy Jeffries, as the exponents of a large and long continued experience of etherisation, declare that these faults are not inherent in the action of the anæsthetic, but are incidental to a timid and clumsy use of it. Etherisation is slower than narcotism by chloroform, but not by more than a very few minutes. Freely administered in such a manner as almost to exclude temporarily the respiration of atmospheric air, they aver that ether is a safe, effective, complete, and agreeable anæsthetic. Of its safety they produce abundant and unimpeachable statistical evidence, extending over many years, and including many thousands of cases; and safety is the prime consideration. The case which they make out, if it be not thought conclusive of the merits of the question, is at least irresistible as the basis of a demand for a full, thoughtful, and careful trial, in the manner which they recommend, of the agent whose claims they so warmly advocate. That trial we now call upon the surgeons and professed administrators of anæsthetics with one accord to give. We can see no other alternative of duty in respect to narcotism for the purpose of surgical operations. We have already alluded to the immunity from accident which chloroform has enjoyed in the lying-in room, and here there seems no reason to supersede it by an agent which is avowedly less convenient; but, outside the domain of the accoucheur, it has forfeited its claims to be considered a safe anæsthetic.

PERSISTENCE OF THE CATTLE-PLAGUE.

Some serious considerations are suggested by the persistence of the cattle-plague. Two fresh cases of the disease were reported to the Veterinary Department of the Privy Council on Saturday as having occurred at Belthorpe, near Yapham, where the outbreak of the 18th ult. occurred. The cattle in contact with those attacked, consisting of eleven cows and eight calves were all slaughtered and buried. The whole of these outbreaks have occurred in direct connexion with the first importation by the plague-infested ships which arrived recently at Hull. It is a noticeable fact, that this is the same district in which the cattle-plague persisted obstinately during the former pestilence which so seriously affected our herds. The danger of extension arises, it must be remembered, not less from the conveyance of the germs of disease by individuals who have been in contact with the infected animals, than from the neglect to slaughter all the cattle which have been within the circle of infection. One great cause of the persistence of the plague, and of its repeated outbreaks, is the desire of salvage and the want of vigour on the part of local authorities. Another has been sometimes found to exist in the culpable manœuvres of individuals, who avail themselves of this desire in order surreptitiously to purchase cheap meat. When a farmer has reason to suspect or to know the presence of the disease among any part of his herd, he is apt to slaughter off-hand the rest, and sell them, at whatever they will fetch, to the butcher. Pur-

chasers have found this business sufficiently lucrative to induce them to seek to stimulate it by unlawful means; and experience has shown that the only way of stamping out the disease is to order the peremptory slaughter of all beasts within the circle of infection, and to absolutely prohibit all salvage. In this way, the interests of those favoured by the extension of the cattle-plague are extinguished, and with them the plague itself.

LUNACY IN IRELAND.

THE annual official report to the Lord-Lieutenant on the lunatic asylums of Ireland shows that at the close of the year 1871 there were 10,767 lunatics in asylums, workhouses, and gaols, and that the constabulary returns show 7,560 other lunatics, idiots, and epileptic imbeciles at large, making a total of 18,327 insane persons in Ireland, being 1,134 more than at the close of the preceding year. Five-and-twenty years ago, the returns showed only 12,397 known insane persons in Ireland; and though fuller information is now attainable, and greater accuracy has been arrived at, yet this is regarded as going only a short way towards an explanation of so large an apparent accession to the ranks of the insane in a decreasing population, raising the number from one insane person to 661 of the population in 1846, to a fraction below one in 300 of the population in 1871. But it should not be overlooked that in a decrease of population by means of emigration, insane persons might be left behind, provision being made for due care of them in the old country. Still, the increase of known insane persons in Ireland is very large. It appears that in the last three years—between the end of 1868 and the end of 1871—the registered insane increased by 1,313—viz., from 9,454 to 10,767; and the unregistered, or insane at large, by 996—viz., from 6,564 to 7,560. These last consisted of 4,853 idiots, 1,514 epileptic imbeciles, and only 1,193 lunatics. Of the 2,914 insane persons in workhouses at the end of 1871, there were 1,660 idiots. The 6,992 in public asylums included some idiots and epileptics; but 6,300 were lunatics, 4,383 of them probably incurable; and the supposed cause of the mental disease is stated in 3,837 cases. In 856 the disease was hereditary. In 1,432 it was due to physical causes; in 434 of these the cause was intemperance and irregularity of living. In 1,549 cases the mental disease was attributed to moral causes; in 284 to poverty and reverse of fortune; in 460 to grief, fear, or anxiety; in 221 (99 males and 122 females) to love, jealousy, or seduction; in 188 to domestic quarrels or afflictions; in 231 to religious excitement; in 83 to study or mental excitement; in 43 to ill-treatment; in 24 to pride; and in 15 to anger. The extraordinary augmentation of numbers is well shown by the following figures.

	Registered Insane.	Unregistered Insane.	Total.	Population at large.
1846...	6,180	6,217	12,397	8,175,124
1871...	10,767	7,560	18,327	5,402,759
	4,587	1,343	5,930	2,772,365
	Increase of Insane.			Diminution of Population.

A PUBLIC HEALTH BILL FOR IRELAND.

THE course of sanitary legislation for Ireland has now so far advanced, that during the next session we must expect to have a Public Health Bill introduced for that country. The Local Government (Ireland) Act, the Local Government Board Act, and the Medical Charities Act of 1851, taken together in connection with the various sanitary enactments that have been already passed, enable us to arrive at a conclusion as to what the provisions of such a measure ought to be. Taking into consideration the operation of the Local Government Acts, it may be supposed that the authorities will be urban and rural, as in England; that the urban authorities will be town councillors and commissioners; and the rural, boards of guardians. It will also be necessary to have port authorities, and to subdivide certain districts. Ireland is so subdivided into dispensary districts, and such a system of, as it were, sanitary police is established already, that it would require but little legislation to make the arrangements almost perfect.

We will assume, then, that in the introduction of a Public Health Bill for Ireland, it will be enacted that the dispensary medical officer shall be the public health-officer of his district. There must of course be inspectors of nuisances and other officers. These may probably be relieving officers; but it must be distinctly understood that they shall be subordinate to the health-officer, otherwise the Act will be ineffective. Last session, an Act was passed enabling the redefinition of the boundaries of counties and other divisions and denominations of land in Ireland. This is capable of enabling a great improvement to be carried out in the redistribution of dispensary districts, as many of them are arranged in a very straggling manner, and greatly require to be altered. The Poor-law Medical Officers' Association (Ireland), we understand, have such a scheme at present under consideration.

With regard to the emoluments connected with sanitary service, dispensary medical officers will do well to take care that proper provision is made; and they will in all probability endeavour to have the Bill made explicit on this subject. The distribution of authorities into rural and urban is necessary for reasons in connection with the present condition of taxation, into which it is unnecessary now to enter, but which may prove exceedingly troublesome hereafter in the progress of sanitation. To modify this, it will be necessary to appoint health-officers over considerable areas—counties or provinces—to whom the monthly, quarterly, or annual reports should be made, and for whom the central office should obtain information. The Local Government Board itself will fully appreciate the importance to be attached to the accounts of the proceedings of rural authorities, such as boards of guardians, with whom there may be at the time a feud about the sinking of a pump or some other of the elementary subjects of sanitation. It will be necessary, therefore, to have some authority over a large area, as a county or province, to whom the medical health-officers of the dispensary districts may report at stated periods, and who may again be in communication with the central officer, and thus act as a buffer between the rural authority and the health-officer; for it must be borne in mind that their sanitary interests will in all probability be antagonistic, in the present state of hygienic infidelity, whenever pecuniary liability comes into question. Inspectors, no doubt, and engineering inspectors, will be required. In a Public Health Bill, medical inspectors can hardly be ignored; and Clause 3 of the Medical Charities Act might be imitated. The working of the Public Health Bill (England) has already proved that it is better to be assured on this point. With regard to urban districts, there is no question that, much as rural districts may require health-officers, the urban districts, crowded, badly ventilated, badly sewered, require them still more. The probability is, that in urban districts the proviso will be that the sanitary authority shall appoint a health-officer. What could one health-officer do in Dublin, for instance, with over 300,000 inhabitants? or in Belfast with nearly 200,000 inhabitants, without the co-operation of the dispensary medical officers? These gentlemen are intimately acquainted with their various districts, and alone can give the necessary information as to their sanitary requirements. For this reason it appears to be expedient that the dispensary medical officers of urban districts should also be *ex officio* health-officers, and that they should report to the principal medical officer of the district weekly. It is true that the dispensary medical officer is paid by the Board of Guardians, and the health-officer of an urban district would be paid by the Corporation or Commissioners. This leads to another question; that is, as to the total payment of Poor-law medical officers by Government. This is not so utopian a scheme as is generally supposed. Half the medical expenses of the unions in Ireland are now paid by Government. The total of the expense of the Medical Charities Act for the year 1871 was £135,000; the half of this (£67,500) was paid by Government. It would be but right that the expense of the permanent plant of the dispensary—that is

the medicines, rent, books, printing, vaccination, midwives, and incidental expenses—should be borne by the local rates, but that the salaries of the medical officers should be borne by the national purse, on account of the internationality of disease.

THE VOLUNTEER MEDICAL REGULATIONS.

It is time that some definite regulations should be issued by the War-Office regarding the duties required of Volunteer Medical Officers. We have received many letters of inquiry from all parts of the country, asking whether the regulations issued in May last are withdrawn or are still in force. This question it is hard to answer. We believe they have not been formally withdrawn, but they have not, we believe, been enforced by the War-Office since the Volunteer Medical Officers expressed their strong disapproval of some of the regulations, and Lord Elcho and Colonel Charles Lindsay brought the matter before Mr. Cardwell in Parliament. In the debate on the Army Estimates in the House of Commons last June, Mr. Cardwell distinctly stated, with regard to the proposed examination, and to the compulsory attendance on the staff for twopence a week, that "he did not know that either of them would be insisted upon if they should prove unacceptable to the volunteers generally." Again referring to the latter regulation, he said "if this proposal were unacceptable, it need not be insisted upon." On July 9th, at his own request, he received in detail from the Secretary of the Volunteer Medical Association the objections raised by Volunteer surgeons to both of these regulations. However, although repeated application has been made to him regarding the actual position of the Volunteer surgeons under the War Office Circular, he has vouchsafed no reply. Copies of the regulations are, moreover, not to be obtained; and in the Draft Scheme of Amendments, relative to the efficiency of Volunteers, which was published in the *London Gazette* of October 18th, the medical staff is not once alluded to. It is difficult under these circumstances to say whether Mr. Cardwell insists on the regulations, or thinks it better not to enforce them, thus leaving the Volunteer medical service in its present condition. Both of these alternatives would be bad; indeed, one would scarcely be more unsatisfactory than the other. We have always insisted on the necessity of improved regulations and the reorganisation of the medical department of the Volunteer force; and we had expected, when the present Secretary at War undertook the organisation of the army, more practical results than the unfortunate regulations of May last. But we still entertain the hope that Mr. Cardwell will give to the subject the attention it deserves. There is a strong feeling among Volunteer surgeons that the medical service ought to be placed on a sound basis; and if a sensible scheme be framed and carried out, the best men of the Volunteer surgeons will remain in the service, and do their utmost to perform their duties. On the other hand, if Mr. Cardwell's recent regulations, in their unamended form, be put in force, there is only one course open to the profession. We recommend Volunteer surgeons in the meantime to consider the War Office Circular as obsolete.

The usual collections in aid of the charitable institutions of Birmingham were made on Sunday in the various churches and chapels of the town. The total amount collected was £3,057 3s. 8d.

The *Times of India* says that cholera is very prevalent on board the shipping at Calcutta. Out of the 600 native soldiers quartered at Trichinopoly, 530 are or have been down with dengue.

The vestry of Lambeth has the credit of being the first local authority in London to carry out the new Adulteration Act. It has appointed Dr. John Muter, F.C.S., of the South London School of Chemistry and Pharmacy, to be the public analyst for the borough.

Mr. T. W. Crosse has been elected surgeon to the Norfolk and Norwich Hospital, in the room of Mr. Nichols, retired.

WEIRS AND MILL-DAMS.

It is well that the Local Government Board has begun to give its attention to weirs and mill-dams, which often count among the numerous obstructions that in this country are allowed to stand in the way of public health. In the *Abingdon Herald* of this week there is an account of a special meeting of the Town Council of Abingdon, convened for the purpose of enabling Dr. Thorne Thorne, one of the inspectors of public health under the Local Government Board, to make a statement concerning the sanitary condition of the borough. Amongst other points dealt with, the inspector referred to the water-logging of the subsoil over a large area of the town, caused by the weir of a mill on the river Ock. The subsoil water in that part of the town referred to appears to be reached within less than two feet of the surface, rendering any sewerage of the district next to impossible, because the sewers would have to be laid in water, as indeed the gas-pipes are at present. The Ock flows into the Thames at Abingdon, and it appears from Dr. Thorne's observations that, near the point where the rivers join, the Ock is dammed up four feet six inches above the level of the Thames; and he strongly urges the removal of the weir causing this obstruction, on the grounds that the Ock level would be reduced more than four feet, the subsoil water would find a natural outlet, and one great difficulty in connection with the sewerage of the town would be removed. Dr. Thorne also referred the Town Council to the injurious effects upon public health observed by Dr. Buchanan at Chelmsford, where, notwithstanding the execution of deep sewerage works, the drying of the subsoil which usually follows such works had been prevented by a weir on the river just outside the town, and no consequent diminution in the phthisis death-rate had been observed. Oxford is another town where public health is seriously interfered with by the artificial impediments to natural drainage which weirs effect; and many other examples exist throughout the country. In these days of steam-power, no mill-owner should be allowed to use water-power, when by so doing he injuriously affects surrounding communities by his interference with natural drainage; and we must regret that the powers it was intended to invest in sanitary authorities and in the Local Government Board under the recent Public Health Bill, as first introduced, were, with many other important provisions, excluded from the Act as it at present stands.

THE NITROUS OXIDE COMMITTEE.

The final report of the Committee appointed to inquire into the action of the nitrous oxide gas will be read before the meeting of the Odontological Society, on Monday, at eight o'clock. Those who have taken an interest in the subject will, we are sure, be made welcome at the meeting, and will doubtless derive considerable instruction from the discussion which will, we presume, ensue. The Society holds its meetings at the Dental Hospital, Soho Square.

CHOLERA INFECTION IN ANIMALS.

In the article, "Cholera Infection in Animals," in our last issue, reference was made to a series of experiments conducted by Dr. Lauder Lindsay nearly twenty years ago, the results of which were partly given in the Journal in 1854. That they are pretty well known on the continent is shown by the fact that, in 1866, in the *Académie des Sciences*, the committee on the *Prix Bréant* (consisting of MM. Serres, Andral, Velpeau, Jobert de Lamballe, Cloquet, Cl. Bernard, and Ch. Robin) reported as follows:—"We must finally mention the interesting experiments of M. Lindsay, which appear to demonstrate the transmission of cholera by the emanations proceeding from the clothes worn by cholera-patients as well as from their excreta, when these emanations are breathed by animals submitted to certain conditions of general depression. He has carefully described these conditions, as well as the symptoms and changes observed in the dogs and cats submitted to experiment." They concluded that his researches "appear to be worthy of honourable mention in the report."

SMALL-POX IN VIENNA.

THERE is no improvement in the health of Vienna, as regards the epidemic of small-pox. During the week ending October 25th, there were 103 deaths from the disease; and the average number of cases under treatment daily was 428.

THE CHOLERA.

UNPLEASANT news comes from the Russo-German frontier. The weather of the past week or two, so unseasonably mild and excessively wet, has caused a somewhat alarming new outbreak of cholera at Warsaw; and the epidemic is said to be advancing towards the frontier, though as yet no cases are reported on the left bank of the Vistula.

VACCINATION IN HOLLAND.

A BILL on the subject of contagious diseases, which makes vaccination compulsory, has passed the second chamber of the Dutch States General by a majority of 49 to 13. A correspondent at the Hague says that this provision was carried against the wish of the Home Minister. There will be no difficulty (he anticipates) in passing the Bill through the Upper House.

TYPHOID AT LEAMINGTON.

A GOOD deal of excitement has been caused at Leamington by a coroner's inquiry, in London, into a case of death from typhoid fever at Leamington, the patient being a girl, who was sent home from the Arboretum, at Leamington, in an advanced stage of typhoid fever, according to the evidence. Rebutting statements have been put forth; but further statements were made that three other cases of typhoid fever have occurred at Leamington, and that the water-supply is polluted, all of which is denied by the inhabitants. As usual, some confusion is made between typhus and typhoid fever; and the coroner, Dr. Hardwicke, according to the published statements, seems to be hazy in his notions of contagion.

OXYGEN AS A REMEDIAL AGENT.

THE discovery of the chemical composition of the atmosphere, and of the important part which oxygen plays in combustion and respiration, led naturally enough to the idea that richness or poorness in oxygen constituted an important atmospheric distinction between the air of different localities; and the idea—natural in itself—gained strength from the faulty analyses of the air which were made by Priestley and his contemporaries. Modern analysis has, however, shown that there is no essential difference in the proportion of oxygen in different places; the air of the close street being almost absolutely as rich in oxygen as the air of the open country. The minute differences in the proportion of oxygen in air are too minute to affect its quality, and at most serve as indices to other changes. Parallel with the discovery of the essentially constant composition of the atmosphere all over the world, comes also the belief in the inertness (physiologically) of oxygen. It used to be said that just as iron burns rapidly in pure (or nearly pure) oxygen, so violent excitement, inflammatory changes and the like, supervene when an animal is made to breathe oxygen. It is said now that pure oxygen is inert towards the animal economy, and that no particular effects are produced by breathing pure oxygen gas. Possibly it is so; but we submit that hitherto the experiment has never been properly tried. That there is no instant and striking result we readily admit; but that prolonged exposure to the action of an atmosphere containing, say double the normal proportion of oxygen, would produce no results, remains to be proved. Our reason for calling attention to the subject is the fact that now, for the first time, the possibility has arisen for the making of such experiments, inasmuch as the employment of oxygen for illuminating purposes is now rendering the gas sufficiently cheap and available to permit its use for therapeutic purposes, if it should really happen to be possessed of valuable properties of that description. Through the establishment of factories for the working of Tessié de Motay's process, it is actually becoming practicable to charge the atmosphere of a bedroom with double the normal proportion of oxygen. This process, as some of our readers know, consists in heating manganate of soda in steam, whereby oxygen is discharged and water taken up, yielding a mixture of caustic soda and oxide of manganese, which, on being heated in a current of air, takes up oxygen and gives out water, and is reconverted into manganate of soda, which admits a repetition of the process. In this manner, as will be understood, oxygen is extracted from the atmosphere, and obtained in a state of tolerable purity. The manufacture of oxygen by Tessié de Motay's process commenced in the year 1867, at Pantin, near Paris, and, despite of the difficulties which beset it, is gradually becoming a success. In Brussels, a factory for the production of the gas for use in the illumination of the town commenced operations in May this year, and is now furnishing a daily supply of oxygen for the illumination of the arcade (Galerie St. Hubert) and a number of shops. The gas is compressed into iron cylinders, made of boiler-plate, each one holding a quantity of gas equal to seven cubic meters at ordinary atmospheric pressure. The portability of the gas may be judged of by the circumstance that nine such cylinders (holding 63 cubic meters, or about 2,000 cubic feet) form an ordinary cart-load, such as is sent from the factory to the arcade in Brussels. The reason for the adoption of this plan of transport is to avoid having to lay a set of mains for the conveyance of the oxygen. As will be readily appreciated, this arrangement offers peculiar facilities for the obtaining of the gas for experimental purposes. With regard to the cost of the gas, the remark may be made that, just at present, certain accidental circumstances tend to keep up the price, and 1,000 cubic feet may possibly cost twenty-five shillings; but, within the course of a year, there is every probability of the gas being procurable for a quarter of the money. Even at twenty-five shillings per 1,000 cubic feet, the gas is by no means out of reach in certain cases. For this sum (and the cost of carriage), the atmosphere of a good-sized bedroom may be made to contain double the normal proportion of oxygen.

APOTHECARIES' HALL.

AT the recent competitive examination for the Society's prizes in Materia Medica and Pharmaceutical Chemistry, the successful candidates were:—
1. Alfred Felix Stevens, of St. Bartholomew's Hospital, a Gold Medal;
2. William Henry Harsant, of Guy's Hospital, a Silver Medal and a Book.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE half-yearly general meeting of the Society took place on Wednesday evening, October 23rd, in the room of the Royal Medical and Chirurgical Society, Berners Street. The chair was taken at half-past eight by the President, Dr. Burrows. The statement of the acting treasurer showed receipts, during the half-year ending June 30th, available for the payment of grants and expenses, amounting to £1,522 1s. 3d. The grants made were £1,271 10s., the expenses £144 14s. 3d., leaving a sum of £135 17s. to meet any further demands on the funds. The number of widows relieved during the half year was 55, that of children 43; and extra assistance from the Copeland Fund had been given to two children suffering from incurable diseases. The Chairman called the attention of the meeting to the great loss sustained by the Society by the death of Mr. Martin Ware, formerly president, and by that of Mr. Robert B. Upton, honorary member and solicitor. Dr. Burrows stated that Mr. Ware was the son of one of the founders of the Society, had always been most active in working for its welfare, and had filled the offices of director, vice-president, and president. Mr. Upton had by his professional advice rendered most essential services to the Society, more especially when the charter was obtained, for all which Mr. Upton had most generously refused any pecuniary remuneration. The following votes of sympathy and condolence were passed unanimously.

That the Society being informed of the death of Martin Ware, Esq., formerly president, wish to convey to his family, by the secretary, their deep regret, esteem, and condolence.

That this Society have heard with great regret of the death of their

valued friend and solicitor, Mr. Robert B. Upton, and the president and members generally are anxious to convey to the late Mr. Upton's family their deep sympathy with them in their bereavement, and also their great sense of gratitude for the many valuable services rendered to the Society by the deceased.

The proceedings were brought to a close by a vote of thanks to the chairman.

A HORRIBLE SUPERSTITION.

THE Providence *Herald*, September 5th, says: "The village of Peacedale was thrown into excitement on Thursday last, by the report that two graves had been dug up near Watson's Corner, on the shore of the Saugatuck River. The family of Mr. William Rose, who reside at Saunderstown, near the South Ferry, are subject to consumption, several members of the family having died of the disease, and one member of the family is now quite low with it. At the urgent request of the sick man, the father, assisted by Charles Harrington, of North Kingston, repaired to the burying-ground, located one mile north of Peacedale, and, after building a fire, first dug up the grave of his son, who had been buried twelve years, for the purpose of taking out his heart and liver, which were to be placed in the fire and consumed, in order to carry out the old superstition that the consumptive dead draw nourishment from the living. But as the body was entirely reduced to ashes, except a few bones, it was shortly covered up, and the body of a daughter, who had been dead seven years, was taken out of the grave beside her brother. This body was found to be nearly wasted away, except the vital parts, the liver and heart, which were in a perfect state of preservation. The coffin was nearly perfect, while the son's coffin was nearly demolished. After the heart and liver had been taken out, it was placed in the fire and consumed, the ashes only being put back into the grave. The fire was then put out, and the two men departed to their respective homes. Only a few spectators were present to witness the horrible scene. It seems that this is not the first time that graves have been dug up where consumption was prevalent in the family, and the vital parts burned in order to save the living. A few years ago the same was done in the village of Moorsfield, and also in the town of North Kingston."

CHARING CROSS HOSPITAL.

AMONG other improvements about to be carried out at the Medical School of the Charing Cross Hospital, a demonstrator of anatomy is shortly to be appointed with the handsome annual salary of a hundred and fifty pounds. Preference will be given to gentlemen possessing a knowledge of comparative anatomy, as it is desired to associate a lectureship on this subject with the office of demonstrator. The proposal to present a testimonial to Mr. Hancock promises, we hear, to meet with much success.

BRITISH MEDICAL BENEVOLENT FUND.

AT the usual monthly meeting of the Committee, held on Tuesday last, the sum of £122 was distributed in grants among seventeen applicants. Eight other cases were either postponed for further inquiry or passed over as unsuitable for relief. A vote of thanks was passed to S. Holloway, Esq., for a donation of fifty pounds, through the chairman, Dr. G. C. Jonson.

SANITARY CONDITION OF PADDINGTON.

DR. HARDWICKE, Medical Officer of Health for the Paddington district, has just issued his report on the sanitary condition of the locality under his charge during the past year. He points out that in some parts of the district there is an extraordinary overcrowding of the population. In a space of ground on each side of the Harrow Road 12,000 people are packed in 900 houses; 35 houses and 469.7 persons to the acre, averaging 14 to 24 in each house. On the Hall Park estate, an area of 7½ acres is covered by 303 houses, whose inhabitants number 3,643; 486 persons and 40 houses to the acre, and 12 persons on the average to each house. The consequences of overcrowding in this and other localities are directly deleterious to the physical and moral well being of the people. Workmen coming home from work are tempted to exchange the stifling atmosphere of a single room for places where recreation is to be had amid the pleasant vices of drinking and smoking; and household and personal cleanliness must be carried on by the women under insurmountable difficulties. Dr. Hardwicke says that the year's experience has confirmed his opinion that large numbers of men born in cities have poor constitutions and deficient vital stamina, who cannot cope with their competitors from the country, nor command the best labour markets in the world. From an analysis of statistical tables, Dr. Hardwicke states that, in comparing in-door with out-door occupations, he finds that only 15½ per cent. of the tailors are over the age of 40, and 25 per cent. of the dressmakers and needlewomen; while of coachmen, cabdrivers, grooms, and labourers, 50 per cent. exceed that age, thus showing that the danger arising from exposure in all weathers is not nearly so great as that arising from deficient air and want of exercise in the open air. Dr. Hardwicke mentions it as a curious fact that more than one-third of the workmen in a given district have wives older than themselves. In urging that remedial measures should be adopted to relieve the overcrowding in Paddington and other parts of the metropolis, Dr. Hardwicke calls attention to the difficulty which is raised in the fact that most of the working people are fixed to the spot, and cannot remove from the locality if contagious diseases break out. Under such circumstances, all classes should combine to provide that the dwellings of the poor shall be free from the pollutions which endanger the functions of life, and uncontaminated by contagion and death.

THE CHOLERA IN INDIA.

I BELIEVE we may now hope (says a correspondent of the *Pall Mall Gazette*) that the cholera epidemic of 1872 in the Bengal Presidency has come to a close. Though less fatal as regards numbers than many that have preceded it, it has been of an unusually virulent type where it has attacked. I have not been able to obtain trustworthy statistics of its effect on the civil native population, but I gather that the deaths fall not far short of 100,000. The returns from the army are, of course, accurate and up to date. Wisely, and for the same reason that the customary volleys at military funerals are discontinued during epidemics, these returns are not published; but from the latest I have seen, brought up to the middle of September, it appears that some twenty-four cantonments have been, to use the word in vogue with cholerologists, invaded. The whole number of European troops attacked, inclusive of women and children, is 750, of whom 480 have died. The native troops, with the exception of the large garrison of the Punjaub frontier force at Kohat, have escaped with comparative impunity, having had in all less than 100 cases, with from 30 to 40 deaths only. At Kohat, however, the disease was very fatal, there having been nearly 80 deaths out of 130 seizures. Many of the twenty-four European stations I mentioned as having been attacked were so almost nominally; Umballa, Roorkee, Rawul Pindee, Dinapore, Mooltan, having had but one or two deaths each. Of those which have suffered severely, Meean Meer maintains its bad pre-eminence with 125 deaths; Meerut follows with 54; then come Fyzabad and Agra with 31 and 22 respectively. The Peshawur Valley has been watched with apprehension, and a strict quarantine maintained; up to now it has entirely escaped; but as in former years the visitation has been made so late as the end of October or November, it is impossible even yet to feel safe or to relax precautions. It is a remarkable feature in this epidemic that the hill-stations and convalescent depôts have been especial sufferers. Dugshai lost 22, Kussowlie 27, and Murree 28. Subathoo and the new station of Chukrata were also visited, but very lightly; while in none of them were the native inhabitants or the surrounding population otherwise than ordinarily healthy. I cannot help thinking that the losses in these places are to be attributed to overcrowding, which, I gather from some of the papers, a natural desire on the part of the military authorities to place as many as possible in the hills has, by being carried to excess, produced. Doubtless, however, the Sanitary Commissioner and the heads of the medical departments will make full inquiry into this and all other points con-

nected with the late outbreak. At present, as regards cholera, we cannot be said to have exhausted even the negative stage of knowing what it is not; but the ground is being cleared; and, in the meantime, those indisputable conditions of health, pure water and pure air in the barracks, and pure soil around them, are being applied, so far as appliances are available, wherever the troops are congregated, and in the greater cities of the country.

GRESHAM LECTURES.

THE course of lectures for Michaelmas Term will be delivered in Gresham College, Basinghall Street, as follows, by Dr. E. Symes Thompson, Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.—Lecture I, Friday, November 8th, 1872. On Draughts: Causes of Winds and Air-Currents. Trade winds. Hurricanes. Circular winds or Cyclones. Varying character of winds. East and west winds. The Sirocco. Qualities of Air. Instruments for testing rapidity of winds and air-currents. Anemometers. Aspirators. Modes of testing Purity of air in rooms. Diffusion of Smoke and of Perfumes. Means of securing free Ventilation without Draughts, by Doors, Windows, Chimneys, and by Shafts, Double Currents, and other artificial systems. (Experiment with double current ventilator.) Draughts, as causes of catching cold, explained. Preventive suggestions.—Lecture II, Monday, November 11th, 1872. On Mineral and Vegetable Tonics: Modes of preparation, tests and uses of the Salts of Iron. Tests for Iron in the Blood and in the muscles. Bark—Different kinds of "Jesuit's Bark". Exhaustion of South American Bark Forests. Cultivation of the Quinine Bark-bearing trees. Botanical characters and Chemical Composition. Comparison between Quinine and other bitter medicines. Demonstration of Quinine-like compounds in the Eye (florescence test by the induction coil). Strychnia. Whence obtained. Modes of preparation. Its effects in large and small doses. Different effects produced by varying the quantity and mode of prescribing the same drug. Tests for Strychnia, for Arsenic, and for Antimony, in bodies of poisoned persons.—Lecture III, Tuesday, November 12th, 1872. On Prescriptions: The History of Prescription Writing. The Physicians of Arabia, Egypt, Greece, and Rome. Medicine in the Middle Ages. The relation of Alchemy and Astrology to Medicine. The Doctrine of "Signatures"; *e.g.*, yellow Poppy a cure for Jaundice; the Eye-bright for Blindness. Complexity of ancient receipts. Macbeth. Downfall of Mysticism from advancing education. Latin directions replaced by English. Natural reaction from complicated prescriptions; *e.g.*, "Theriacum" (which contained sixty-six ingredients), in favour of single remedies. Real value of combination in Medicines as in meals; *e.g.*, Iron and Ether, Acid and Bitter, Bread and Butter, Meat and Vegetables. A Typical Prescription explained—1. Principal ingredient; 2. Adjuvant or directive; 3. Corrective; 4. Vehicle; 5. Flavouring and Colouring ingredients. Symbols and abbreviations.—The lectures are illustrated by diagrams and experiments, are free to the public, and commence each evening at seven o'clock.

AMERICAN PRIZE ESSAYS.

THE subjoined prizes are announced for competition. *Boylston Medical Prizes.* The following are the questions proposed for 1873: 1. Electrotherapeutics. 2. The Value of Chemistry to the Medical Practitioner. The author of a dissertation considered worthy of a prize, on either of the subjects will be entitled to a premium of one hundred and fifty dollars. Dissertations on these subjects must be presented on or before the first Wednesday in April, 1873.—*Warren Prize.* The income of two thousand dollars for three years will be awarded to the author of the best original dissertation, considered worthy of a prize, on the subject of "Experimental Researches on the Elimination of Drugs by the Mammary Glands." Dissertations, accompanied with a sealed envelope, containing the name and address of the writer, must be sent on or before February 1st, 1874, to Dr. Benjamin S. Shaw, Resident Physician, Massachusetts General Hospital, Boston.—*Boylston Medical Society Prizes.* Two prizes of thirty and twenty dollars respectively, will be awarded for the most approved dissertations, considered worthy, on medical subjects to be selected by the author. Dissertations must be placed in the hands of the President of the Society on or before January 31st, together with a sealed envelope containing name and address of the author. The decision of the Committee will be announced at the last meeting of the Society in February.—*Jacobi Prize.* A prize of four hundred dollars will be awarded for the best essay, considered worthy, on "A History of the Diseases of Infancy and Childhood in the United States, and of their Pathology and Therapeutics." Dissertations must be sent, postpaid, accompanied by a sealed envelope containing name and address of author, to Dr. A. E. M. Purdy, 123, East Thirty-eighth Street, New York, on or before January 1, 1873.

PERSECUTIONS AT EVESHAM.

AT a recent meeting of the Evesham Board of Guardians, the election of Mr. A. H. Martin as Medical Officer of Health was declared to be unsatisfactory to the Guardians, on the ground of his having neglected the poor whilst performing the duties of medical officer. Two alleged cases of neglect, which at a previous meeting had been explained to the satisfaction of the guardians, were again brought up and discussed; and after many animadversions and much ill-feeling expressed against Mr. A. Martin, it was moved and carried that he should give a personal explanation to the Local Government Board of one of the alleged cases of neglect. Upon this, the efficient and much respected Chairman, Mr. Randell, rose, and gave in his resignation, saying that he could no longer preside over a board tainted by such improper feeling, and that the cause of the hostility against Mr. A. Martin was his having a short time since exposed the sanitary condition of Evesham. The honest statement of facts that he then made had brought on him the hatred and hostility of the guardians, which feeling is shown by them in petty persecutions and in accusations, and in maligning his character both in his private and public capacity. It may be hoped that this is not an example of the treatment which Medical Officers of Health have to expect at the hands of the rural guardian sanitary authority when honestly performing their public sanitary duties under the Public Health Act. But it is impossible not to attach some importance to the fact, that the same persons, who as guardians are here seen persecuting their Poor-law Medical Officer for the honest discharge of sanitary duties, are those who, as the "rural sanitary authority," will be called upon to appoint, direct, and support medical officers in the discharge of their health duties. It remains to be seen what compensation for his loss, annoyance, and injury, Mr. Martin will receive from "influential residents," who would, it was suggested recently, be eager to indemnify the medical officer of a local board for persecutions brought upon him by the discharge of his duty.

THE SEWAGE QUESTION IN BERLIN.

THE magistrates of Berlin have determined that a system of sewers shall be laid down in the city. This proceeding has excited opposition, and a manifesto, signed "Two hundred and fifty Citizens of Berlin," has been circulated, of which we have received a copy. The protest alleges that the scheme will burden the city with a debt of about thirty millions of dollars (£4,500,000). "And what is the city," it is asked, "to gain by this terrible expenditure? A system of sewerage, which will tear up its streets and destroy its traffic all the year long; sewers, which will receive the most malignant excreta, and introduce deadly vapours into our houses and families through the tubes leading from them, so that the opening of every sink, drain, and closet, will breathe pestilence and death. Does not the condition of the *Thiergarten*, for whose poisoned water we have had only to thank the sewer in Queen Augusta Street, fouled as it was by water-closets—does not this sewer and each water-course that runs into the Spree, whose poisonous exhalations yearly demand unnumbered victims—teach us sufficiently that our magistrates have no more sacred and imperative duty than, by purifying the water, to restore to a healthy state the air which we breathe and our general conditions? This is the most pressing want of Berlin; for, as a healthy mind can only exist in a healthy body, so a population

can be kept sound in mind and body only in a healthy city." The document further refers to the fouling of the river Spree by sewage, which has already been complained of by the inhabitants of places at a distance; and advocates a properly regulated system of carrying away the sewage in such a way that it may be applied as manure to the land, and thus become a source of profit. This, it is represented, will be more effectual than any other plan in restoring to Berlin its general healthiness, and improving the welfare and sanitary condition of its inhabitants.

MEDICAL PORTRAITS.

Of the numerous caterers of photographic portraits of medical men, none have surpassed Messrs. Fradelle and Marshall in their production of what they call "Photo-Mezzotint" likenesses. At their exhibition, at 230, Regent Street, a large selection of medical portraits may be seen, many of which are excellent works of art and most faithful likenesses. Dr. Murchison, Dr. Meadows, Mr. Savory, Mr. Christopher Heath, Mr. Nunn, Dr. Barnes, Dr. Langdon Down, Dr. John Murray, Mr. Barwell, Mr. Henry Smith, Dr. Edis, Dr. Buzzard, and many others, are exceedingly good. The delicacy in the half-tints and the skilful arrangement of the lights and shades produce an effect which is almost unknown in the inartistic large photographs commonly turned out by photographers.

THE AMERICAN HORSE-EPIDEMIC.

The very severe epidemic among horses which is reported from America and Canada is of a kind well known here. It is, in fact, an epidemic influenza. This epizootic is a catarrhal affection resembling, in all its symptoms and in its course, the epidemic influenza of poor humanity. It runs a definite course: it is accompanied by severe nasal catarrh, general fever and debility; in severe cases, the lungs and pleuræ are apt to be affected. It requires the same kind of nursing in animals as in men. Rest within doors, a light nourishing diet, mild febrifuge medicine, if any, and attention to the local troubles of the throat and air-passages. A very small proportion of the cases are fatal, but the epidemic is apt to prove very troublesome in European experience by its widespread and debilitating character.

SUICIDES.

The occurrence of some suicides which have attracted unusual public attention makes it of interest to explain that suicides have increased of late years in England. In the six years 1859-64, the annual average was a little over 66 to every million of population; but in the six years, 1865-70, the latest period to which detailed returns extend, the annual average was nearer to 68 than to 67 in a million of the population. In the first six years the suicides of a year only once reached 70 per million of population; in the last three years, 1868, 69, 70, the ratios were 70, 73, and 70 per million. The range in the 12 years was from 62 per million in 1867 to 73 in 1869. Comparing the last period of six years with the first, we find that the suicides by drowning bear a larger proportion to the whole number of suicides than they did; but there is a smaller proportion of suicides by hanging than formerly, though that is still the most frequent mode of exit adopted.

DEATH AFTER EXTRACTION OF TEETH.

Dr. Lanyi has recorded, in the *German Quarterly Journal of Odontology*, two cases in which death followed the extraction of teeth. The first was that of a student of medicine, aged 24, in whom the first upper molar on the left side was loosened in an unsuccessful attempt to extract it by forceps. Suppurative periostitis set in, causing necrosis of the alveolar process of the jaw. This was accompanied with rigors, icterus, and pleuropneumonia of the right lung; these subsided, but empyæma set in, and death occurred in a fortnight from perforation of the lung. In the second case, that of a strong man aged 26, the root of the right upper molar was left in the jaw; in the attempt at extraction, the alveolus was broken, and the gum lacerated. There was some bleeding, which was at first arrested by cotton-wool soaked in solution of tannin, and a plug of cork. The next day, the patient removed the dressing, and the hæmorrhage returned. Cork plugs and perchloride of iron were applied, but had to be replaced several times in consequence of their being removed by the patient. After some days, it was found that, when the patient was erect, there was a fine stream of blood flowing into the pharynx; it continued in spite of the use of styptics and plugging of the nostrils, and at last the patient died in a state of anæmia. The source of the bleeding from the nasal cavity could not be ascertained at the necropsy. The antrum of Highmore contained fœtid brown mucous fluid.

SCOTLAND.

The death of another alleged centenarian is recorded by the Greenock newspapers. This was Mrs. Wilson of Gourock, a soldier's widow, who followed her husband through the Peninsular campaign and was with him at Waterloo. The local papers say, somewhat loosely, that she was "over one hundred years of age".

EDINBURGH UNIVERSITY.

The General Council, at their meeting on Friday, decided that the influence and representation of the Council in the constitution of the University ought to be increased. This was founded on the recommendations of a committee of their number, appointed after the behaviour of the Court of Curators, in the patronage of University chairs, had been severely criticised two years ago.

UNIVERSITY OF ABERDEEN.

An appointment, opened to graduates in medicine of this University under the age of twenty-eight, is offered by the trustees of the late Dr. Robert Wilson, "to travel in Western Asia, or Eastern Africa or Northern Africa, making observations, of which a report is to be transmitted, and collecting antiquities and objects of interest." The remuneration, we suppose, is not included in the "travelling expenses"; otherwise, graduates had better stay at home.

THE LADY STUDENTS AND THE SENATUS OF THE EDINBURGH UNIVERSITY.

The appeal of the senatus of the University of Edinburgh against the decision of Lord Gifford, has been before the second division of the Court of Session. The Court has deferred it decision. The case lasted three days, and throughout afforded a good deal of amusement and interest.

THE LORD RECTORSHIP OF ABERDEEN UNIVERSITY.

Natural science, it is alleged, is likely to carry the day at Aberdeen, in the person of Mr. Darwin or Mr. Huxley, both men who thoroughly deserve to receive academic honour. If the students do not appreciate a Lord Rector who has, greatly to the benefit of the north of Scotland, broken down the stale traditions of the University—or, what is, we fancy, at the bottom of the thing, if they decline to lose their fun on the occasion of an election by insisting on a new rector, they can hardly light upon better men. Mr. Huxley, as a member of the London School Board, has shown that he has given large attention to the subject of education, and being a member of the medical profession, he will probably receive the support of the medical students. Mr. Darwin's state of health would, we fear, prevent his fulfilling the duties of Lord Rector; while Dr. Neil Arnott's age would equally stand in the way of his accepting an honour to which he has shown himself fairly entitled.

IRELAND.

The Board of Trinity College, Dublin, has re-elected Dr. Benjamin McDowel to the Professorship of Anatomy and Surgery. It has also resolved to found a new Professorship of Comparative Anatomy, with an endowment of £100 a year and a portion of the dissection fees. The Professor is to deliver eighteen lectures on comparative anatomy in each year.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

On St. Luke's Day, October 18th, the annual meeting of the college was held, at which the following office-bearers for the ensuing year were appointed. *President:* Dr. Alfred Hudson. *Vice-President:* Dr. Robert D. Lyons. *Censors:* Drs. Lyons, Jennings, Little, and Grimshaw. *Treasurer:* Dr. Aquilla Smith. *Registrar:* Dr. Finny. *Professor of Medical Jurisprudence:* Dr. Travers. *Examiners in Midwifery:* Drs. Atthill and Ringland. *Representative on General Medical Council:* Dr. Aquilla Smith. *Librarian:* Mr. H. J. Fennell.

NEWCASTLE WEST BOARD OF GUARDIANS.

We extract from the Irish *Daily Telegraph* the following:

"Dr. —— was appointed *pro tem.* in place of Dr. Bolster, for a fortnight, at the rate of £3 per week, to be paid out of Dr. Bolster's salary, the balance to be paid by the guardians, as Dr. Bolster is not receiving £3 per week. This appointment was made by the Dispensary Committee, and sanctioned by the Board of Guardians."

We make no comment upon this, but we leave it to the descerning public to judge of the liberality of a Board which refused to grant a substitute to an old and tried officer, until compelled by local events; and then the said substitute receives a salary on a scale much larger than that of their own medical officer. This is, unintentionally, a tacit acknowledgment (as we conceive), on the part of the Guardians, of their real view of the low stipend doled out by them to their medical staff.

THE APOTHECARIES' HALL OF IRELAND.

A course of practical instructions in chemistry and pharmacy, in their relations to medicine, will be given at the Apothecaries' Hall, during November, December, January, and February. The course will commence on Monday, November 4th, and will be carried on during the first four days in each week It will comprise the general principles of chemistry, botany, and pharmacy; the history and description of the drugs and preparations of the *British Pharmacopœia*, their physical and chemical characters, the *rationale* of the different Formulæ; the means of detecting impurities and adulterations in food and drugs; the uses and doses of medicines; the translation of Latin prescriptions, and the proper mode of compounding and dispensing them. It will conclude with a description of the principal poisons, their effects, antidotes, and appropriate tests, in simple and compound mixtures; and an explanation of the chemistry and application of disinfectants. The main objects of the course are to enable medical practitioners, who dispense their own prescriptions, and persons who desire to qualify themselves as assistants to apothecaries, to recognise genuine articles, both of food and medicine, and to instruct them in the art and science of pharmacy. The course will be conducted by a staff of qualified teachers. The fee is five guineas.

DR. DRUITT.

Dr. Druitt, well known for his professional and literary labours as an author of standard surgical works, as a leading labourer in the cause of sanitary progress, and as the Editor of the *Medical Times and Gazette*, is compelled by ill health to retire for two years to a more genial climate. At a meeting attended by many of the leading members of the profession on Thursday evening, it was resolved to initiate a subscription with a view to the public recognition of his eminent services.

ROYAL COLLEGE OF PHYSICIANS IN LONDON.

At a meeting of the Fellows of the Royal College of Physicians on Thursday evening, Dr. C. J. B. Williams brought forward a motion to facilitate the admission as members of the College of all practising physicians in this country. It was, after much discussion, referred to the Council.

BRITISH MEDICAL ASSOCIATION.

ANNUAL MEETING, 1873.

At a meeting of the Council of the Metropolitan Counties Branch, held on the 23rd ult., it was unanimously resolved—

"That, in the opinion of this Council, it is desirable that the members of the British Medical Association residing in the Metropolitan Counties District should invite the Association to hold its Annual Meeting in 1873 in London."

A general meeting of members residing in the district will be held at the Office of the Royal Medical Benevolent College, 37, Soho Square, on Friday, November 8th, to consider the foregoing proposal; and, if it be approved, to nominate a Committee of Arrangement, and take such other measures as may be necessary. The Chair will be taken by Sir William Fergusson, Bart., President of the Metropolitan Counties Branch, at 4 P.M. precisely, when the attendance of all the metropolitan members of the Association, whether members of the Branch or not, is earnestly requested.

THE ANNUAL REPORT OF THE SHROPSHIRE ETHICAL BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

October 1872.

In resuming their Annual Reports which have for a time been suppressed, in consequence of the prolonged illness of the member to whom the work has always been entrusted, the Council of the Ethical Branch gladly avail themselves of the occasion to congratulate the members on its successful progress; and, at the same time, to express the pleasure they have in meeting their professional brethren at the customary anniversary:—for such reunions not only afford opportunities to the busy practitioners of the surrounding districts of uniting in friendly intercourse, and of enjoying each other's converse at the social and musical banquet (a no slight attraction to a hard worked man), but exert a moral and intellectual influence, and thus tend to diffuse and maintain a healthy *esprit de corps;* on such occasions, moreover, not only are the results of their professional labours interchanged, but jealousy—the bane of social and professional life—thereby oft averted, and a spirit of kindly feeling engendered, which cannot fail to be beneficially reflected on the profession and society at large.

Ere passing in review, in accordance with former custom, the several subjects which more especially claim the attention of the members, your Council, in reply to the objection still occasionally urged against their Medico-Ethical Code—viz.: that 'no laws, however stringent, will make a man honourable who is not innately inclined to be so,'—while regretfully admitting the general truth of the assertion, unhesitatingly affirm their deliberate conviction that a *good* example is calculated to exert an almost equally powerful influence with that for *evil*:—and, therefore, that the *morale* of the truly honourable members cannot fail to exercise a very important influence over those who might be otherwise inclined; for however much the latter may affect to despise the good opinion of the practitioners in their own immediate neighbourhood, yet, knowing as they now must do, that unprofessional conduct will sooner or later be brought under the cognisance not merely of their medical brethren throughout the country, but, if need be, of the Association at large,—callous indeed to all the finer feelings of human nature must he be, who could calmly contemplate so unenviable a position in the medical world, as that which would be implied by the general censure of so large a body of his brother practitioners.

Your Council now proceed to offer a few remarks upon the subject and present aspect of 'Medical Reform.' Although much uncertainty still surrounds the question, there is reason for believing that an 'Amended Bill' will be introduced next Session by Government; and the profession will alone be to blame, if, assisted as they now are by a powerful body of Parliamentary supporters, they fail to carry it (or, in lieu of the Government, the Association Bill,) with such amendments as may be deemed essential to the well-being of the public and the faculty—the associated interests being, in truth, inseparable. In the meanwhile, your Council venture to offer the following suggestions for the consideration of those members with whose views the expected Bill may not be found to altogether accord:—'Bear in mind that there are several and conflicting interests to be considered; and while you sup-

port in general the principles for which the profession at large, (in contradistinction to the University and Corporate Bodies, as represented by the General Medical Council,) have always contended, be prepared to concede or to modify certain of them, to meet the advances which have been, or may be, made towards your views by those whose notions differ from your own, and who in the abstract have as much right to their opinion as you have to yours; and that while a blind acquiescence in any Bill that might be brought forward is not to be desired, a system of prominently advancing some objectionable or omitted clause, as a reason for repudiating the entire measure, is a proceeding calculated neither to do good, nor allow good to be done.' Let us also remember that, where so many conflicting interests are involved, it is far easier to *amend* than to *get* a Bill; for which reason your Council venture to express a confident hope that prudent counsels will prevail among the leaders of our Association—for there can be little doubt that the rejected Government Bill of last year was a great improvement on the Act of 1858; and it was, therefore, with considerable reluctance that your Branch Executive, in deference to the opinion of the Committee of Council of the Association, assisted in promoting its rejection by numerous petitions to Parliament, and the active support of the borough and county members.

Another subject of much interest and importance to the profession and the public is the late successful prosecution of an illegal practitioner trading on a negociated Degree from an American University, and the subsequent affirmation of the conviction by the Court of Exchequer—an audited copy of the costs of which will shortly be published. The moral degradation evinced by their shameless traffic in diplomas—alike regardless of American honour, and the public weal—your Council are happy to be able to announce, on the authority of an official communication from the President of the Pennsylvania Senate to Dr. Styrap, has resulted in the annulment, by the State Legislature, of the Charters of the offending University of Philadelphia, and of the kindred Eclectic Medical College of Pennsylvania.

In reference to the Shropshire 'Sick Club Movement' initiated, in 1869, with the view to effect a mutually satisfactory and equitable arrangement relative to 'Club Attendance' and 'Club Pay', your Council would briefly remark that, while in some districts its true nature and objects have been understood and appreciated, in others they have been persistently, if not wilfully misrepresented; and the result in one district has been the formation of a 'General Medical Aid Association' by the union of several Courts of Foresters, and the appointment of a Surgeon to attend exclusively thereto. How far the medical arrangements are likely to conduce to the general interests of the seceding Courts by a decrease, or otherwise, upon the fund for 'sick pay', time will show.

Debarred, however, as the officer is from private practice, your Council need scarcely remark that the pittance of salary offered is but ill-calculated to attract or retain other than immature, unskilled advice of the young, or of the 'ne'er-do-well', needy practitioner! All such associations will do well to realise and apply the fact—the like principle being commercially recognised throughout the world—that 'cheap doctoring' (excepted that extended to the poor by public hospitals and kindred institutions,) is a great and costly mistake, and infringes the well established rule respecting labour, viz.: 'That, unless remuneration bear a just relation to the duties performed, there can be no mutual confidence or satisfaction between employer and employed.'

How far, moreover, it is relatively right and consistent with the homely and equitable rule of 'Live and let live", that such associated clubs (*specially established for working men and their families*) should not only admit to membership *tradesmen* and others, whose position in life render them well able to pay the customary medical fees, but (if report be true) seek to extend their sphere of action, and utilise their surgeon by tendering his services for the medical care of the parochial poor, your Council stay not to discuss; nor yet the pernicious system of allowing, at the charge of *one shilling per annum*, not merely the sons and daughters (under 14 years of age) of members, but their relatives and friends—in fact, any person—on payment of one shilling and a penny per quarter, to avail themselves, on the accession of illness, of the professional services of the medical officer; a principle of financial polity so evidently unsound, that it must ere long, if carried out to any extent, materially affect the stability of the Society. [Rumour affirms that there is already an excess of expenditure over receipts.]

Your Council, in justice to the 'retired' medical officers of the associated clubs, deem it right to observe that the solicited increment (for the special reasons assigned) to their club pay was *from* a fraction less than *a penny*, *to* a fraction less than *a penny farthing*, per member, per week—which sum included medicines and attendance within a radius of three to four miles from the club-house, or residence of the doctor.

In face of the menacing strikes and combinations of the artisan and other classes for a considerable increase of wage and decrease of labour, the curt refusal to accede to so moderate and reasonable a request on the part of the ill-paid members of a skilled profession would seem to evince but a slight and selfish appreciation of the wise maxim of 'doing unto others as we ourselves would wish to be done by.'

At the same time, it is much to be regretted, when an important principle affecting a generally admitted defective system of club remuneration and attendance was being contested by the local profession, that a non-resident practitioner should, under the exceptional circumstances, apply for and accept the appointment. Action so unprofessionally selfish needs no comment, and sooner or later will reap its own reward.

Hopes were justly entertained, that, upon a careful review of all the circumstances which your Council (who had no personal pecuniary interest whatever in the matter), submitted for the consideration of the respective clubs, the members would have seen not simply the *justice* but the *policy* of remunerating their surgeons on a scale more commensurate with the value of their services than the current one, and one better calculated to promote that mutual confidence and respect which should subsist between the members and their medical officers; for although inadequate payment affords no justification for the least omission of duty on the part of the latter, still, the probability, nay, the moral certainty, cannot be ignored, that a fair and liberal remuneration would, by securing increased medical attention, tend (humanly speaking) to shorten the duration of disease; and thus, to no inconsiderable amount, lessen the demand upon the club funds for 'sick pay.'

As regards the Branch Tariff of Medical Fees—more especially intended as a suggestive guide for the junior practitioner—your Council, while freely admitting its various defects, are led to infer from the fact that the able and cautious Editor thought well (as did also the Editor of the *Gazette Médicale de Lyon*,) unsolicited, to print it in extenso in the pages of the JOURNAL, as well as from the general approval accorded to it by the profession—that their co-operative efforts to effect a solution of an admittedly difficult question, have not been altogether unsuccessful or unappreciated.

The last, though certainly not the least agreeable, topic to which your Council have to allude, is that of the Annual Meetings; at which, as many of you are aware, they have ever been somewhat averse to the reading of elaborate scientific papers—believing, as they do, that the majority of the members, escaped for a brief period from the harassing daily anxieties incident to professional life, would rather look upon such meetings in a social than a scientific point of view, and prefer availing themselves of the opportunity for friendly communion, the renewal of old acquaintance, and a cheery recital of the reminiscences of by-gone days. Nevertheless, they are of opinion that if each thoughtful practitioner (especially their rural brethren, who are necessarily thrown so much upon their own individual resources than are practitioners in populous towns,) were to jot down, as briefly as may be, any successful deviation from the ordinary treatment of disease which may occur in his practice, and favour us with the result at the Annual Meetings, we should ere long be furnished with a mass of valuable practical hints, which, at present, are simply stored up in the brain of the busy practitioner; and, on his decease, too often lost to suffering humanity. In the hope of inducing others to follow in the suggested path of observation and record, several members have, in deference to the wishes of your Council, promised to contribute a few stray notes.

In concluding their remarks, your Council, with such pleasing reminiscences of the past, confidently anticipate that the present re-union will be characterised by the same harmony and good feeling that have so happily distinguished former festivals—a result which cannot fail to exercise an important local influence, and at the same time tend to cement still more strongly the existing bond of union amongst the members of the Branch.

EDUCATIONAL VACCINATING-STATIONS.

IN order to provide for the granting of those Special Certificates of Proficiency in Vaccination, which, under the Regulations of the Privy Council, are required to be part of the Medical Qualification for entering into contracts for the performance of Public Vaccination, or for acting as Deputy to a Contractor, the following arrangements are made.

1. The Vaccinating-Stations, enumerated in the subjoined list, are open, under conditions appointed by the Privy Council, for the purposes of teaching and examination.

2. The Public Vaccinators officiating at these Stations are authorised by the Privy Council to give the required Certificates of Proficiency in Vaccination to persons whom they have sufficiently instructed therein.

3. The Public Vaccinators, whose names in the subjoined list are

printed in *italic letters*, are also authorised to give such Certificates, after satisfactory examination, to persons whom they have not themselves instructed.

Cities and Towns.	Places used as Educational Vaccinating-Stations.	Public Vaccinators authorised to give Certificates of Proficiency.	Days and Hours of attendance.
London	PRINCIPAL STATION: Surrey Chapel, Blackfriars Road.	*Mr. J. F. Marson.*	Tuesday, Thursday; 1.
—	NORTH-W. STATIONS: 1.—Marylebone Institution, 15, Lower Seymour Street.	Mr. W. A. Sumner.	Monday; 9-11.
	2.—Albion Hall, Grove Place, Lisson Grove.	Mr. W. A. Sumner.	Wednesday; 9-11.
—	WEST STATION: 9, St. George's Road, Pimlico, S.W.	Dr. E. L. Webb.	Thursday; 10.
—	EAST STATION: Eastern Dispensary, Leman Street.	Mr. C. T. Blackman.	Wednesday: 11.
—	NORTH STATION: Tottenham Court Chapel, Tottenham Court Road.	Mr. W. E. G. Pearse.	Monday, Wednesday; 1.
—	SOUTH-W. STATION: 2, Regent Place, Horseferry Road.	Mr. W. E. G. Pearse.	Tuesday; 2.
—	STRAND STATION: Charing Cross Hospital.	Mr. R. W. Dunn.	Monday; 10.
Birmingham	STATION 1: School Rooms, 27, Old Meeting Street.	*Dr. E. Robinson.*	Monday; 11.
—	STATION 2: Working Men's Mutual Improvement Society, Barr Street.	*Dr. E. Robinson.*	Tuesday; 11
—	STATION 3: St. Mark's School Rooms, St. Mark St.	*Dr. E. Robinson.*	Wednesday; 11
—	STATION 4: Islington Assembly Rooms, 42, Broad St.	*Dr. E. Robinson.*	Thursday; 11.
Bristol	The Public Vaccination Station, Peter St.	*Dr. H. A. P. Robertson*	Wednesday; 10.
Exeter	Odd Fellows' Hall, Bamfyld Street.	*Mr. C. H. Roper.*	Thursday; 3.
Leeds	23, Burmantofts Street.	*Mr. F. Holmes.*	Tuesday; 3.
Liverpool	4, Oldham Street.	*Mr. A. B. Steele.*	Thursday; 2.
Manchester	159, Rochdale Road.	*Mr. E. S. Guest.*	Monday; 2.
Edinburgh.....	The Royal Dispensary.	*Dr. W. Husband.*	Wednesday, Saturday; 12.
Glasgow.....	The Hall of the Faculty of Physicians and Surgeons.	*Dr. J. Dunlop.*	Monday; 12.
—	The Royal Infirmary.	Dr. R. D. Tannahill.	Monday, Thursday; 12.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Queen's Hotel, Birmingham, on Wednesday, the 13th day of November next, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

37, Great Queen Street, 24th October 1872.

SOUTH EASTERN BRANCH.

NOTICE is hereby given that a special meeting of the Executive Council of the Branch will be held at Laker's Hotel, Redhill, on Thursday, November 7th, 1872, at a quarter to three o'clock, for the following purposes, viz.:—1. To elect a President for the year 1873-4, the gentleman who was nominated at the last annual meeting having declined to serve.—2. To elect new members.—3. To consider, etc., the new Public Health Act.—4. For any other business that may be found necessary.

As the Public Health Act is a subject of much importance, all members of the Branch who take an interest in it, whether they are members of the Council or not, are invited to attend, and express their opinion.

Dinner, as usual, will be provided at five o'clock.

ALFRED CARPENTER, M.D. (Croydon), *President.*
G. FREDK. HODGSON (Brighton), *Honorary Secretary.*

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

THE November meeting of the members of this district will take place at Brighton, on Tuesday, November 19th; Dr. WITHERS MOORE in the Chair.

Members are requested to attend prepared to express their views on the Public Health Act.

A leading feature of the meeting will be a visit to the new Marine Aquarium, the directors of which offer free admission on the occasion; and the manager, Mr. Lord, has kindly promised to conduct the members and direct attention to the characteristics of the more remarkable occupants of the tanks.

Dinner will be provided as usual.

THOMAS TROLLOPE, M.D., *Honorary Secretary.*

35, Marina, St. Leonard's-on-Sea, November 1872.

SHROPSHIRE SCIENTIFIC BRANCH.

THE annual meeting will be held in the History and Antiquarian Museum, Shrewsbury, on Wednesday, November 20th, at 1.30 P.M.; Dr. H. NELSON EDWARDS, President of the Branch, in the Chair.

Papers will be read, and interesting specimens and objects exhibited.

Gentlemen intending to read papers will kindly communicate with the Honorary Secretary.

The Dinner will take place at the George Hotel at 4 o'clock, for 4.30 exact time. Members can introduce friends.

SAMUEL WOOD, F.R.C.S., *Honorary Secretary.*

Shrewsbury, October 30th, 1872.

WEST SOMERSET BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held at Yeovil, on Thursday, October 17th. Sixteen members and visitors were present. The party, who had previously been invited to partake of luncheon at the residence of the President, E. C. GARLAND, Esq., assembled at the Yeovil District Hospital at 4 P.M. This new and pretty-looking building, which has only just been erected, was inspected with interest by the meeting. It stands on an elevated triangular piece of ground immediately outside the town, at the fork where the Preston and Ilchester roads meet. A striking feature of its exterior which at once catches the eye is a large open balcony, thrown forward from the whole front of the hospital, and covered by a projecting roof; it is intended for the use of bedridden or other patients, who may be wheeled out from the wards above and below, and left to enjoy the open air under cover. The wards are small but lofty, and well lighted and ventilated; they are intended to receive twenty patients, but as yet, for want of funds, the house is unfurnished, and the dispensary department alone is in use for out-patients.

Mr. GARLAND having taken the Chair, the Secretary produced letters of regret from gentlemen unable to attend.

Question of breaking through an Objectionable Rule of a Foresters' Club.—A letter from Dr. CLARK, of Dunster, was read, asking if the profession would support him in breaking through one of the rules of a foresters' club to which he was surgeon, which rule required the surgeon "to examine for admission *all sent to him.*" He had refused to examine a man whom he thought able to pay differently from the club rate, and had in consequence been suspended; and he thought such men as farmers and the better class of tradesmen ought not to be allowed to join such clubs. The question having been discussed, and some strong opinions expressed condemnatory of all clubs as acting injuriously to the interests of the profession, the following resolution was passed:—"That the meeting considers the rules of the foresters' club should be framed so as to exclude as members such persons as Dr. Clark alludes to in his letter, viz., persons above the station of artizans and labourers, or persons earning wages above what that class of men obtain in the district, and while considering that Dr. Clark is deserving of support in his efforts to raise the status of the profession, they think he was wrong in refusing to examine a candidate for admission, having accepted office under rules requiring him to do so."

Case of Gangrene.—Mr. FRANCIS J. C. PARSONS read the case of a boy in whom gangrenous inflammation of the right hand and arm occurred, followed by symptoms of pyæmia, which the action of carbolic acid given internally appeared to rapidly counteract and arrest; during recovery, skin-grafting had greatly helped to bring about rapid cicatrisation. The case presented many points of great interest, and led to a lively discussion.

Anæsthesia.—Mr. W. A. HUNT read a paper on anæsthesia, in which

he advocated the use of nitrous oxide gas for great no less than for minor operations, as being preferable to all other known anæsthetics, on the ground of the absence of danger in its employment, of its speedier action, and its freedom from any irritating qualities. He produced specimens of compressed gas, and of the same liquefied; and illustrated the mode of giving the gas by means of the apparatus now in common use for the purpose.

Old Bones.—Mr. PRANKERD showed a number of bones, portions of skeletons which he had dug up at Drayton, near Langport, and which he had no doubt belonged to natives who had probably been slain on that spot two thousand years ago. One thigh-bone presented a very respectable cure of fracture through the neck. The teeth in some lower jaws were perfect, but ground down like a horse's, probably from being used in a similar manner on rough food.

Pensions to Medical Men and their Widows (a Proposition).—A paper from the PRESIDENT under this title was postponed, the dinner-hour having arrived.

Dinner.—The dinner took place at the Three Choughs Hotel at half-past six P.M.; Joseph Moore, Esq., the Mayor of Yeovil, and some other visitors interested in and anxious to hear the discussion which was to follow, being present by invitation of the President.

After the usual loyal toasts, the question which had been submitted to each member of the Branch a month previously was put by the Chairman to each member round the table *seriatim*, as follows :—

"What is your opinion as to the desirability of establishing the provident system in connection with our hospitals and dispensaries, and as to the part which the profession should take in reference to this question?"

Written answers from some absent members were read by the Secretary, which, with most of the replies round the table, went to show that the profession suffered from the abuse of charities and provident institutions as now conducted. After an animated discussion, the following resolution was passed.

"That the provident system might be advantageously applied to the out-patient department of our infirmaries and hospitals, and in that respect deserves to be promoted by the profession; but that the initiative of the provident system other than that connected with the out-patient department of general hospitals should not be with the profession."

The dinner being over, the Mayor invited the party to finish the evening at his house, where a very pleasant evening was concluded.

YORKSHIRE BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held on October 22nd, at the Royal Hotel, Scarborough; C. G. WHEELHOUSE, Esq., President, in the Chair.

Papers.—The following papers were read.

1. Case of Rupture of the Spleen. By T. Deville, M.D.
2. On some Epileptiform Cases treated with Bromide of Potassium. By A. G. Myrtle, M.D.
3. Illustrations of the Surgical Use of the Aspirator. By T. R. Jessop, Esq.
4. A few cases treated by Electricity; and the employment of Pincuss's Battery. By P. Nicol, M.D.
5. Hydatidiform Mole. By J. Ure, L.K.Q.C.P.

The Public Health Act.—A letter was read from Dr. EASTWOOD, suggesting that the Public Health Act (1872) should be brought forward for discussion. This, however, was prevented by want of time.

Dr. Calavtarients exhibited a most ingenious invention, illustrated by a model, for the prevention of bursting of leaden pipes during frost, which he has patented.

Dinner.—After the meeting, which was a most successful one, thirty-one members dined together, the chair being occupied by Mr. Wheelhouse.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

NON-COLLEGIATE STUDENTS.—There has been a marked increase during the present term in the number of non-collegiate students in the University of Cambridge, proving apparently that the advantages offered by this mode of residence, especially to students of narrow income, are becoming more generally known in the country than heretofore. Since the scheme was established, in 1869, eighty students have been admitted. A considerable number of the students are given to the pursuit of natural science, facilities for which are liberally provided by the University and several colleges for the benefit of all. Experience of the cost of living, with severe economy at Cambridge, leads to a result very like that arrived at Oxford. The University payments at Cambridge for nine terms' residence and the B.A. degree do not much exceed £30; books, and some additional instruction, sufficient in the case of an ordinary student, may raise this amount to £50 or £60. Several have gained high distinction.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

MR. THOMAS LAND, late medical officer for the Leeds Workhouse and Industrial Schools, has been granted a superannuation allowance of £50 *per annum* by the Board of Guardians, which has been sanctioned by the Local Government Board.

THE ADULTERATION ACT.

AT a large meeting of the Association of Medical Officers of Health, held on October 28th, 1872, it was resolved that the following suggestions for the effective working of the Adulteration of Food, Drugs, etc., Act, 1872, should be printed and circulated.

1. That, in their opinion, the Adulteration of Food Act, 1872, notwithstanding its imperfections, is capable, with proper management, of being made an important and valuable public measure; but to this end it will be necessary to carry out its several provisions in the fullest and fairest manner, having proper regard for the interests of commerce and trade, as well as for those of the public.

2. That, if the Act be put in force in this metropolis, it will be most desirable and expedient that the several analysts appointed by the Vestries and District Boards should work conjointly, and in accordance with some pre-arranged system. This will not only be the means of securing uniformity of results and agreement of opinions, but it will also serve to check the conflict of scientific testimony, and will afford the best guarantee for the full, fair, and effective working of the Act.

3. That to this end, as well as for the sake of economy, it is advisable that all the work of analysis throughout the metropolis should be performed in as few laboratories as possible, say two; and that skilled assistants should be constantly engaged therein to conduct the analyses, under the superintendence and in the presence of the appointed analysts.

4. That, as this will entail a large expense, it will be necessary for each of the Food Analysts appointed by the Vestries and District Boards of the metropolis to contribute, *pro ratâ*, according to the amount of the work done, towards the maintenance of the said laboratories, etc.

5. That, guided by the practical experience of two of the members of the Committee, namely Dr. Letheby, the Professor of Chemistry in the College of the London Hospital, and Dr. Stevenson, the Lecturer on Chemistry at Guy's Hospital, the Committee are of opinion that the work of analysis, etc., under the Act, cannot be fully and effectually performed at a less charge to the Vestries and District Boards of the metropolis than from one to two hundred pounds per annum to each of the appointed analysts; for, in considering the question of salary, the Committee have had regard, not merely to the great expenses of the laboratory, but also to the time and attention required from each of the analysts, in the supervision and conduct of his laboratory work, and in the proceedings which must arise out of it.

6. The Committee are strongly of opinion that, if a too strict economy be exercised by the local authorities who are appointed to carry out the provisions of the Act, whether in this metropolis or in the country, the objects of the Act will not be attained, and the interests of the public will not be served; for the Act will either become a dead letter, as in the case of the Act of 1860, or it will be made the medium of persecution, and perhaps also of the most offensive quackery. Already there is evidence of this, and we submit, for the earnest consideration of local authorities, that those who are appointed analysts under the Act, should be strictly debarred from giving any certificate or testimonial as to the purity or impurity of any article of food, or drink, or drug, other than for the purposes of the Act, and every certificate should be so worded as to prevent its use for advertising trade purposes.

7. As the success of this Act will largely depend upon the manner in which the duties cast on the Inspector are carried out, it is considered advisable that he should be under the direct control of the local authority or of the analyst in purchasing or procuring samples of food, drink, or drug, for analytical examination.

HY. LETHEBY, M.B., *President.*

MEDICAL OFFICER OF HEALTH FOR HALIFAX.

It may be well to invite attention to some facts in reference to the recent election of a medical officer of health for Halifax. The importance of such an office, and the high attainments that should be possessed by the applicant, have been freely discussed in the pages of the JOURNAL by ourselves, and by authorities such as Acland, Rumsey, Stewart, and Letheby. When we learn that the Halifax Corporation have selected a practitioner who not only practises homœopathy, but allows his name to figure on the fly-leaf of the *Halifax Parish Almanack* for this year, in conjunction with the advertisement of a homœopathic chemist, as being in daily attendance at his establishment, it is plain that there is something radically wrong in the mode of election, which can result in what is nothing less than a public scandal, an insult to the profession at large, and to the gentlemen who offered their services. We have been favoured with a list of the practitioners who applied ; and the simple consideration of their names and qualifications will at once show that they possessed fully adequate attainments, and all had ampler claims to the office than the person selected. The list is as follows. J. H. Wright, Esq., M.R.C.S. & L.S.A., Senior Surgeon to the Halifax Infirmary, and Assistant-Surgeon 6th West York Militia.—T. M. Dolan, Esq., L.R.C.S.E., L.R.C.P.E., L.S.A., Medical Officer Halifax Union Workhouse and Fever Hospital.—J. A. Synnott, Esq., M.D., M.R.C.P.Ed., L.F.P. & L. Glas., Assistant-Surgeon 8th West York Artillery.—A. Jukes, Esq., M.R.C.S., L.R.C.P.Ed., House-Surgeon Halifax Infirmary.—N. J. Dougall, Esq., L.F.P. & S. Glas., and L.R.C.P.Ed.—Mr. Ainley, M.R.C.S., was the one selected by the Sanitary Committee, and his appointment has been ratified by the Town Council. Amongst the duties attached to the office, he will have to attend the Halifax Borough Fever Hospital, without possessing a diploma in medicine—setting aside his homœopathic tendencies. When we read the qualifications possessed by the other candidates, we cannot but consider that other influences than merit and medical attainments have played the primary part in securing such a result. The provisions of the Public Health Act require alteration, to prevent a repetition of such a *fiasco*. It is to be hoped that the members of the profession residing in the town will at once take steps to express their disapprobation of such proceedings by transmitting a protest to their own member, the framer of the measure. It is not a little remarkable that this gross outrage on propriety should have been perpetrated in the borough represented by Mr. Stansfeld. We are not aware whether this appointment has been, or will be, submitted for approval to the Local Government Board. The election to the post of medical health officer of the one candidate who possessed the smallest amount of legal medical qualification, and who necessarily stands outside of professional intercourse, and cannot count upon, and will not receive, the essential professional co-operation of medical men in the borough, is an example of the sort of thing that may be expected from the mode and area of election which Mr. Stansfeld chose to adopt, in spite of the most authoritative remonstrance.

SMALL-POX GRATUITIES.

The guardians of St. Marylebone, at their last meeting, unanimously agreed to award the following gratuities to their medical officers for their services during the past epidemic of small-pox. The several amounts are based on the number of cases, viz.: to Mr. Clapp, £25; to Mr. Benson Baker, £15; to Dr. Thomas, £10.

POOR-LAW MEDICAL OFFICERS' SUPERANNUATION.

The guardians of St. Marylebone have recommended that a superannuation of £35 *per annum* should be allowed to the Medical Officer of St. Mary's District, on the ground that he was permanently disabled, through ill health, from performing the duties of the office. Mr. Elkins was appointed in 1857, at a salary of £100 *per annum*, out of which he had to find all drugs and appliances. In computing a superannuation allowance, the cost of drugs, if found by the medical officer, is deducted, and the average extra fees *per annum* added, in order to obtain the net salary on which to base an estimate of the superannuation to be allowed. This, at the option of the guardians, may be the minimum of one-third, or the maximum of two-thirds of the net salary, subject to the approval of the Local Government Board. In the interest of the Poor-law Medical Service, it is very important that, in all cases where superannuation is granted, the fact and circumstances should be recorded in the JOURNAL. Nor is it less important where the superannuation is not recommended by local boards of guardians, that the grounds for their non-compliance with the Superannuation Act should be stated, in order that the discretionary power now vested in boards of guardians, if systematically abused, may be removed by amending the Act, so that the Local Government Board may have the power to superannuate medical officers in cases where guardians have, through local parsimony, failed to comply with the spirit and letter of the Act.

It is a regulation of the Local Government Board that, when a medical officer is appointed, he shall name some legally qualified gentleman who will act as his deputy in his unavoidable absence. Such deputy may be his partner or legally qualified assistant. As a rule, the medical officer must personally perform the duties pertaining to his office. It is not competent for him to delegate those duties to his partner or qualified assistant. A deputy or assistant is only to attend under exceptional circumstances, and then a notification of such attendance should be entered in the case-book in red ink.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 24th, 1872.

Bedford, Charles William, Brighton
Clark, Peter, Stathern, Leicestershire
Finzi, Judah Moses, Gower Street, W.C.
Hopkins, Rees, Pontypridd, Glamorganshire
Le Mottée, George Herbert, Guernsey
Parker, George Williams, New Cross Road, S.E.
Read, Charles, Jewin Street, E.C.

The following gentleman also on the same day passed his primary professional examination.

Smith, Herbert Neale, Guy's Hospital

As Assistants in compounding and dispensing medicines.

Harley, Edward Thomas, Enfield, Middlesex
Taylor, Stephen John, Westbury, Wiltshire

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK INFIRMARY—House-Surgeon: £105 per annum, furnished apartments, attendance, coals, and gas.
CENTRAL LONDON OPHTHALMIC HOSPITAL—Assistant-Surgeon.
CHARING CROSS HOSPITAL MEDICAL SCHOOL—Demonstrator of Anatomy: £150 per annum.
CRAIGNISH, Argyleshire—Parochial Medical Officer.
DURHAM COUNTY LUNATIC ASYLUM, Sedgfield, Ferryhill—Assistant Medical Officer to the Female Department.
FRIENDLY SOCIETIES MEDICAL INSTITUTE, Northampton—Medical Officer: £180 per annum, with residence.
HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square—Two Consulting-Physicians.
LANCASHIRE—Surgeon to County Prison at Kirkdale: £160 per annum.
LEPER HOSPITAL, Waterford—Apothecary.
LIVERPOOL—Third Medical Inspector of Emigrants at Liverpool: £300 per ann.
MANCHESTER ROYAL INFIRMARY—Two Assistant-Physicians.—Two Assistant-Surgeons.—Ophthalmic Surgeon.—Obstetric Surgeon.—Dental Surgeon.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Honorary Assistant-Physician.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Swiney Lecturer.
MIDLAND MEDICAL SOCIETY, Birmingham—Two Honorary Secretaries.
NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Newman Street—Consulting Physician.—Junior Physician.
NEWCASTLE UNION, co. Limerick—Medical Officer for the Broadford Dispensary District.
NEWTON ABBOT UNION, Devon—Medical Officer for the Workhouse: £50 per annum.—Medical Officer and Public Vaccinator for the No. 4 District: £67 : 10 per annum.
NORFOLK AND NORWICH HOSPITAL—Assistant-Surgeon.
PORTSEA ISLAND UNION—Medical Officers for the Southsea and Landport Districts: each £70 per annum, and midwifery fees.
ROYAL MEDICAL BENEVOLENT COLLEGE, Epsom—Treasurer.
SHEFFIELD PUBLIC HOSPITAL and DISPENSARY—Assistant House-Surgeon: £65 per annum, apartments, washing, and board.
SOUTH CHARITABLE INFIRMARY and COUNTY HOSPITAL, Cork—Resident Surgeon, Apothecary, and Secretary: £100 per annum, residence, coal, gaslight, attendance, etc.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

MORRIS.—On October 27th, at 13, Somers Place, Hyde Park Square, W., the wife of *James Morris, M.D.Lond., Fellow of University College, of a son.

MARRIAGES.

*ROBERTS, John D., Esq., Surgeon, Southwark Bridge Road, London, to Ellen, daughter of the late Richard WILLIAMS, Esq., of St. Austell, at St. Austell, on October 22nd.

*SIMPSON, Alexander Russell, M.D., Professor of Midwifery, etc., in the University of Edinburgh, to Margaret Stewart, daughter of George F. BARBOUR, Esq., of Bouskeid, Perthshire, at 11, George Square, Edinburgh, on October 29th, by the Rev. Charles J. Brown, D.D., Moderator of the Free Church General Assembly.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. General Meeting for making such alterations and additions to the Laws as may be thought necessary. Dr. Goulson, "A Case of Hæmatoma of the Vagina"; Mr. Jabez Hogg, "On the Relation of Cataract, Stricture of the Urethra, and Enlarged Prostate".

TUESDAY.—Pathological Society of London, 8 P.M. The following specimens will be exhibited:—Dr. Duffin: Peri-nephritic Abscess. Mr. Hulke: Multiple Dermoid Cysts; Calculus removed from the Neck, the nucleus of which is formed by a fragment of Wood; Stricture of the Rectum. Mr. Lawson Tait: Cystic Polypus from the Uterus. Mr. Norton; Loose Cartilage removed from the Knee-joint. Mr. Croft: Chronic Herpes—a living subject. Dr. Tilbury Fox: A Case and Specimen of Sclero-derma. Dr. Crisp: Gordius in the Lungs of Sheep. Dr. Moxon: Abscess of the Liver bursting through Hepatic Vein into Cava and Right Heart; Acute Interstitial Pneumonia. Mr. Cripps Lawrence: A Serous Cyst presenting at the Anterior Fontanelle; Constriction of the Left Humerus by the Funis.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Dr. Wallace, "On Vaginal Stethoscopy"; Dr. Edis, "On the Systematic Examination of the Abdomen, with a view to the Rectifying of Mal-positions"; Dr. Meadows, "On a Case of Extra-uterine Fœtation"; and other papers.

THURSDAY.—Harveian Society of London, 8 P.M. Mr. H. Power, "On Wounds of the Eye."—Hunterian Society, 8 P.M. Council Meeting, 7.30 P.M.

FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. George Lawson will exhibit a patient from whom he has removed a large Cancerous Growth from the Antrum by Excision and the application of Chloride of Zinc Paste; Dr. Duffin, "On the Value of Puncture in Hydatid Tumour of the Liver"; Dr. G. Johnson, "A Case in which Trismus and Facial Palsy were apparently excited by a Foreign Body in a Wound on the Cheek"; and other papers.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

COW-POX LYMPH.—A correspondent at Valencia, in the South of Spain, wishes to obtain a small supply of "Gloucester" cow-pox lymph, as he call it. Small-pox is raging, he says, terribly at that town and at Barcelona. Can any of our readers afford information as to the means of procuring the lymph?

PHOSPHORUS IN NEURALGIA.

SIR,—In the JOURNAL of October 26th, there is a note from Mr. Bradley of Manchester, in which he gives the results of his trial of phosphorus in neuralgia. One point in it puzzles me; namely, that there is a tincture of phosphorus (which he describes as phosphorus dissolved in alcohol in the proportion of one to ten).

Now, I do not profess to know anything about homœopathic preparations, but as phosphorus is only soluble sparingly in alcohol, I do not see how a tincture can be prepared of the strength stated. I shall be glad to learn from Mr. Bradley or any other of your correspondents if the said tincture is of the said strength, and if so what is the solvent employed, as I should like to try it in a suitable case, but am unwilling to do so until I know what I am giving.

I am, etc., GEO. D. BROWN.

Ealing, Oct. 29, 1872.

SIR,—Permit me to refer Mr. S. M. Bradley to "Practical Hints on Treatment of Nervous Pain and Neuralgia", by C. B. Radcliffe, M.D., BRITISH MEDICAL JOURNAL, November 7th, 1863, p. 489, and a case therein reported as successfully treated by phosphorus. Possibly the homœopath may have been fortunate enough to read this paper.

I am, etc., MARTIN WOODWARD.

Pershore, Worcestershire, Oct. 30, 1872.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

DR. LAUCHLAN AITKEN (Rome).—It shall be attended to.

IRISH POOR-LAW REFORM.

SIR,—It is proposed to hold a meeting of the county representatives of the Irish Poor-law Medical Officers' Association some time before the commencement of next session of Parliament, in order to submit a detailed report of the grievances of the service to the President, Sir Dominic Corrigan, and such other members of Parliament as may be present, and to consider what may be the best means to adopt for their redress.

The question of permissive superannuation, under the 32 and 33 Vict., cap. 50, will form a subject for discussion, and it would be very important for us to know in how many instances it has been refused. On referring to the last report of the Poor-law Commissioners, I find that but thirty-two medical officers have been superannuated since the passing of the Act in Aug. 1869; of these twelve, or more than a third, have got less than two-thirds of their salary, the amount provided for by the Act. I am aware that there are many instances in which the superannuation has been refused, I would feel much obliged if the readers of your JOURNAL would let me know the names of the gentlemen to whom, and, if possible, the circumstances under which superannuation has been refused, in order that the report may be complete on this point, which is a very important one. I am not aware that the provision of the Union Officers (Ireland) Superannuation Act, the 35th and 36th Vict., cap. 89, has yet been availed of by any dispensary medical officer, as it only has existed since the 10th of August last; but if such has taken place, it would be important that the fact should be communicated to me without delay.

As some controversy exists about the history of the passing of the latter Act, I may mention that we are solely indebted for it to the exertions of Sir Dominic Corrigan, and that its true history will be found in the last report of the Irish Poor-law Medical Officers' Association, dated 3rd June, 1872, and which is long since in the hands of every Poor-law medical officer in Ireland.

I am, etc., D. TOLER T. MAUNSELL,
Secretary Poor-law Medical Officers' Association, Ireland.
1, Harrington Terrace, Dublin.

DR. H. M. JONES (Cork).—The paper has been received.

CURIOUS.—The Treasurer of the Aberdeen Royal Infirmary acknowledges two recent donations of a kind which reminds one, somewhat circuitously perhaps, of the mysterious and oft amusing advertisements of the *Times* and *Scotsman*. The gentleman in question has received towards the funds of the Infirmary the sum of five shillings, representing the generous reward paid to the donor in London for returning a lost sum of five hundred pounds to the owner; while a part *solatium* for personal damages sustained in Glasgow by the second charitable personage amounts to the sum of ten pounds. We trust that the person or persons who had to pay the damages may know where the *solatium* has gone, and henceforth feel that

"The drying up a single tear has more
Of honest fame, than shedding seas of gore."

MEDICAL ASSISTANTS.

SIR,—I know of no subject which at the present juncture of intricate propositions in reference to medical education, which demands a more careful solution than that of medical assistants. Assistants are of immense value; and when competent, are greatly prized by their employers. They have it in their power to save a principal a deal of time, and are able also to relieve him of a moiety of anxiety in many cases. If assistants could be imbued with the knowledge that they may learn a great deal in their situation, which is of immense value in their after life, they would be more anxious to remain where they are, as subordinates, and would sooner be able to take the part of principals than they often do under existing circumstances. To detail experience in quest of a good assistant, would be to describe circumstances more varied than any one would imagine. As a principal, having come into contact with all sorts, I could alternately amuse and horrify. Lately I had an assistant who undertook to do dispensing, and could not read a prescription properly. Even chalk mixture was an enigma. Labels were wrong in almost every instance, and conceit and ignorance were the paramount features in a self-complacent individual who produced testimonials, so called, of competency and ability. It is absolutely requisite for the safety of the public, that these embryos should be weeded out of the profession; they are positively dangerous to the community. There are hosts of such floating about for situations, which they very rarely keep more than a few weeks, to be drifted again from situation to situation.

I am, etc.,
October 7th, 1872. MEDICUS.

A. P. L. M. I. naïvely suggests that, if Poor-law medical officers do not like the invidious responsibilities of the new offices of Public Health, they can decline the office; and he does not understand the lamentation over those conditions. His argument is terse, if not complete: "If you don't like it, leave it." But he omits to consider that there is a great public and professional interest to be served by making the conditions of such offices so far satisfactory that the right men should not be driven from accepting them. It is not those who will most thoughtlessly or rashly accept conflicting and dangerous duties, who are always the safest public officers. It was and is right that health-duties should be attributed to Poor-law medical officers, but under conditions which are generally acceptable and fair, and which do not place honest men's interests in direct conflict with their duty. The rapid reasoning of our correspondent is not very profound.

WE are indebted to Dr. Samelson for his communication.

SIR,—I shall be glad to know if the following case is one that is occasionally met with, never having seen it myself before. A young man, eighteen years of age, whilst running over some uneven ground, suddenly felt as if a stone had been thrown at him, striking him on the hip, and then felt that he could not move again. He was carried home, and upon my arrival an hour afterwards I found that he was unable to draw his leg forwards, and upon examination I found the one head of the rectus femoris muscle torn from its attachment to the ilium, with a piece of the bone, of about the size of half a damson, perfectly movable, so much so that distinct crepitus could be felt by moving the surfaces of the fractured parts together, I flexed the thigh, and applied a pad with figure-of-8 bandage round the pelvis and thigh. At the end of two weeks, union had taken place with formation of callus, and in another week he could walk about with some little difficulty.

I am, etc., WM. EDW. HYDE.

Leominster, Oct. 21st, 1872.

Contagious Diseases Acts.

Sir,—It is clear that, if women will apply voluntarily to hospitals when diseased, there can be no necessity for police spies or for such hateful perquisitions of healthy women as are carried out under these Acts, and yet the supporters of the Acts have all given most conclusive evidence that women are delighted to apply to hospitals when diseased. Thus the memorial addressed to Mr. Bruce by certain members of the profession, praying for the maintenance of the principle of the Acts, states that women flock in crowds to hospitals when diseased, in order to be treated, and that there is no difficulty whatever in obtaining their attendance.

In p. 10 of the Blue-book containing the report of the Lords' Committee, I find the following: "It has been amply shown, by evidence before the committee, that the very efficiency of the Act tends to lessen its success by inducing diseased prostitutes to flock into the places where it is in operation in order to gain the benefit of treatment in hospital." In p. 13 of the same report, Mr. Veasey remarks, "That the periodical examinations were unnecessary simply because the hospitals were filled with voluntary patients without it." Mr. Mallalieu, in reply to Earl Nelson (2187), remarks that "the hospitals attracted diseased women, who were eager to take advantage of the relief offered by the hospital in Portsmouth; for instance, they came in from Southampton and Winchester for the purpose of being treated." Mr. Berkeley Hill (2285) said, in answer to the chairman, "that diseased prostitutes came to districts where the Act was in force, and when they are found out, the worst punishment that awaits them is simply what they want themselves; namely, to get into hospital." Dr. Peter Leonard says: "The women would submit to anything rather than be without some place where they could go to to get cured." Mr. Woolcombe (2536) says: "There has been a considerable importation of women; they have come into town from other quarters for the purpose of getting admission into the hospital; they have come from the lower end of Cornwall and various other places; the women are certainly amenable to kindness and careful good treatment to an extent which is very satisfactory." Mr. Skey (2617) says: "As to women refusing to enter the lock hospitals, I do not believe it at all; my experience and observation of them would enable me to say that there is no objection whatever on their part." The chairman replies: "I do not think the evidence we have had militates against what you say. The women are willing enough to enter the lock hospitals." Mr. Paget (2677) is asked, Do you think women generally of that class would voluntarily enter the hospitals, if there were hospitals established in every locality? and replies, "I think they generally would—the lowest of them certainly would—and the lowest are, on the whole, the greatest propagators of the disease." The Rev. J. G. Bailey of Chatham says: "We have had instances of women coming from a distance—Canterbury, Dover, and Margate—and offering themselves voluntarily because they were diseased." He further says, "The Act defeats its object because the hospitals attract diseased women"; and so on *usque ad nauseam*.

It is possible, of course, that all the women who are diseased may not apply; but it is certain that with good management a much larger proportion would do so than could be got under police control. As Mr. J. R. Lane has remarked: "Much more good may be done by free hospitals than by police interference; police regulations can get only a certain number of women, whereas free hospitals will be resorted to by all who are suffering from disease, even by those who have contracted it clandestinely, and who would escape the police."

The promoters of these Acts argue as though the system they advocate brought all diseased women under control. Nothing can be farther from the truth; for the police espionage fosters clandestine prostitution, and induces women to conceal their diseases, and become permanent sources of infection rather than be thrust into the ranks of notorious prostitutes. Thus, in spite of all the efforts of the police in Paris, as appears from the report of M. Lecour, Chef of the Bureau de Mœurs, out of forty thousand prostitutes, not more than three thousand can be brought under control; and it is perfectly absurd to suppose that the system I advocated would not secure an immensely larger proportion than this; in fact, I am quite sure that, with careful management, women would come at once to have their minds set at rest, if they even suspected that they were diseased. As Mr. Holmes Coote has observed, all that is necessary is to "make provision that these women have ample accommodation to receive them in the hour of sickness and let such hospitals be readily accessible without unnecessary exposure or disgrace." We do not object to the treatment of disease, but we do say that the hospitals shall not be prisons, and that the doors shall be opened by Christian charity and not by the police.

The promoters of these Acts further state, that women do not know when they are diseased, will not apply in the early stages, and will not stay till they are cured; and assume that surgeons who examine one hundred and fifty women in two hours, including the signing of certificates, are able as a matter of course to detect the disease in any stage, and to say at once when it would be safe to permit of intercourse. All these ideas are fallacious, as Mr. Acton has observed, "Notwithstanding all assertions to the contrary, the best managed regulations cannot guarantee freedom from disease." The editor of the *Medical Times and Gazette*, referring to this fact, says "it is very frequently impossible to say by any mode of examination that may be devised whether a woman is in a contagious condition or not"; and Dr. Aitken says: "Medical inspections are formal, and look useful, but the infecting sore, the true syphilitic one, can rarely be detected in the female." In another part of his work, the same authority says: "The syphilitic sore, when it does occur in women, is readily overlooked, even when searched for with great care, aided by a vaginal examination with the speculum"; and Mr. Simon, certainly one of the first pathologists in Europe, says: "The various local states which most habitually spread the infection of true syphilis are constantly overlooked in examinations made expressly for their discovery." Puech and Fournier's tables also show that, out of 873 males coming under their care for constitutional syphilis, 625 contracted the disease from the public prostitutes of Paris. It is thus clear that examining surgeons cannot in a large proportion of cases detect disease; but it is also evident that the examinations give a false security, and tempt many into danger who would not otherwise have incurred the risk.

Moreover, although it is very possible that a woman may not know when she is diseased, it is certain that, if she be a prostitute, she will very soon find it out—far sooner than the surgeon would—because, although the disease cannot be detected by examination, it is known by its effects, and their paramours accuse them, under which circumstances they would gladly apply to such an institution as I have described. The assertion that they will not remain under treatment until cured is also untrue, as I shall be able to show from the voluntary system in the Lourcine and other hospitals, if you can afford me a little more space.

I am, etc., Thomas Worth, M.R.C.S.L.,
Formerly Surgeon to the Nottingham Union Lock Hospital.

Nottingham, Oct. 21, 1872.

Notices of Births, Marriages, Deaths, and Appointments, intended for insertion in the Journal, should arrive at the Office not later than 10 A.M. on Thursday.

Dr. Harris (Redruth) is thanked. His suggestion shall be attended to.

Hypodermic Use of Strychnia in Amaurosis.—Dr. Drummond (Royton) and Mr. Garman both write that they are injecting strychnia hypodermically, each in one case of impairment of vision from optic atrophy. The patients think there is an improvement; the doctors cannot see any. An American author, to whose paper we have mislaid the reference, finds only failure as the result of the treatment in the cases in which he has employed it. We report in another column some cases from Guy's Hospital.

Leeds General Infirmary.—Our Reporter writes: "The announcement made in the Journal of the 19th of a vacancy for a Resident Medical Officer was correct: the denial of it by your correspondent in the Journal of this day is incorrect. The announcement was made upon official authority, as is the following; namely, that Mr. J. J. Pickles was, on October 21st, in pursuance of the announcement which your correspondent has taken upon himself to deny, appointed a Resident Medical Officer. I hope you will, after this, request an explanation from your correspondent, Mr. McGill.—Oct. 26, 1872."

Medical Emigration.—I have a great inclination to emigrate to the United States or Canada, believing that a medical man has a better opportunity to lay by a little for a rainy day than he has in England. Where is the best place for a medical man to go—one that could put up with a little rough life for the chance of earning his daily bread, and having a little to spare; and where could I obtain full information on the subject? Information on this subject from any of your readers at home or abroad would interest many, and would oblige A. B. C.

The Cerebral Macula.

Sir,—I should like to ask Dr. Crichton Browne, whose able papers I have read with much interest in your Journal, what he means by "that singular modification of the cutaneous vascularity which is known as the cerebral macula", since he has made me a little alarmed as to the mental condition of a good many of my patients, both public and private. He evidently lays great stress on this phenomenon as a characteristic of melancholic insanity in his graphic account of the case of "Gill, F., in Ward 2." Indeed, his account of this case presents to my mind no further addition to the facts that the patient was "intensely wretched and had thought of suicide" beyond merely this, that he was of lymphatic temperament, and the subject of what I should unhesitatingly call chronic urticaria.

In spite of the assertions in most of the text-books that chronic urticaria especially attacks such persons as have transparent and delicate skins, I have met with it—I may say almost invariably—in people who have opaque and thick skins. I am glad so far to find myself in accord with so able a writer. But am I to be on the look out, in the case of those placid and contented looking persons who are, as a rule, the very cheerful and patient subjects of chronic urticaria, for so shocking a probability as that of melancholic insanity?

The only skin-disease that I have hitherto heard spoken of as associated with a tendency to suicide is one to which I have devoted especial attention, and the pathology of which I a short time since discussed at some length in your columns with a former editor of the Journal; viz., prurigo senilis. But Dr. Crichton Browne, if I apprehend him rightly, would add to this another cutaneous disease, which, although sometimes coexistent with prurigo senilis, is altogether independent of and distinct from it. I am, etc., Balmanno Squire.

9, Weymouth Street, W., October 21, 1872.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Oct. 26th; The Manchester Guardian, Oct. 30th; The Bath Express, Oct. 26th; The Orkney Herald; The Kirkwall Guardian: The Irish Times; The Newcastle Daily Journal; The Norwich Argus; The Lincolnshire Chronicle; The Pembrokeshire Advertiser; The Scotsman, Oct. 24th and 25th; The Liverpool Porcupine; The Evesham Journal; The Eastern Daily Press; The Retford News; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. T. R. Fraser, Edinburgh; Dr. Broadbent, London; Mr. Furneaux Jordan, Birmingham; Dr. Alfred Wiltshire, London; Dr. Copeman, Norwich; Dr. T. Spencer Cobbold, London; Mr. Jessop, Leeds; Mr. Rivington, London; The Secretary of the Clinical Society; Mr. Warrington Haward, London; Mr. S. Messenger Bradley, Manchester; Dr. L. Owen Fox, Broughton, Winchester; A Member; Dr. Charles Sprigge, Great Barford; The Secretary of the Harveian Society; E. M.; Dr. H. Franklin Parsons, Beckington, Somerset; Mr. Richard Davy, London; Dr. Lauchlan Aitken, Rome; M.D.; Mr. Underwood, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Ransome, Manchester; The Secretary of the Royal Medical and Chirurgical Society; Mr. Wanklyn, London; The Secretary of the Obstetrical Society; Dr. T. Trollope, St. Leonard's-on-Sea; Our Dublin Correspondent; Dr. Samelson, Manchester; Mr. Dobson, Bristol; Dr. Procter, York; Mr. H. C. Lawrence, London; Dr. H. M. Jones, Cork; Mr. Callender, London; Dr. Parsons, Dover; Dr. Cheadle, London; Mr. George M. Cole, London; Dr. Green, London; Mr. Barnard, Tamar; Mr. H. E. Armstrong, Newcastle-on-Tyne; Dr. Playfair, London; Dr. Wade, Birmingham; Mr. A. Davies, Swansea; Mr. G. D. Brown, Ealing; Mr. Dyke, Merthyr Tydfil; Dr. F. J. Brown, Rochester; Dr. Letheby, London; Mr. Whitehead, Manchester; Mr. Bartleet, Birmingham; Mr. F. Rule, Ashford; Mr. Lovegrove, Ightham; Mr. F. Jordan, Birmingham; Rev. Dr. Haughton, Dublin; Dr. Drummond, Manchester; Dr. Broadbent, London; Dr. G. M. Humphry, Cambridge; Dr. James Robertson, Edinburgh; Dr. Tomkins, Leamington; Mr. Hodgson, Brighton; Dr. Symes Thompson, London; Dr. O'Sullivan, Cork; Dr. Dickinson, London; Mr. R. M. Mann, Manchester; Mr. Woodward, Pershore; Dr. Meymott Tidy, London; Dr. Gibson, Bedford; Dr. Ward, Warneford Asylum, Oxford; Mr. L. Armstrong, Newcastle-on-Tyne; etc.

RESEARCHES
ON
THE MECHANICAL DILATATION OF THE CERVIX UTERI, AND THE APPLIANCES USED FOR THE PURPOSE.

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THE investigations, the results of which are given in the following paper, were begun simply with a view to greater exactness of knowledge of the powers and uses of the various means employed to dilate the cervix uteri in obstetrics and gynæcology. As the inquiry advanced, numerous physiological and therapeutical points arose in my mind, which appeared to throw light on it, or to be themselves illustrated ; and to some of them reference will be made.

For the dilatation of the cervix uteri, cutting instruments are occasionally used, but no account of their action is here attempted, as it is of the simplest kind, and its power is practically unlimited. The means to which attention will be directed are :

1. The bougie.
2. The tangle-tent.
3. The sponge-tent.
4. The India-rubber bag, commonly made fiddle-shaped, and named after Barnes.

All of these may be used, and are used, in obstetrics and gynæcology ; the last, or India-rubber bag, is used almost exclusively in the former. Besides these, there are several other methods of dilatation in use, such as that by the instruments of Rigby and of Priestley ; but I have not included these in the present inquiry.

The numerous experiments to be referred to were all made in the laboratory of Professor Tait, and I am indebted and grateful to this gentleman not only for assistance and suggestions of every kind, but especially for the necessary calculations made in order to reach the results of the various experiments.

There are many elements in the action of the above-mentioned four means of dilating the cervix uteri which are worthy of investigation and discussion ; but three are evidently chief, and will alone be now described. They are :

I. The amount of force exercised.
II. The amount of expansion produced.
III The amount of time required for producing the expansion.

I.—THE AMOUNT OF FORCE EXERCISED.

1. *The Bougie.*—The cervix uteri, and especially its internal os, may be dilated by a succession of bougies. The rounded and somewhat conical point of the bougie having in every longitudinal section that passes through the point nearly a wedge-shape (Fig. 2), must act under pressure as a wedge does; but the shape of the point is so ill-defined and so various that it is impossible to make definite statements regarding the actual force exerted by it under any given circumstances, and only very general statements will be attempted. The flat rounded point of the ordinary uterine probe has a wedge-shape (Fig. 1) of so large an angle



Fig. 1.—End of an Uterine Probe, magnified. Fig. 2.—End of an Urethral Bougie. Fig. 3.—Imaginary end of a Bougie.

as to destroy almost entirely any wedge-like action which it otherwise might possess. This flattened point is necessary, because the point must be both short and blunt. Were it sharp, it would be apt to catch on the rugosities of the arbor vitæ, and it might prick or otherwise injure the mucous membrane. In the larger bougies used for dilatation, there is space for an arrangement or conformation that cannot be made in the slender, small ordinary uterine probe. The extreme point or angle of the wedge is rounded off or destroyed, and a blunt point obtained, as in the ordinary uterine probe ; but there is still a considerable and an efficient part of the now blunted or pointless wedge left between the rounding off or blunting and the shoulder, or part where the whole point joins the stem of the bougie. This wedge-shaped point it is that effects the dilatation desired, if the constricted part is to be gradually expanded or burst asunder by main force.

Before proceeding farther, it is desirable to estimate the amount of force or pressure that may be applied to the base of this bougie wedge. Now it is evident that this force is, theoretically speaking, limited only by the strength of the instrument ; but this strength will give no estimate of the amount safely or ordinarily applied in actual practice. To ascertain what is the amount used in practice, I have used two plans. I have observed that in using great force to pass a common uterine probe, the instrument is bent; and by experiment I find that the force required to bend the instrument, applied as in gynæcological practice, is about four pounds exerted at its point, the handle being fixed. Again, taking a bougie in the hand, and pressing it appropriately against a balance or steel-yard with as much force as I permit myself to use in practice, I find that the pressure exerted at the point is about four pounds. In calculating, therefore, the dilating force of the wedge-like ends of common male urethra bougies, as used for uterine dilatation, I shall suppose a forward pressure of four pounds to be exerted on the base of the wedge.

Now, with this same force used, the tension overcome will be the greater in proportion as the wedge is sharper or has a smaller angle, supposing that the same breadth of surface of the wedge is pressed upon. It is plain, then, that the smaller bougies, having generally sharper points, or wedge-points of smaller angle, will have more force to dilate than the larger bougies with wedge points of larger angle, the extreme point being in both cases excluded. Two bougies may be supposed and compared, and it may be assumed that the surface pressed upon in the cervix is one-tenth of an inch in breadth, then the dilating force exerted will be about 9 lbs. if the wedge have an angle of 90 deg., or 90 lbs. on the square inch, and about 18 lbs. if the wedge have an angle of 45 deg., or 180 lbs. on the square inch. Probably both of these angles are exemplified in the male urethral bougies, which are used in gynæcological practice. Should exactness in the amount of force used be desired, it may be approximately attained by the construction of bougies which have an ascertained wedge-angle in the active part of the point.

The larger bougies have their rounded ends so made (Fig. 2) that the thickest part of the wedge-like point, or that nearest the shoulder, forms a wedge of smaller angle than the parts nearer the extreme point. In consequence it happens that the further the point is introduced the instrument is, *cæteris paribus*, more powerful. To make this clearer, I have introduced Fig. 3. Were a bougie so constructed, its wedge-like point would be weaker and weaker, *cæteris paribus*, in proportion as it was further and further introduced, because the wedge near the shoulder is of much larger angle than near the point.

When, in discussing dilatation of the internal os of the cervix, I speak of the extent of surface of the wedge-like point of the bougie that is actually pressed upon as being one-tenth of an inch, I make an assumption, but it is certainly not very wide of the truth ; for that the internal os is a short strait, is proved by the sudden or jerk-like manner in which it is permeated by a dilating bougie : there is no considerable length of passage to dilate. Besides, in cases where a tangle-tent passed through this strait fails to expand it, the tent, when forcibly withdrawn, exhibits a mould of the strait. There is an indentation where the counterpressure of the internal os acted. The longitudinal extent of the deepest portion of this indentation is not far from one-tenth of an inch.

2. *The Tangle-Tent.*—This does not act as a wedge. It is used in the form of a cylindrical piece of dried vegetable cellular tissue. When it is in use, it is passed through the part to be dilated, and, absorbing water by an osmotic or a capillary force, it enlarges with great power, and distends the constricted part. The expanding force of the tangle-tent was ascertained in two different ways. First, an apparatus was used to test how great a weight the expanding tent could raise. This apparatus consisted of two metallic beams articulated together at one end, and having flat well-fitting surfaces. Where the surfaces came into contact, canals were cut out to accommodate tents of various sizes. Half of each canal was in the upper metallic beam, half in the lower (Fig. 5). A tent was passed into a canal, which it filled pretty exactly ; the apparatus was then plunged into water and the weight adjusted upon it (see Appendix). As the tangle expanded, it elevated the weight. Second, an India-rubber strap was rolled around a tent at an ascertained tension, and its ends fixed by ligature to the tent. The tent so treated was then plunged into water, and it was observed whether it became expanded or not. These varied experiments showed that the expanding force of the tent rose as high as 500 lbs. on the square inch, or even higher ; in one experiment, as high as 640 lbs. on the square inch.

In the cases of the tangle-tent, sponge-tent, and India-rubber bag, the extent of the part to be dilated is immaterial, because the same, or nearly the same, force is exerted at every point of the tent or bag, whether a small or a large portion, or the whole surface of the tent or bag, be opposed to the constriction or resistance.

3. *The Sponge-Tent.*—The sponge-tent acts in the same manner as the tangle-tent, but its power is very much less. It was not tested in the metallic apparatus or clamp, but with the India-rubber band wrapped around it at an ascertained tension. By this means it was found to exert a force in expanding equal to from 20 lbs. to 30 lbs. on the square inch.

4. *The India-rubber Bag.*—In order to test this, good specimens were obtained in the ordinary shops. It was easy, by the use of a manometer, to find exactly what pressure they exerted or withstood when distended by the ordinary barrel or otherwise shaped India-rubber syringe, supplied along with them. They were found at the highest to exert a pressure equal to from 15 lbs. to 25 lbs. on the square inch. The pressure was found to be greatest when they were fully and equably distended; afterwards, becoming deformed and thinned in parts, previously to ultimately bursting, the pressure became considerably lessened.

II.—The Amount of Expansion Produced.

1. *The Bougie.*—By the use of this instrument, an amount of expansion is produced which is susceptible of exact measurement. The size of an aperture or passage being ascertained by transmitting easily through it as large a bougie as will pass, a larger bougie is then urged through it with some expenditure of force, and the difference between the diameters of the round stems of the two bougies is a measure of the amount of dilatation effected. In ordinary practice, the amount of dilatation effected at one sitting is not considerable: it amounts to from .02 to .04 inch in the diameter of the part dilated; but, by prolonging the sitting and using a succession of instruments, or using one large instrument very long and perseveringly, a greater amount of dilatation may be effected: .02 or 1-50th of an inch is the average difference between the diameters of two successive bougies in the ordinary male urethral series, and these may be used in gynæcology, or, by trivial changes, adapted for gynæcological purposes. The series, as procured in such a well known surgical cutler's shop as Mr. Young's, runs thus: 7 = .16, 8 = .18, 9 = .20, 10 = .22, 11 = .23, 12 = .24, 13 = .26, 14 = .28, 15 = .30, 16 = .32, 17 = .34, 18 = .36, 19 = .38 inch. I cannot conceive why this regularity of the series is broken at 11, nor have I been able to find out. If there be any reason, it is surgical, for the series tested is the ordinary surgical series. The whole series, if successfully used, produces a dilatation of about a quarter of an inch.

2. *The Tangle-Tent.*—The expansion of a tent of this kind when it is subjected to no pressure is considerable A tent whose stem has about one-fifth of an inch in diameter expands to about half an inch in diameter, and other sizes expand in a like proportion; but this amount of expansion is not a good measurement of what this tent can do by mere mechanical force, for, in proportion as the resistance to be overcome by the expansion increases, so does the amount of actual expansion decrease. A tangle-tent raising by expansion a weight of 300 lbs., enlarges to a degree which in medical practice would be regarded as almost nothing. In one of the experiments made, it was found that a tangle-tent of .36 inch in diameter, expanding with a force of nearly 166 lbs. per square inch, increased its diameter only from .36 to .43, or about 1-14th of an inch. The same tent, under a pressure of nearly 500 lbs. on the square inch, enlarged only from .406 to .43, or 1-40th of an inch. To fully appreciate the insignificance of this enlargement, it is necessary to remember the length of time—at least many hours—consumed in producing this amount of dilatation. The minute dilatation effected at a sitting by a bougie one degree larger than its predecessor used at a former sitting, is produced almost instantaneously.

3. *The Sponge-Tent.*—The amount of expansion of a sponge-tent, when not under any constraint, is greater than that of the tangle-tent. A small sponge-tent of one-third of an inch in diameter will expand to a little more than an inch, more than trebling its diameter: but it is very compressible; and a reference to the experiments, in the Appendix, shows that the expansion, even under slight compression, is very small indeed.

4. *The India-rubber Bag.*—The expansion produced by the India-rubber bag is practically unlimited on the side of great extent. Small bags are not available, or have at least not yet been introduced into practice. But, beginning with the smallest bag in ordinary use, about the thickness of a finger, further expansion is practically unlimited, because any bag can be easily withdrawn and another of larger size immediately substituted for it. This is not true of the other methods of dilatation, if the important and danger-bringing element of time be kept in view in considering the matter practically. This mode of expanding is greatly different from that of the sponge or tangle-tent, for it maintains its full power until the complete regular expansion of the bag is arrived at. It does not, like them, expand to a slight degree with moderate or great force, and then become weak; for, by keeping up the repletion of the bag, it may be made to maintain the same force from the first moment of application to the last degree of regular expansion.

III.—The Amount of Time Expended in Producing the Expansion.

This element in the production of expansion is one of the most important for the consideration of the practitioner. He may wish speed for its own sake, or he may find it essential with a view to avoid the risk of the supervention of inflammation.

1. *The Bougie.*—No time is lost in bringing the full power of this appliance into action.

2. *The Tangle-Tent.*—Even when under no constraint whatever, this dilating agent expands slowly. Before its small dimensions have doubled, twelve hours will have elapsed. When there is considerable mechanical resistance to the expansion, it is, compared with this, to a very slight degree in amount, and very slowly produced. Particulars under this head will be found in the Appendix of Experiments.

3. *The Sponge-Tent.*—Almost no time is lost in bringing out the full power of this agent. Sometimes time is lost in the melting of the lard and wax with which such tents are smeared; but when the fluids get access to the sponge, it is scarcely so much as a matter of minutes to produce full expansion when the sponge is unconstrained; but under pressure its power of expansion is small, and the amount also very small.

4. *The India-rubber Bag.*—No time is lost in bringing into action full power of this method, and its power continues till the full expansion of the bag.

[*To be continued.*]

CASE OF WOUND OF INTESTINE: RECOVERY.

By HENRY DODD, Esq., Rollington, Yorkshire.

T. R., aged 24, labourer, stout built, tall, and well-proportioned, received a wound in the abdomen on the right side, two inches and a half from the umbilicus, and on a parallel line with it. He was stabbed with a knife, its blade being three inches long, and extremely sharp to the very point. From the appearance of the wound, which was three inches long and gaping, I should say that the instrument had passed downwards, and then had been torn upwards and outwards. I found the man in a semi-conscious state, nearly an hour after he had received the injury. The loss of blood had been great. The omentum was protruding; also a portion of the ileum, the latter being punctured. The wound in the gut was longitudinal, and half an inch long, and from the aperture was exuding a thin dark-coloured fluid. I at once, after examining the wound carefully, applied a stitch (glover's) with the thread saturated in a weak solution of carbolic acid. I returned it with the omentum to the cavity of the abdomen, closed up the external wound of the parietes by ligature, also saturated with solution of carbolic acid, and over all placed a pad of carbolised lint, with a bandage extending from the pelvis to the extremity of the sternum. I gave every three hours an ounce of a mixture composed of a grain of tartarised antimony in eight ounces of water, and a grain of opium in pill every four hours.

Twelve hours afterwards peritonitis set in, when I increased the dose of opium to two grains three times a day, and continued the mixture of antimony.

On the fourth day I examined the wound, and found it looking remarkably healthy, and healing by the first intention, and the peritoneal symptoms somewhat abating. I lessened the dose of opium to one grain every four hours. His diet up to this time had been barley-water, with a little milk; no solid food whatever.

On the seventh day the bowels acted, and he passed a dark viscid stool, and again complained of considerable pain.

I continued the opium till the tenth day, on the evening of which day the bowels again acted, this time without any pain whatever; I therefore only gave him half a grain of opium at bed-time, combined with two grains of calomel. Next morning the bowels again acted, and he expressed himself free from pain.

The patient at this time was very much reduced, from the treatment adopted. I then ordered beef-tea, and the milk diet was continued.

On the fourteenth day he was able to leave his bed; from that time gradually but slowly recovered, and I considered him convalescent on the twenty-eighth day.

CLINICAL LECTURE

ON A

NEW METHOD OF TREATING RETENTION OF URINE AND IMPASSABLE STRICTURE.

By FURNEAUX JORDAN, F.R.C.S.,

Surgeon to the Queen's Hospital, and Professor of Surgery at the Queen's College, Birmingham.

GENTLEMEN,—For many years I have been considering the possibility and the propriety, in cases of retention of urine and impassable stricture, of getting behind the stricture and passing instruments forwards—the way the urine runs. With care, skill, perseverance, and time, the cases of stricture in which an instrument cannot be passed are very few. Now and then, however, operative interference is needed, and usually either vesical puncture or perinæal section is resorted to. The operation which I am about to describe I believe to be superior to either of these. I will briefly recite a case in which I have just performed it.

But, first, a few words on retention of urine and on impassable stricture. Some one has well said that there have never been two cases of strangulated hernia precisely alike. In every case of retention of urine, and in every case of stricture of the urethra, there is some distinctive peculiarity. In retention, one bladder will rise above the umbilicus, another will not rise above the pubes, and the symptoms in the latter case may be even more urgent than in the first. In one case, not a drop of urine escapes, and the bladder goes on constantly expanding until relief is given or extravasation occurs; in another case, there is slight dribbling, and consequently excessive distension of the bladder is more

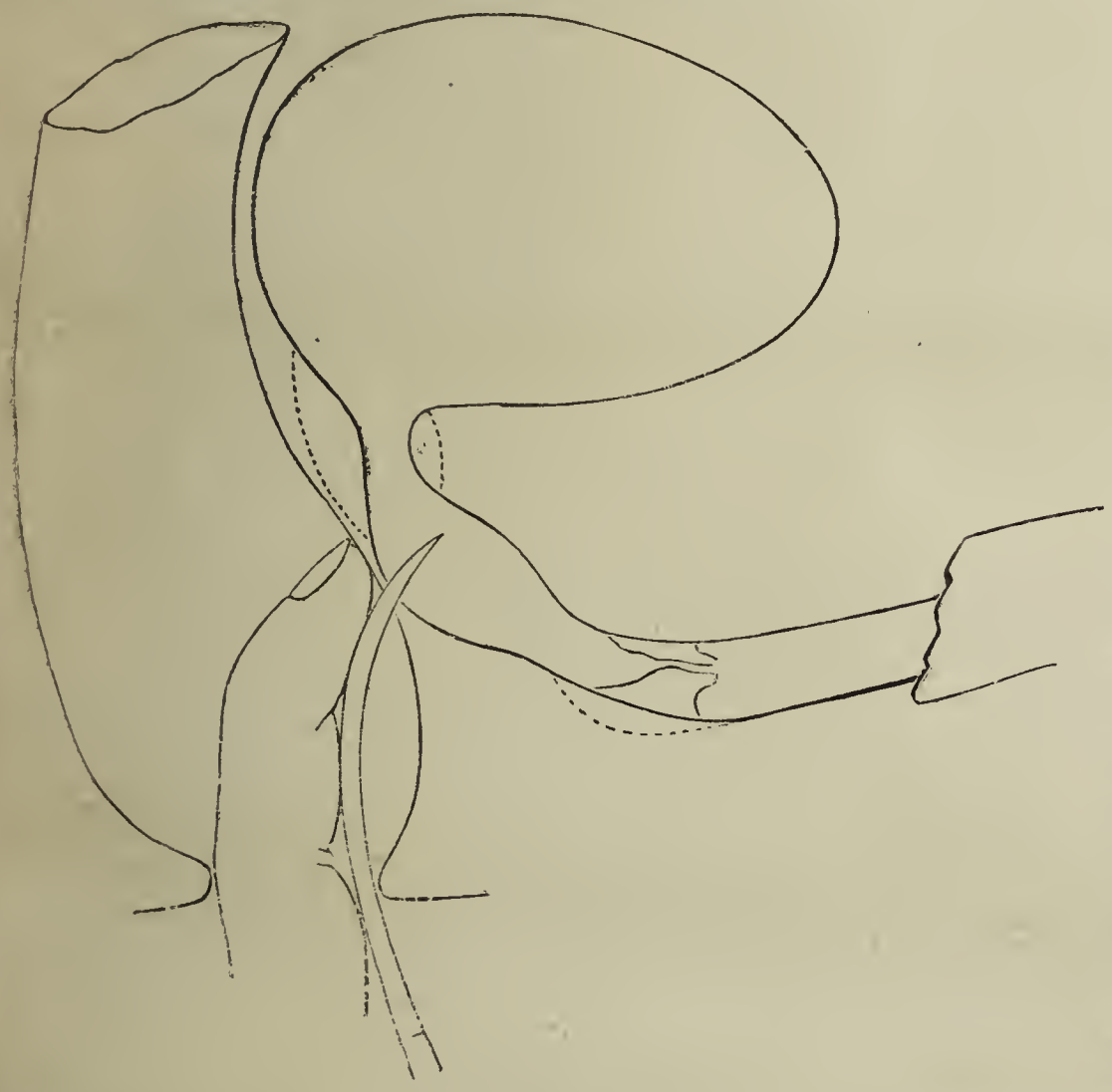


Fig. 1.

slowly effected; in another, free dribbling sets in early, and the urine runs out of the bladder as fast as it runs in. In one case of rapid distension of the bladder, without any escape of urine and extreme urgency of symptoms, a comparatively large instrument may be passed into the bladder by, perhaps, an inexperienced hand; in another case, of possibly free dribbling, failure may attend the most skilful efforts of the ablest hands, with the best selection of instruments.

A man past middle age came into the Queen's Hospital with a distended bladder and some dribbling. Careful and repeated efforts to pass instruments failed. I then carried the left forefinger and a curved sharp-pointed bistoury into the rectum. I thrust the point of the bistoury forwards through the anterior median line of the rectum, an inch and a quarter from the anus, into the membranous part of the urethra, and drew it forwards for a short distance through the incision. I readily introduced my finger into the urethra, and could bring it to the stricture in front or carry it backwards into the bladder. Directing the tip of the finger to the stricture, I conducted a probe-pointed French bougie (six, English scale) along its concavity. It passed forwards through the stricture with unexpected ease and emerged from the end of the penis. (Fig. 3.) One end of the instrument was now at the urinary meatus, the other at the anus. The ivory open end was cut off smoothly, drawn into the urethra, and carried by the finger backwards into the bladder. The urine flowed freely, at first through the incision and then through the catheter. The catheter was retained twenty-four hours. A few feet of small India-rubber tubing conducted the urine to a convenient vessel. At the expiration of twenty-four hours the catheter was withdrawn, and a No. 8 was passed without difficulty through the meatus. In a day or two a No. 12 bougie could be passed with ease. He was now allowed, for a few days, to pass urine by natural efforts. With each act of micturition, a little urine entered the rectum. The next step was to close the rectal fistula. The urine was drawn several times during the twenty-four hours, especially before each act of defæcation. The wound, thus kept from contact with the urine, closed completely in eight days. The man himself discovered his good fortune by passing urine, against orders, on the eighth day. He entered the hospital haggard, wasted, feeble, and at death's door. He is now in good health.

Here, gentlemen, are diagrams to explain the operation. In old, tight, impassable stricture with retention, more or less, it is a simple method of relieving the retention and of curing the stricture. (Fig. 1.)

When I first entertained the idea of treating stricture from its bladder side, the question arose whether I should pass an instrument from the bladder, incising it close to the prostate for the purpose, or from some part of the urethra behind the stricture. My first impression was, that it would be practicable to make a limited incision into the bladder through the rectum at the spot usually selected for puncture with the trocar. In the dead body, without stricture, everything occurred as I expected it would. It was quite easy to make a limited vertical incision close to the base of the prostate; the tip of the finger, introduced through the incision, immediately came into contact with the vesical orifice of the urethra. Along the concavity of the finger, a French bougie passed readily forwards through the urethra, and made its escape at the external meatus. But on the living man, with an old stricture and a largely dilated membranous urethra, everything was different. I found in the case above cited, that the prostate gland was carried a considerable distance backwards and upwards into the pelvis. I did not remember to have seen any reference to such a condition in surgical writings; but a moment's consideration told me that such an altered position of the prostate must necessarily be present not only in the case under treatment, but in every case of dilated membranous urethra. The explanation is close at hand. In front of the membranous urethra is the triangular ligament. It is clear that this, with its strength, tension, and attachment to the pubic arch, and the penis in front of it, cannot be driven forwards to any appreciable degree. The dilatation of the urethra occurs in all directions—longitudinally as well as laterally, longitudinally possibly even more than laterally. It follows that the older and more neglected the stricture, and the more dilated the membranous urethra, the further backwards must the prostate be thrust.

The bearing of this altered position of the prostate gland on the ordinary operation of puncturing the bladder by a rectal trocar is very important. The prostate is driven nearer, perhaps close, to the peritoneal cul-de-sac. Puncture of the bladder under such circumstances is likely

to endanger the peritoneum with a too certainly fatal result. It once happened to me to be made acquainted with three cases of puncture of the bladder by the rectum which were successively fatal; this, too, in competent hands.

Bearing in mind, then, the dilated membranous urethra, the deeper and more dangerous position of the prostate gland, and repeated experiments on the subject, I am led to prefer, as a rule, opening the urethra in front of the apex of the prostate gland. The ordinary puncture by the rectum merely relieves the retention. It is near, sometimes unavoidably through, the peritoneum. It is not unfrequently fatal. Perineal section of any kind is mostly, in the opinion of all experienced surgeons, a difficult, deep, and often unsuccessful, dissection. The operation I have just performed is a simple incision through only a thin wall of tissue, free from important vessels or erectile tissue.



Fig. 2.

There is one error in the diagrams which I have brought before your notice. The dotted line represents the bulb of the urethra as being much smaller than it really is. The same error is present in the anatomical diagrams of books. Take a vigorous male adult not long dead, and make a vertical section of the pelvic organs exactly in the middle line: you will be astonished to find how nearly the bulb approaches the rectum, and how comparatively inaccessible is the membranous urethra from the perinæum. I do not say there is any great danger in wounding the bulb; I am sure it is often wounded in lithotomy and in the various perineal sections. Nevertheless, any operation which distinctly avoids the bulb has so far an advantage over other operations which aim at a similar object.

There is one point in urethral surgery on which I differ from currently accepted surgical doctrines. I believe that actual obliteration of the urethra at the seat of stricture is not only not impossible, but is not so unfrequent (it certainly is not common) as is usually supposed. I base these remarks on careful dissections, and on the phenomena of inflammation of mucous membranes. Stricture-tissue is itself a cell (or tissue element) growth; in other words, it is a mass of granulation-substance, on its way to connective tissue, more or less dense. If the epithelial covering of this tissue be removed, either by the progress of inflammation or by the abrasion of instruments, from the whole circumference of the stricture, the granulations will certainly coalesce in the centre. You have then a mass of granulation-substance with urethra behind it and urethra in front of it. It is quite true that a network of fine canals traverses this substance, the result of the use of instruments and of the flow of urine. In perineal section—especially that variety, probably the best, called the "Leeds operation"—we often see several small openings along which we pass the grooved probe, with the hope that one or the other will prove to be the urethra. The succession of hopes is frequently blighted, because at that spot there is no urethra. With the finger in the urethra, however, behind the stricture we are more likely to be successful in following the course of the urine from behind forwards than we are in following instruments less ingeniously driven from before backwards. We have another advantage; we can place a finger in contact with the back of a stricture, and with the other hand (or other hands) an instrument may be carried to the front of the stricture. We thus obtain a knowledge of, and a control over, a stricture either from before backwards or from behind forwards, which no other means could give us.

It is beyond all doubt that an instrument must pass more easily the way the urine flows, as it is beyond doubt which way water can be most readily passed through a funnel. Every fold, ridge, ruga, orifice, or lacuna inclines towards the meatus. A hundred thousand acts of micturition have driven these all one way. The stricture itself is a funnel, the smaller end of which is directed outwards. False passages are often present in old and difficult cases; they lie anteriorly to the stricture. Should the surgeon prefer to pass an instrument from the meatus, the finger placed on the bladder side of the stricture enables him to guide it with an accuracy otherwise unattainable.

As regards the ease and certainty with which the membranous urethra can be opened from the rectum, let me observe that I have never failed to open even the flaccid and collapsed tube in the subject; in old and impassable stricture, the membranous part of the urethra is, as a rule, dilated. In the cited case, I passed the bistoury on the finger. The rectal speculum may be used instead of the finger. (Fig. 2.)

The membranous part of the urethra is much nearer the rectum than it is represented in the anatomical diagrams. An instrument in the membranous part of the urethra is readily detected by the finger when carried fairly within the sphincters. We recently had a lad with urethro-rectal fistula: he had been cut for stone by a most able and careful surgeon in one of the largest of our midland hospitals. The rectum had been unfortunately wounded. He was taken into hospital under my care. The one great difficulty in the treatment arose from the circumstance that, surrounding the margins of the opening—in fact, everywhere between the membranous urethra and the rectum—there was only a thin film of tissue. In men, the urinary apparatus is even deeper in the pelvis than in children.

After opening the urethra, the treatment which I adopted was "continuous dilatation"; this will probably prove the most generally useful. The same incision may, however, prelude the treatment of the stricture by rupture, excessive dilatation, internal incision, or escharotics by instruments carried through either the rectum or the urinary meatus.

A word on the "continuous dilatation" treatment. With the French flexible instruments, this treatment is admirably efficient and quick. It has this great advantage—in old stricture with probable renal disease, it gives rise to less shock than any other kinds of rapid treatment, valuable as many of them are. The illustrious Liston had a contempt for flexible instruments. I hope you will agree with me in the opinion that the Flood, as I have said elsewhere, did not come after him, and that Providence has been kind enough to permit surgery to make advances since his death.

It may happen that instruments will be purposely devised to act on stricture through the rectum. It is certainly desirable, if it be practicable, to have at hand French catheters and bougies made alike—that is, probe-pointed at both ends, so that the end which is drawn into the membranous urethra may be readily pushed backwards into the bladder.

I do not think there is any danger of a rectal fistula. A clean incision without loss of substance would probably heal in time, even if

left alone, if the stricture be well dilated, as the lithotomy wound heals. It would not be difficult to close the wound with sutures at the time of the incision, or by a later operation. Perhaps the simplest and best method of closing the fistula is the frequent use of the catheter—a method which is very certain to succeed. If an exceptional difficulty in closing the opening occurred to me, I would draw off every drop of urine, divide the anal sphincter on one side, and keep the bowels quiet.

Another advantage in the operation which I have brought before you is worth alluding to. The curved-pointed bistoury in your pocket-case, or even a common penknife, might enable you to save a man from extravasation of urine, or even death, if you had no other instrument at hand.

But suppose, when you have carried your finger into the membranous urethra, you are unable to pass an instrument forwards through the stricture. Should this occur, which is unlikely, I should introduce a catheter through the rectum, the wound, and the prostatic urethra, into the bladder, and retain it there for a time. If it slip out, you can easily introduce it again. Puncture of the rectum sometimes requires to be repeated frequently. After a little rest, the instrument would probably pass forwards through the stricture. With a funnel-orifice and probably false passages in front, an instrument will always pass more readily forwards than backwards.

When I say that a finger can readily be introduced into the urethra, I am not speaking of very large fat fingers; but probably even with these there would be no great difficulty. Bear in mind, the living urethra is much more dilatable than the dead.

Bear in mind, too, as we are again speaking of anatomy, of the diversity presented by the shapes, sizes, relations, and curves of all our internal organs. In the pelvis, as elsewhere, every anatomical peculiarity is as individual and varied as are our noses or chins. Do not, therefore, underrate the value of anatomical knowledge. Anatomy itself—not ignorance of anatomy—teaches anatomical diversity.

The operation which I have just described I believe to be simpler, safer, and more efficient than the alternative operations commonly adopted for the treatment of stricture of the urethra. We must not forget, however, that old and neglected stricture is usually accompanied by disease of the kidneys. If this disease be advanced, the performance of any operation whatever on the urinary organs is attended with risk to the patient.

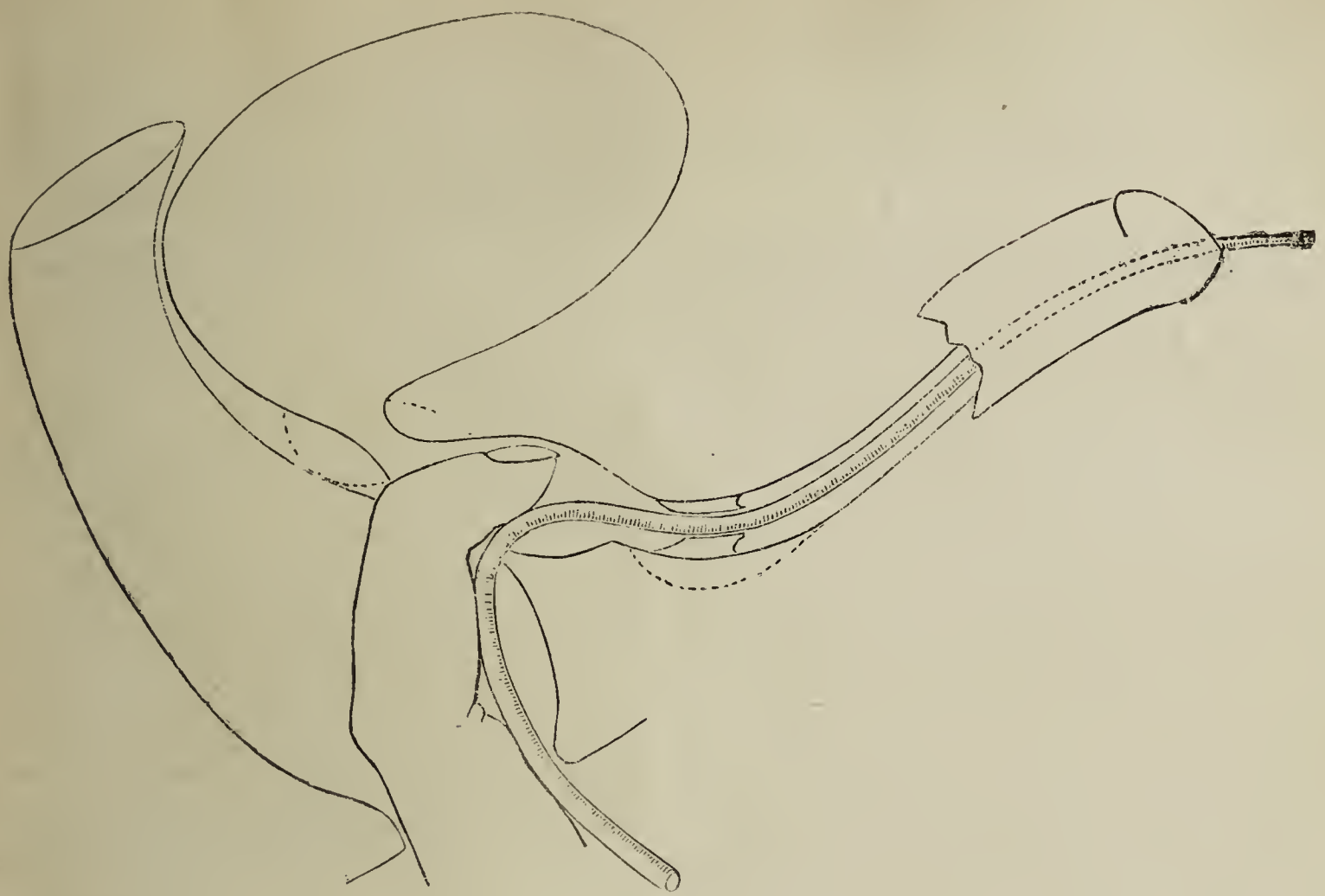


Fig. 3.

CONGENITAL ABSENCE OF UTERUS AND VAGINA.

By J. W. F. SMITH, M.D., Physician to the Royal Infirmary, Aberdeen, and Lecturer on Clinical Medicine.

IN the summer of 1867, a girl attended the Royal Infirmary as an out-patient, complaining of periodic pains in her back, with headache. She was 21 years of age, healthy, and seemingly well developed in every respect; but she stated that she never menstruated. She had the usual routine of medicines given internally in amenorrhœa, and galvanism was also applied to the sacrum and pubes. After this treatment had been persevered with steadily for two months, I proposed to her mother that a vaginal examination should be made. This was agreed to, and, on examining her in the usual way, I found that my finger just penetrated about an inch within the labia, and that further progress was arrested in every direction. On inspecting the parts, I found hair on the pubes; the labia, both majora and minora, well formed and normal; but the vagina ended in a cul-de-sac, rather deeper at the posterior than the anterior wall. In a few days I had a consultation on her case with the other members of the staff, the patient being placed under chloroform to allow the freest examination. When pressure was made over the pubic region, with one finger in the rectum, no tumour or swelling could be detected; and when a catheter was introduced into the bladder, nothing could be felt between the catheter and the finger in the rectum beyond a thin septum. From this we were satisfied that the uterus was absent. I was inclined to think, from the periodic pains and other symptoms, that the ovaries were present, although probably in rather a rudimentary condition. The mammæ were large and fatty.

This was a peculiarly hard case, as the girl was engaged to be married, and I considered it my duty to dissuade her against taking such a step. She followed my advice, and when I saw her last, which is about two years ago, she had become very stout, and still complained of periodic pains in her back, with intense headache.

CLINICAL LECTURES

DELIVERED IN

THE OUT-PATIENT DEPARTMENT OF THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

By W. B. CHEADLE, M.D., F.R.C.P.,
Assistant-Physician to the Hospital; Senior Assistant-Physician to St. Mary's Hospital; etc.

I.—Scurvy and Purpura.

Those who have been in the habit of attending this department will, I think, remember well the first case about which I have to speak, for the appearance and condition of the patient were calculated to attract attention, and to fix themselves in your recollection. Louisa T., the child in question, a pretty slender girl five years old, with delicate features and fine silky hair, was brought here in a state of extreme emaciation and debility. She was so weak that she could not walk or even stand, and had to be carried into the consulting-room by her father. She was, moreover, extremely anæmic—blanched, indeed, to a degree rarely seen except after profuse hæmorrhage, and yet there was nothing to account for the pallor, the prostration, or the wasting. There had been no loss of blood, no acute disease, no drain upon the system of any kind. The history given by the father was, that the child had been in perfect health until three months previously, when she was vaccinated, after which she had gradually become thinner, having been feverish and thirsty ever since the operation. There had been no cough, no vomiting or diarrhœa. There was no history of syphilis. The parents had five other children, all of whom were alive and well. The family lived in an open and airy part, had several rooms, and were in a position to obtain ample and proper food. The child, the father said, had lacked nothing. She had fish, meat, and vegetables daily; was extremely fond of potatoes, and drank a small quantity of beer every day at dinner. An examination of the chest showed nothing abnormal. The urine was found to be free from albumen. The tongue was much coated, the skin hot and dry, and the bowels constipated.

The treatment consisted in regulating the bowels by mild aperients, and giving a mixture of quinine and steel wine, with a liberal diet of fresh meat or beef-tea, vegeable and fruit daily, and abundance of milk. As cod-liver oil could not be taken by the mouth on account of the retching which it produced, a dessert-spoonful was ordered to be rubbed into the skin night and morning. Immediate improvement followed; the fever abated; the tongue became clean; the child rapidly gained strength and flesh. Seventeen days after her first visit, she first complained of sore-throat and difficulty of swallowing; and, on examination, the uvula and part of the soft palate were discovered to have been destroyed by ulceration, leaving a raw, ragged margin round the fauces. The throat was sponged out with a strong solution of nitrate of silver, and in a few days had quite healed. In consequence of the deficiency of the soft palate, the food passed into the posterior nares during the act of swallowing; but at the end of a week there had been such an adaptation of the parts that this accident no longer occurred. The extraordinary rapidity with which recovery proceeded will be evident from the fact that, while when she was first brought to the hospital on the 11th October a mere skeleton, pallid beyond description from anæmia, and unable to stand or sit up, on the 18th of November she astonished me by walking into my consulting-room without assistance, and looking quite plump and rosy. Her father told me that he thought she was almost well.

For the next month, the patient attended very rarely, so that I hardly saw her, until one day at the end of this interval when she was carried into my room in a worse condition than on her first visit to the hospital. She was again too feeble to stand, extremely anæmic, with a hot dry skin and a thickly coated tongue. The pulse was 136; number of respirations 44; and her condition altogether appeared so critical that I at once procured her admission into the hospital as an in-patient. She remained under my care, and as soon as she had been put to bed I examined her more carefully, and found the body covered with small purpuric spots; there was, however, no sponginess of the gums. The glands of the neck and groin were enlarged; but nothing abnormal could be detected in the thorax and abdomen, with the exception of some large and small bronchial *râles* in the chest. No medicine was given, but new milk in abundance, strong beef-tea, and three ounces of port wine.

The next day, the child seemed better, the tongue cleaner, pulse down to 128, and respirations to 32; the temperature 99.4. Citrate of iron and quinine was given; but the symptoms increased in gravity during the next few days, the temperature rising from 102 to 105 deg. Hæmoptysis now occurred, which appeared to come from a patch of ulceration which was discovered on the hard palate, just within the alveolar process, and from which blood was oozing.

On examining the chest, fine crepitation was heard at the right apex, but no sign of consolidation. Ammonia and bark, with brandy, were given freely; but the typhoid state deepened, the pulse and respirations became more rapid (144 and 40). The anæmia had notably increased since admission, and now the pallor was most intense. Hæmorrhage from the palatal ulcer recurred, but was arrested by styptics. The patient seemed frightened and restless, and lay coiled up in bed, her teeth chattering with cold, although she was wrapped in many blankets. The following day she died.

The *post mortem* examination exhibited the following conditions. The rigor mortis was slight; the body and limbs were covered with scattered ecchymoses. The heart was healthy, with fair clots in all the cavities. There were some recent pleural adhesions. The lungs were partially solidified, especially posteriorly, but not so as to sink in water; these more solid portions exhibited large patches of a red, port wine colour, not unlike red currant jelly, but in parts darker: this appearance was clearly the result of ecchymosis. In the fauces, the uvula and a portion of the soft palate were destroyed; the arch was, however, complete, although contracted. The pharynx was healthy, but the lower half of the œsophagus was distended by a firm coagulum of dark blood, rather firmly adherent to the mucous membrane, which, when the clot was separated, presented an ecchymosed appearance in its entire circumference: there was, however, no actual ulceration, and this appearance ceased at the cardiac orifice of the stomach. The stomach itself was filled with a dark fluid, consisting of the admixture of liquid food with a large quantity of blood. Its walls presented in parts small ecchymoses beneath the mucous membrane. In the intestine, scattered at various points, but few and far between, were bright crimson ecchymoses, one of which showed signs of ulceration. About the lower third of the ileum were two Peyer's patches in a state of ecchymotic ulceration; one of these was very large, and covered with adherent feculent deposit. In the large intestine, and the lower part of the small, especially about the ilio-cæcal valve, the apertures of the solitary glands were conspicuously marked as greenish-black dots. This was especially well seen in the patch just above the valve, where the dotted arrangement was very striking. There was not a trace of tubercle in the whole body.

The symptoms observed during life, and the morbid appearances discovered in the body after death, clearly show this case to have been something more than mere purpura. The progressive cachexia, the ulceration of the soft palate, the œsophagus, and the intestines; the inflammation of the pleura, the red-stained half-solid lungs, the conspicuous greenish-black spots marking the solitary glands in the intestine, are exactly what we find in scurvy, as ordinarily distinguished from purpura. Then, again, the rapid revival which followed the treatment is just what is seen in regular sea-scurvy, the administration of a proper diet producing an almost immediate and marvellous effect in most instances. The subsequent relapse and fatal termination after apparent recovery are equally significant. There is in scurvy always a great tendency to relapse after the first partial convalescence, which almost invariably follows appropriate treatment in all but the most advanced and hopeless cases. In the present instance I have a shrewd suspicion that the return of the disease in such an extreme degree, when the cure seemed almost complete, was due in some measure to the neglect of the medicines and special diet as soon as the symptoms ceased to be urgent; and the irregularity of the patient's attendance lends support to this view. Another point worthy of note is the striking contrast between the effects of treatment at first and after the relapse. Nothing could be more satisfactory, and certainly a *propter hoc*, than the remarkable and rapid improvement which followed tonics and proper dieting at the commencement; nothing more utterly futile than the same treatment in the later stage. The reason of this, I imagine, was partly that there was not *time* for the remedy to take effect, but chiefly because the child died, not so much *directly* from the evil condition of blood, whatever that may be, which is the essence of the disease in scurvy, as *indirectly* from the internal hæmorrhage and pleurisy which resulted from this. These secondary lesions killed the patient before the blood-fault could be repaired. There was, however, I think, an omission in the treatment which I should be careful to guard against in another case of the kind. The *post mortem* examination showed that considerable hæmorrhage had taken place from the mucous membrane of the lower part of the œsophagus. Now this hæmorrhage might reasonably be expected to be controlled by styptics. The bleeding surface could be reached directly by remedies taken by the mouth. The morbid action was going

on in a position where the local application of astringents could be brought into play; and the bleeding might, I think, therefore possibly have been subdued by the administration of the sesquichloride of iron or of tannin, and the patient thus given an additional chance. There was nothing to show during life that this internal hæmorrhage was going on. The hæmoptysis was assumed to come from the palatal ulcer, from which blood was oozing. But the case teaches us how necessary it is, in treating scurvy and purpura, never to forget the possibility of the occurrence of hæmorrhage along the alimentary tract, and to provide against that contingency as far as possible by the administration of appropriate styptics.

The case, then, being clearly one of scurvy, there is one remarkable fact to be noted with regard to its etiology. The conclusion arrived at by Dr. Budd and other observers, that scurvy is invariably dependent upon a deficient supply of fresh vegetable food, has been generally accepted as completely and satisfactorily established. The deduction is supported by a great mass of evidence; and yet Niemeyer points out that scurvy prevails amongst people who subsist almost entirely upon vegetable food, where other hygienic conditions are bad, as amongst the poor inhabitants of certain parts of Russia, who suffer from destitution and live in damp and ill-ventilated houses. And then, again, cases crop up occasionally in our own experience like the one we are considering, in which the symptoms and lesions are those of scurvy, yet the alleged invariable cause of scurvy is wanting. We are driven, then, to the conclusion, that the relation between the deficiency of fresh vegetable food and scurvy, however frequent, is not absolutely constant and invariable. In this instance, not only was the patient not deprived of fresh vegetable diet, but had an especial liking for potatoes and beer, both admirable antiscorbutics, and took them daily. She was the child, moreover, of parents tolerably well to do, living in an open and healthy part of London, with more fresh air and a better home than the majority of town children. There was, in fact, nothing whatever to account for the scurvy; none of the conditions under which it usually arises were present.

A similar case of scurvy came under my care not long ago, and was afterwards an in-patient under Dr. Dickinson, where there was the same striking absence of faulty diet or hygiene. The patient was a boy seven sears old, who had spongy gums, was covered with purpuric spots, and suffered from frequent and dangerous epistaxis. He was the son of a market-gardener living at Kew, and, as you may imagine, did not lack fresh air or fresh vegetables.

Dr. Garrod formerly suggested that the blood-fault might consist in an excess of the salts of soda and deficiency in the salts of potash, and the theory was supported by analysis, showing that in scurvy the blood is actually deficient in the latter; that, in scorbutic diets, soda-salts exist in excess, while they contain little potash; and that all antiscorbutics contain potash in large amounts. Two stubborn facts, however, militate against this view. The first is, that many articles of diet, as peas, for instance, which contain nearly as much potash as lemon-juice, possess no antiscorbutic properties; and the second, the circumstance to which I have already alluded, that scurvy occurs amongst vegetable feeders, whose diet must contain abundance of the alkali. The theory that the disease depends not upon deficiency of potash, but of certain vegetable acids, is in the same manner negatived by the fact that these acids alone possess no antiscorbutic power, and by cases such as those I have stated in which scurvy occurs when they are present in the diet.

The question, then, of the etiology of the disease stands thus: whilst in the vast majority of cases scurvy is the direct result of a deficient supply of fresh vegetable food, it is also connected in some way with want and foul dwellings; and, further, it occasionally arises under circumstances where no evil hygienic conditions of any kind can be discovered. The essence of the disease is, no doubt, a faulty condition of blood, which, by supplying imperfect material for the nutrition of the capillary walls and other tissues, renders them fragile and soft, so that they readily break down, and hæmorrhages and ulcerations follow. Dr. Wilson Fox has recorded a case of purpura following syphilis, in which the small vessels of the skin were found to be the seat of amyloid change. But the case was one of extensive amyloid disease; and the fact that purpuric extravasation does not ordinarily occur in connection with this degeneration, although the tissues first affected are the coats of the small arteries, proves that the existence of this change does not render them abnormally fragile. In addition to this, amyloid changes have not been discovered in other cases of purpura. The morbid condition of the tissues, whatever its exact nature, is clearly due to an impoverished state of blood. This may be produced by the want of sufficient supply of necessary ingredients in the food, or be the result of the action of other bad hygienic conditions upon the nutrient fluids. In those cases where neither of these causes are in operation, we are driven to the supposition that the error must be somewhere in the process of assimilation, either in the absorbents or in the tissues themselves; and that, although the necessary ingredients are introduced in the alimentary canal in sufficient quantities, and properly prepared there, they are either not taken up and appropriated by the absorbent vessels, or, if taken up by the vessels and passed into the blood, they are not assimilated by the tissues themselves.

Another point of great interest is the relation of this disease to purpura. There can be no doubt that, under this designation of purpura, we are in the habit of including a number of distinct conditions, in which the extravasation of blood beneath the skin forms one prominent feature. Thus, purpuric spots occur in various acute disorders, as well as in scurvy—as, for instance, in small-pox, acute rheumatism, in syphilis, and in Bright's disease; in all of which some great change in the state of the blood has taken place. In them, the purpura is merely an accident resulting from this change. There is, however, described in text-books a definite disease called purpura, and styled purpura simplex, or purpura hæmorrhagica, according to its severity. There are laid down, moreover, several points of difference by which it may be distinguished from scurvy, to which, in many respects, it bears a close resemblance. It is said, for instance, that while the onset of scurvy is always gradual, and due to one cause only—viz., deficiency of fresh vegetable food, purpura often comes on suddenly in persons enjoying good health; that it is entirely independent of diet; that the gums are not swollen and bleeding, as in scurvy; that it is not cured by fresh vegetables; but that it is, on the contrary, often of a sthenic character, and yields to mercury, blood-letting, and purging.

Now, these distinctions are not altogether borne out by my own observation. It is no doubt true that purpura does occasionally occur in well nourished, well housed persons, in apparent good health; but such cases are the exceptions, and, as a rule, it is closely connected with poverty, starvation, and close dwellings. Then, as to the argument from treatment, which is always liable to be a source of fallacy, I have constantly found purpura, like scurvy, rapidly improve under a liberal diet and lime-juice; and I cannot but think that, when the disease has disappeared under blood-letting and purging, these measures have been accompanied by diet which has supplied the deficient constituents to the blood. The disease has probably got well from the diet, and in spite of the other treatment, rather than in consequence of it; although it is possible that the diminution in the amount of fluid in the blood-vessels may have done passing good by temporarily relieving the pressure in the fragile capillaries, while permanent results have been effected by improved diet and hygiene. Purpura is met with almost entirely amongst the poorer class of hospital patients; and the very change from the scanty bread diet and foul rooms of their own homes to the ample food and free ventilation of a well regulated hospital must exercise a powerful influence. And then, again, with regard to these two diseases, just as cases in which all the symptoms are those of scurvy occasionally arise without any deficiency of fresh vegetable food or other usual cause of the disease, so, conversely, cases in which the symptoms are simply those described as belonging to purpura are met with connected with a deficient supply of vegetables. Two instances of this kind have lately come under my notice. The first was a boy aged seventeen, who came to me in the skin department at St. Mary's Hospital with purpura. The gums were not spongy, and the only fault which could be made out was the existence of the subcutaneous ecchymoses and some swelling and tenderness over the dorsum of one foot; otherwise he appeared to be, and affirmed himself to be, in perfect health. His history was this. He had just returned from a visit of several months to some friends in the country; and, as the only vegetables provided by them were potatoes, which he disliked, and never ate, he had subsisted entirely upon bacon and bread and butter, with a little fresh meat occasionally on Sundays. He had been on scurvy diet. On full diet, and a couple of lemons daily, he was well in a fortnight. The second case is that of Emily G., a child four years old, who is now in the girls' ward of this hospital. Her case is in many ways a very striking and instructive one. The child was brought to me suffering from severe whooping-cough. She spat blood, and the conjunctivæ were crimson, and so swollen with ecchymosis that the sclerotics were entirely hidden. The mother also drew my attention to the fact that she was covered with purpuric spots; on the body these were mostly small, but on the arms and legs large bruise-like patches. While examining the spots, I made the further discovery that the patient had general ichthyosis, well marked, although not of the most extreme kind. And then the history revealed a curious connection between the purpura and ichthyosis. She had previously been under treatment for the skin-disease at another hospital, and had been ordered by the physician under whose care she came to eat no vegetables. Accordingly, for two months she had no fresh vegetable, with the excep-

tion of a small portion of one potato as a treat two or three times a week. Her father being out of work, the family lived almost entirely upon bread, and the child had neither milk nor fresh meat. At the end of this time, the whooping-cough being severe, and the purpura having appeared, the mother transferred the child to this hospital, where she attended as an out-patient. The paroxyms of cough, which were of excessive violence, abated in the most striking manner under the use of tincture of Indian hemp, a remedy which, when given in full doses and carefully mixed with mucilage to prevent precipitation, is in my experience the most valuable of all the sedatives in the later stages of this disease. The purpura did not, however, disappear *pari passu*, in spite of the full diet and fresh vegetables which were directed to be given. Fresh crops of ecchymoses appeared from time to time. It is probable that the impoverished circumstances of the family did not permit them to feed the child properly. Two lemons were now ordered to be taken daily, and from that time the purpura faded away, and no fresh blotches have appeared for several weeks. The girl is, as you see, nearly well, and as the whooping-cough has gone, she has been received into this hospital in order to be transferred to the convalescent branch at Highgate, where the cure will be confirmed by wholesome country air.

The truth, then, with regard to these two affections, scurvy and purpura, appears to be this. Purpura is not to be regarded as a distinct disease, but as a symptom denoting a certain condition of blood and blood-vessels which occurs in several distinct diseases. The most common disease of which purpura is one of the phenomena is scurvy; and I believe that the majority of cases of so-called purpura met with in this country are cases of slight or imperfectly developed scorbutus. And this view is confirmed by the fact that we meet with every gradation of the disease, from a few scattered ecchymoses to the extensive extravasations, indurations, ulcerations, and serous inflammations of its full development. All degrees arise, as a rule, under similar conditions of life—viz., scanty unvaried diet, such as the bread and weak tea which form the staple food of the London poor, foul dwellings, or lack of fresh vegetables. When these evil conditions, and especially the latter, are present in moderate degree, so-called purpura results; when they are present to an extreme degree, or their action greatly prolonged, the extreme form of the disease is produced, and so-called scurvy follows; and, lastly, the disease may arise, as in two of the cases I have shown to you, when no defect of diet or any hygienic condition can be traced, and in which the blood-fault must be due to some secret cause which has not yet been fathomed.

CASE OF PULMONARY HÆMORRHAGE.

By W. J. BARKAS, L.R.C.P.Lond., M.R.C.S.Eng.,
Newcastle-on-Tyne.

THE following case came under my notice while acting as surgeon in the steamship *Emblehope*, on her return voyage to England from Calcutta. It is mainly curious from the large amount of blood the man lost during the last ten days of his life. He had from one to three attacks of hæmorrhage every day, the quantity varying from one and a half gills to rather more than a quart. During his recovery from the slight pneumonic attack, the pulse gradually became slower, though the temperature remained very high. The ship was for some time in very rough seas, and in a disabled state from the engines breaking down and the hold filling with water. The waves kept washing over her decks, thus causing the sailors to be constantly at work at the pumps, while their clothes were saturated with water; and, with their usual recklessness, they would actually lie down to sleep in that condition.

The patient was J. G., aged 38, a seaman, married, and having two children. He had undergone great hardships from shipwreck and other casualties, and had led a very laborious life—so much so that he had the appearance of a man of 50 years, though he had been all his life a careful and temperate person, and had never suffered from any severe illness. On the voyage from England he had a slight attack of bronchitis, which left an occasional short hacking cough, without any expectoration, and without any difficulty of breathing. From that time till this illness came on he felt perfectly well, with the above exception. During the afternoon of June 21st, 1872, he was seized with a violent fit of coughing, followed by a copious flow of red fluid blood, which coagulated into a firm clot immediately on exposure to the air. The bleeding soon ceased. On seeing him again two hours afterwards, he was expectorating blood mixed with a little mucus; the cough was very slight, with no difficulty of breathing; pulse 82; tongue clean; skin moist and warm; bowels open. There was slight dulness on percussion, and some small crepitation at the posterior portion of the base of the right lung. The heart's action was feeble, but normal. On the 22nd (7 A.M.), he had passed a quiet night; he expectorated some pure blood, but the sputa were commencing to assume the rusty colour of pneumonia. His cough was very slight; pulse 100; temperature 101 deg.; no pain. He was treated by ammonia, plenty of nourishment and port wine, and by the constant application of hot poultices over the chest. At 4 P.M., there was no increase of dulness; temperature 103 deg. Shortly after this visit, he had a severe fainting fit, but soon recovered, with only a slight headache, which was relieved by cold applications. On the 23rd, dulness on percussion was still present; he had very little cough or expectoration; pulse 100; temperature 102 deg. On the 24th, the sputa were bloody; pulse 90; temperature 103 deg. He was ordered ten grains of quinine night and morning. On the 27th, the temperature had fallen to 100 deg.: the quinine was continued, and he was ordered to have quinine mixture three times a day. On the 28th, the lungs were free from dulness; he had no cough or expectoration; pulse 80; temperature 98 deg. From this date he rapidly improved, and was gradually able to resume work; but on July 7th, alarming pulmonary hæmorrhage occurred without any previous warning. He appeared in his usual health even after the attack was over. There were no signs of phthisis, aneurism, congestion of lungs, or heart-disease. Mr. Lee, Resident Civil Surgeon, Trincomalee, saw the case with me, and was also unable to detect any cause for the hæmorrhage. I ordered him a mixture containing dilute sulphuric acid and sulphate of magnesia. On July 8th, he had had a return of the hæmorrhage, but expectorated bloody mucus. He was ordered to take 30 minims of tincture of sesquichloride of iron every four hours. On the 11th, he had had three or four attacks of bleeding since the 8th. The quantity of blood lost in each bleeding varied from a pint to a quart. He was ordered to take the tincture every two hours. There was no hæmorrhage until the 17th, when it broke out to a more alarming extent than before. I now gave gallic acid in twenty-grain doses, but without effect. On the 19th, I ordered him to take fifteen minims of oil of turpentine every ten minutes during the attacks, and every hour between them. This seemed to lessen the quantity of blood lost, but did not prevent the bleedings from returning. The debility rapidly increased, and the breathing was very difficult during the attacks, but not at other times, he only then feeling languid and weak. This continued till the 27th, when he died from asphyxia, not being able to cough up the blood, which was flowing in large quantity. I was not able to obtain a *post mortem* examination.

PARACENTESIS THORACIS.*

By W. A. I'ANSON, Esq., M.R.C.S., L.R.C.P.Ed.,
Honorary Surgeon to the Prudhoe Memorial Convalescent Home, Whitley.

JAMES O, aged 10, complained of chilliness and lassitude on February 1st. During the night fever set in, accompanied with delirium and a lancinating pain in the right side. On the following day, and up to March 1st, when first seen, he had been playing about the house, although he was during each night feverish, and slightly delirious, and occasionally referred to pain in the right side.

On examination, the skin was found to be hot and dry; the respiration somewhat increased in frequency, with short troublesome cough; there was also pain in the right side, inability to lie on the left side, etc. On listening to the right chest, no sound of any kind was heard except that produced by the air passing into the larger bronchial tubes; the respiration on the left side was puerile. He was ordered diaphoretic medicines, etc.

March 2.—During the evening the skin became moist; and through the night free perspiration set in.

March 3. 9 A.M.—The boy suffered from urgent dyspnœa, and had to get the head raised. Bronchial respiration was quite gone; the right side was stationary during respiration; there was a complete dulness on percussion at the back as high as the spine of the scapula; also total absence of vocal fremitus and vocal resonance. His face was pinched and dusky-looking; pulse 130. Throughout the afternoon the dyspnœa was of a suffocative character, with a sense of great pressure in the neck near the right sterno-clavicular articulation. The signs of suffocation were so well marked that the parents watched over him, expecting every minute to be his last. He was again seen at 5.30 P.M., and the operation of tapping the chest was advised, as the only means likely to save his life. At my request, Dr. Philipson kindly met me in consultation, and fully coincided with the diagnosis, and necessity for immediate operative measures. The trocar and cannula (a long vulcanised India-rubber tube being attached to the cannula, with the free end in a basin

* Read before the Northern Branch.

of warm water) were introduced into the sixth interspace, in the axillary line, and, immediately after the first ounce or two had passed, the respirations became less hurried. One pint and a half of clear straw-coloured serous fluid were withdrawn. There was complete re-expansion of the compressed lung, and, on listening, the respiratory murmurs were distinctly heard. Shortly after the operation, the little patient lay comfortable on the sound side, slept, and passed a good night.

March 4.—He expressed himself as quite well; pulse 120. Vesicular breathing was well heard. There were no signs of any re-accumulation of fluid.

March 6.—The respirations were quiet; there was no difficulty or pain during respiration, or when turning from side to side; pulse 100. In the evening he had two slight rigors, shortly followed by several watery stools.

March 11.—He continued to improve; pulse 90. He had no pain or uneasiness, and felt stronger. His appetite was good.

March 18.—During the last four days he had been going about the house without any difficulty or accelerated breathing.

March 22.—There was no shrinking of the walls of the chest, or evidence of the reaccumulation of fluid; the respirations were normal.

This case has been recorded as an example of the beneficial effects of the early performance of paracentesis thoracis in cases of acute pleurisy with effusion. From the time of the operation there has not been one unfavourable symptom, showing the avoidance of the formation of adhesive bands, with the gradual contraction of the affected side, and diminished power of expansion, occasionally accompanied with a partly carnified lung. Up to the present time (September), he is in excellent health.

HEADACHES IN CHILDREN.*

By W. H. DAY, M.D.,
Physician to the Samaritan Free Hospital for Women and Children.

In considering the subject of headaches in children, I may reasonably be accused of selecting a symptom which in some cases is the leading feature of intercranial change, and at others merely an indication of passing functional disturbance.

Diseases of the brain, whether organic or functional, are most deceptive, and difficult of detection and diagnosis. They are prone to run their course rapidly, and to terminate in death when we least expect it. They affect the mind, and may be said to influence every mental operation, concerning which our views are still speculative and open to controversy. In health and in disease general facts are required to take rank with some of the established laws of Nature, or we shall be in danger of giving to the world endless hypotheses and theories. Sound opinions, based on deductions from the conduct of Nature in disease, are the only principles on which we can depend.

Headaches at all ages and in both sexes are so common that, in the absence of cerebral disease, they barely attract our notice, and the sufferer thinks it useless to consult us. Looking at the grave termination of cases in which headache has been the chief symptom, I have thought the subject deserving especial notice. In the young and in the old they are significant, and possess a meaning which should put us on our guard, and prepare us to be ready for mischief, of which this symptom is sometimes the prelude.

In addition to the commonest varieties of headache that attack children, there is a peculiar functional form, of which numerous examples had come under my notice. I think no more suitable term than functional could be found to convey a meaning for those intricate changes of structure to which the nervous system is especially prone. I say change, because it appears to me that some change—physical, structural, or chemical—does take place in most, if not all, nervous affections, however passing and slight they may be; and it would be conceded that it is so in childhood, when the circulation is active and the brain is undergoing rapid development. I am disposed to think that, with excess or diminution of action in a part, which we call functional disturbance, there may be associated some essential change not capable of detection. Simple congestion, constantly met with in disturbance of function, is sometimes the forerunner of exudation and morbid deposit, or of alteration of texture. Some diseases of the liver impede the circulation through the veins, and lead to effusion of serum and dropsy; long-continued congestion of the kidney, caused by habitual exposure to cold and damp, may induce nephritis, and end in granular degeneration.

We may proceed to inquire "What is headache? What is the degree and character of change that will produce it?" We are not sure of the exact pathological conditions of headache; we cannot say that in this case or in that case the brain is congested or anæmic, because these changes sometimes exist without it. Tumours and abscess of some portions of the cerebral mass have been discovered, on *post mortem* examination, when no headache has been complained of during life. In such cases the morbid change has occurred slowly, and the brain has thus become tolerant of the pressure. Time permits the circulation to accommodate itself to the deposit, which it would not do in any sudden lesion, as a small extravasation, for instance. We may, however, generally affirm with safety that organic disease of the brain at least is attended with headache, vertigo, giddiness, convulsions, or some disturbance of function in the cerebral hemispheres; if not invariably amounting to headache, then to some confusion or abnormal sensation, which shows that the brain is involved. We shall generally find that uneasy sensations, if not actual pain, are the accompaniments of alteration of structure within the brain, whether there be morbid growth, chronic softening, or the changes due to inflammation.

Headaches calling for separate discussion are found under the titles—1. Cerebral headache, attributable to injury. 2. Gastric or sick headache. 3. Headache from anæmia and neuralgia. 4. Headache depending on plethora or fulness of blood. 5. Headache depending on some intricate change in the cerebral membranes or tissues of the brain—a condition amenable to treatment at an early stage. 6. Epileptic headache. We may incidentally mention the severe headache of fever, especially in the young and robust sufferers from typhus. Headache is severe and continuous in relapsing fever, and sometimes in typhoid fever.

Of the form of headache depending on some peculiar cerebral change, it may be observed that there is occasionally, but by no means often, some enlargement of the head; and, if this state continue without improvement, it is apt to grow disproportionately to the rest of the body, and the extremities waste, the muscles become flabby, and the joints loose. The enlargement of the head is mainly noticeable at the upper part of the forehead and occiput, and sometimes at the sides of the head immediately above the ears. The increase of size is symmetrical. The leading symptoms are pallor and debility, restlessness at night, irritability by day: sometimes these little patients are sullen and indifferent to what is going on; at others, very fidgety and quarrelsome on the slightest provocation; there is sighing and yawning, and exhaustion is marked in every act. What are the changes that take place within the cranium? Is the brain simply exhausted? Is its texture softer than normal? and has excess of fluid replaced any portion of the solid mass? Headache is the symptom which, beyond all others, prompts the parents to seek our aid, and which first draws their attention to the child's state. The cause of all the mischief is located in the brain or its membranes. The slow and sometimes irregular pulse, with dull and persistent headache, taken with other symptoms, makes us fear the approach of organic disease. The temperature is normal, and, if the cases be seen early, they recover.

As to treatment, most forms of headache are unsuited for tonics at the beginning. In the last class of cases, they may be said invariably to aggravate the mischief, till the system is prepared to receive them. Certainly headache of cerebral origin, which disturbs secondarily the nutritive processes, will be increased by the attempt; and, if the stomach be primarily at fault, we shall be equally disappointed with steel wine and bark. In all cases of the kind which I have last described, the latter remedy had to be carefully added, and in many instances, even in small doses, it had to be relinquished. Bromide and iodide of potassium act as specifics in the early stage; but, when once the headache is relieved, their continuance would be too depressing, and iron and cod-liver oil must be employed to complete the cure.

* Abstract of a paper read before the Harveian Society of London.

CASE OF HYDROPHOBIA.

By NELSON C. DOBSON, F.R.C.S.,
Surgeon to the General Hospital, Bristol.

At this time, when the subject of hydrophobia is being discussed not only in the public press, but also in the medical journals, the following notes taken from my private note-book of a case which occurred at St. Thomas's Hospital during the time when I was house-surgeon may be interesting, especially as I saw the man from beginning to end—that is, at the time when he was bitten, and also when the symptoms to be presently detailed occurred.

John Wells, a working engineer, aged 57, a somewhat pale but hearty-looking man, who had always been temperate, applied for

treatment on August 15th, 186[illegible], at 5.15 A.M., suffering from the bite of a dog. He stated that whilst walking to his work near the Walworth Road Station, he noticed a large dog, "half Newfoundland and half mastiff," making towards him. He perceived nothing unusual about the dog, but suddenly the animal seized upon his arm. He struggled with the dog for several minutes until another man came to his assistance, who, after having been severely bitten, succeeded in beating off the dog. The man Wells had a large wound on the front and back of his right forearm. The wounds were deep, and appeared to correspond with the large canine teeth. On the left forearm there was also a wound on the outer and inner side, and an extensive and deep scratch on the back of his left hand. Nitrate of silver was applied freely to all the wounds, and produced considerable sloughing. The wounds gradually filled up, and he ceased to attend at the end of seven weeks.

On November 23rd, 1867, in the evening, he again presented himself at the hospital, complaining of a general uneasiness. He stated that he had not been able to take either fluids or solids during the day, and I found that an attempt to do either produced a deep sighing and paroxysmal inspiration. The mere action of lifting his hand to his mouth produced the same symptoms. He said that he first began to feel uneasy on the previous morning, that he vomited a little, and did not sleep all night. There was no difference in the cicatrices since he had been feeling unwell, and there was not the slightest pain or uneasiness in them. His tongue was furred. The bowels acted to-day. Temperature 97.2 in the left axilla; pulse 100. I recommended him to come into the hospital at once, which he did, and was placed in a private ward. Soon after he was in bed, I noticed a short paroxysmal cough attended by some yawning. I also noticed the first actual convulsive "catchings" in his respiration. The attacks lasted about two minutes (he stated that they occurred about every thirty minutes). They produced some perspiration and fatigue. He exhibited no particular anxiety, and persistently asserted that the animal which bit him was not mad.

At 12 P.M., three hours after admission, the paroxysms were more frequent and more violent. Pulse 120; temperature 99. There was very evident distress and anxiety of countenance. The skin was bedewed with perspiration. The very mention of drinking induced a paroxysm. He had a subcutaneous injection of twenty minims of liquor morphiæ.

November 24th, 5.30 A.M.—Pulse 100; respiration 20. The intervals of quiet were not more than a minute. The paroxysms were more violent. He had not slept.

10 A.M.—The paroxysms were evidently increasing in severity and frequency. There was much anxiety and distress. He had great difficulty in breathing, and during each attack he placed both hands on each side of his chest, evidently having pain there; but his chief complaint was referred to the upper part of his throat. He was quite sensible of his condition, and stated his feelings to be those of uneasiness of an indescribable character, which he seemed to refer chiefly to his respiratory organs. Mr. Solly saw him, and suggested, in addition to his present treatment, a subcutaneous injection of three grains of quinine every four hours. During the night he had had enemata of beef-tea and brandy.

1 P.M.—There was a very decided increase in the frequency and severity of his attacks. He jumped out of bed suddenly, and struggled hard for breath. The attacks last from thirty to sixty seconds; during their interval he lay perfectly still, his respirations being very shallow, his inspirations particularly being attended by a peculiar and sudden catch. Pulse 120, small and thin; respirations 20; temperature in groin 99.2. There was no undue sensibility of the surface of the body. During the attacks the mouth was widely open, and the eyes looked as if starting from the orbits. He had no fear of death, though conscious of its near approach, and prayed fervently to be released from his suffering. Tracheotomy was suggested, but was not carried into effect. He had an injection of beef-tea and brandy with forty minims of liquor morphiæ. He occasionally seemed to wander, but generally was quite rational. Chloroform was attempted to be given him, but as it caused an increase in the violence of the paroxysm, I was obliged to desist.

9 P.M.—There was now for the first time a little frothy saliva about his mouth. He was rapidly becoming weaker. The hands and feet were cold; the skin clammy; pupils widely dilated; respirations 23. He died at 10.30 P.M., about twenty-five hours after his admission, fifty hours from the commencement of his symptoms, and a hundred and two days from the infliction of the bite. I believe a *post mortem* examination was made, but I have unfortunately no record of it.

REMARKS.—It is worth bearing in mind that, though at least half a dozen persons were bitten by the same dog as the patient Wells, yet, so far as I could ascertain, no one else suffered. That the foregoing is a genuine case of hydrophobia I have no doubt; its occurrence in spite of free application of nitrate of silver within a short time of the bite, might lead one to doubt the efficacy of cauterisation. Hydrophobia is, I believe, a much rarer disease than is generally supposed; there is, nevertheless, a wide-spread dread of it. One of the coroner's jury who heard my evidence at the inquest on the foregoing case, applied the same evening at the hospital, declaring he was suffering from hydrophobia. He was speedily cured by two scruples of sulphate of zinc, he having spent his juryman's fee unwisely. The dog which had bitten Wells was killed, and I could obtain no further evidence as to its rabid condition—suffering the same fate which Goldsmith graphically describes as befalling all dogs supposed to be mad.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. MARY'S HOSPITAL.

CASES OF HEART-DISEASE: WITH REMARKS.*

(Under the care of Dr. BROADBENT.)

CASE III. *Mitral Constriction.*—John W., aged 24, a carpenter, was admitted on January 29th, 1872. He was pale, thin, and anxious-looking, and extremely excitable and nervous. He had had acute rheumatism three years before, had been subject to colds and coughs, but had been pretty well till three weeks before his admission, though his breath was short and his work too much for him. He then had pain and swelling in his knees and ankles, which was still present to a slight degree when he entered the hospital; but there were no marked general symptoms of rheumatism. He was subject to palpitation, and almost always had an attack when examined; could not lie down with comfort, and in bed always placed himself on his right side, with his elbow on the pillow, and his head on his hand. The pulse was weak, irregular, variable in force and frequency. The heart's action was visible over an extended area, and powerful to the feel, especially when the patient was excited; the apex beat in the sixth space, about three inches below the nipple, and to the outer side of the nipple-line. There was dulness for an inch to the left edge of the sternum in the second and third spaces; occasionally a faint thrill perceptible here; no impulse. A distinct vibrating thrill was felt at and within the apex, leading up to the impulse. Just within the apex, a vibratory murmur was heard, which began gradually and without accent, and terminated in a loud short sharp sound—the only heart-sound here audible. This murmur was audible upwards and inwards, becoming gradually weaker as far as the third space; it was not heard to the left of the lower sternum. Over the base of the heart, a sharp first and muffled second sound were heard. On carrying the stethoscope downwards little by little, the second sound was gradually lost, but it had not disappeared when the murmur became audible; so that at one point there were heard the murmur and two sounds, and it was now perfectly clear that the murmur ran up to the first sound and was presystolic.

All the interest of this case consists in the determination of the valvular lesion, and a detailed report is unnecessary. He remained in the hospital till April 5th, gaining strength, flesh, and colour, and becoming less nervous, under the influence of rest and good food, aided by quinine, iron, and cod-liver oil.

Mitral stenosis or constriction has attracted much attention within the last few years, and various methods have been recommended for determining the relation of the murmur to the movements of the heart. The difficulty in timing the murmur consists in the fact that in these cases the second sound of the heart is not heard at the apex; and the first is changed in character, becoming short and sharp, so as to resemble the second; while, in ordinary mitral regurgitant disease, a systolic murmur takes the place of the first sound, which is inaudible or indistinct, the second sound being heard; so that, in both obstructive and regurgitant disease of the mitral valve, there is a murmur, followed by a sound; and, unless attention be given, the two are indiscriminately classed as regurgitant. Usually, the thrill felt by the hand, accompanying constriction, fixes the attention; and, the murmur and thrill being synchronous, and the thrill preceding the impulse, the diagnosis is rendered easy. But this method is not always available; and it has been recommended to time the murmur by the radial pulse, which is altogether fallacious, as a considerable interval often separates the systole of the heart and the beat of the pulse at the wrist. The

* Continued from page 496 of last number.

apex-beat or the carotid pulse is not open to this objection, and it is by reference to one or other of these that most observers fix the period of the murmur. It is not easy, however, to co-ordinate the impressions made on the finger and those made on the ear; and many students fail entirely, and in spite of great care and effort, thus to recognise the relation of the murmur to the systole of the heart. The same may be said, moreover, of many physicians, who are competent and experienced auscultators. Dr. Broadbent has found the plan given in describing the case the most easy in application and the most reliable in its indications: it is, to listen first over the base of the heart, where the two sounds are both audible, noting carefully the individual character of each. Then the stethoscope is carried downwards, little by little, and planted each time nearer to the area over which the murmur is heard. The second sound will become more and more feeble; but usually, before it is entirely lost, the murmur begins to be heard, and its place in the rhythm of the heart's movements is at once demonstrated; or, should the second sound be lost, it is known that the remaining sound is the first, and the murmur running up to and ending in it is clearly presystolic.

Dr. Barclay has recently endeavoured to show that the presystolic murmur is not due to obstruction to the passage of blood from the auricle into the ventricle, but that it is really regurgitant, and is produced by the incipient contraction of the ventricle before this has attained the force requisite to close the rigid valves. This view, though most ably supported by argument, Dr. Broadbent cannot accept. Dr. Barclay's *rationale* of the causation of the murmur leading up to and ending with the impulse and first sound, is, that the ventricular contraction is gradual and vermicular, beginning at the base; that at first it is not sufficiently energetic to close the valves; but that it drives back a portion of the contained blood into the auricle, and thus regurgitation is what is heard as the murmur in question. Then, as the contraction becomes more powerful, the valves are forced together, giving rise to the sound, the increased tension at the same moment being felt as the impulse. The objections to this view are insuperable. The vermicular movement of the ventricles, visible in the slowly acting reptilian heart, is not to be detected in warm-blooded animals, in which the contraction of the ventricles is prompt, energetic, and apparently absolutely simultaneous in all parts; and the supposition that the systole can be so slow that the time occupied by an average presystolic murmur is required to reach the full degree of tension, is impossible, if the finger have ever been pressed upon or the hand have held the naked heart of an animal while in action.

In the two remaining cases there was aortic regurgitation, due in both to dilatation of the first part of the aorta, or fusiform aneurism. It is a question, in these cases, how far the derangement of the circulation is due to loss of elasticity in the vessel, and how far to return of blood into the ventricle; how far, again, the establishment of regurgitation, by stretching of the orifice of the vessel, is conservative of the aorta by not permitting continuous distension, or damaging by substituting violent alternations of distension and relaxation.

CASE IV is remarkable for the early age at which extreme disease of the aorta existed without obvious cause. C. K., aged 33, was admitted on February 2nd, with dropsy, severe cough with profuse expectoration of muco-purulent matter, and shortness of breath. There was dulness over the lower part of the left lung posteriorly, with imperfect entry of air, moist *râles*, and bronchial sounds. The heart's impulse was visible over an extended area to the left of the lower sternum and in the epigastrium, the apex-beat being felt in the seventh space near the lower edge of the ribs, and to the left of the anterior axilla-line. There was dulness over the upper sternum. An aortic regurgitant murmur was heard, and also a systolic murmur at the apex; pulse collapsing. The urine was albuminous. Pericarditis set in on the 10th, and he died on the 12th.

POST MORTEM EXAMINATION.—There was much fluid in the pericardium, and the surface of the heart was roughened in patches by recent lymph. The cavities of the heart were dilated, especially the left ventricle; the walls were not thickened. The aortic orifice was greatly enlarged; the valves were stretched, and a little thickened along the free edge, incompetent to close the orifice. The first part of the aorta was dilated and elongated into a large fusiform aneurism, the upper end of which adhered to the top of the thoracic cavity; the outer surface was smooth; the inner rough, irregular, and yellow in colour. The lungs were dense, sodden, mottled by pale fibrinous septa enclosing dark spaces of lung-substance. The liver was small, having a nutmeg appearance, but no irregularities of surface. The kidneys were of normal size and appearance.

CASE V.—Charlotte T., aged 43, a domestic servant, was admitted on January 2nd. She had been ailing two years, having first had pain in the left shoulder and down the left arm, and attacks of dyspnœa. She complained, on admission, of pain in the chest, weakness, and shortness of breath. She had lost one eye in childhood; her two upper central incisors were gone. There was a foul long-standing ulceration on the forehead, and a single patch of rupia on the back, from which it was concluded that she was the subject of constitutional syphilis, probably congenital. A diagnosis of aneurism had been given two years before, and at first sight it seemed is if there were an aneurism of the thoracic cavity of large size. There was very great bulging of the left suprascapular and scapular region of the chest-wall, pushing out the scapula, and causing conspicuous deformity. On examination, however, there was resonance over the entire back, slightly diminished only by pulmonary congestion; and the only circulatory sounds audible were feeble short heart-sounds between the scapula and spine. Anteriorly, the manubrium seemed to project slightly; and there was true pulsation, with slight thrill. Pulsation was also felt to the left of the sternum, at the level of the second and third ribs, and along the right second space for some distance. There was dulness over the sternum and three-fourths of an inch beyond its left edge, as well as over the heart's area. The resonance over the right chest was slightly modified. The apex-beat was powerful in the sixth space, an inch to the left of the nipple-line. At the apex, a prolonged first sound was heard; between the apex and the sternum, systolic and diastolic murmurs, increasing in intensity to the right second space. A systolic murmur and drum-like second sound were heard beneath the left clavicle; a thrill and murmur in the left subclavian, above the clavicle. There was visible pulsation in all the arteries, especially the carotids. In the abdomen, remarkable pulsation was felt much to the left of the middle line; and the question arose, whether this was aneurismal. It was concluded not to be so, as the aorta was missing from its usual situation; and, supposing it to be displaced to the left, it would explain the pulsation.

There was obviously here, in addition to the aortic regurgitation, aneurismal dilatation of the aorta; and at first this seemed to be so considerable as to be explained only by the existence of a large saccular aneurism. No evidences of pressure on surrounding parts were presented, as would be expected on this supposition. The treatment was directed to the relief of the constitutional condition; and iodide of potassium was given, rest in bed being enjoined, and a liberal diet allowed. The syphilitic ulceration healed, and there was marked amelioration in all the symptoms; the pulsation especially diminishing very greatly, while the deformity about the left shoulder entirely disappeared. The aortic disease was itself probably of syphilitic origin; but it is not probable that the iodide of potassium exercised any direct influence on a syphilitic morbid process then in progress. Rest and improved nutrition were the chief agents in the reduction of the aortic dilatation, to which possibly the iodide of potassium may have contributed, as it appears to have cured some aneurisms.

KING'S COLLEGE HOSPITAL.

OPERATIONS, OCTOBER 26TH.

Chronic Inflammation of the Knee: Excision.—A young man, a costermonger, many months ago injured his knee. This resulted in inflammation, and he was under the care of Mr. Henry Smith for several months. At first, with rest and good diet, he apparently improved much in health, and the inflammation in the knee seemed subdued. Mr. Smith suspected from the first that operative interference would be necessary, but was anxious to avoid it if possible. However, he was now satisfied that the only means of enabling the man to again earn his livelihood as a costermonger was excision of the knee. This was explained to the patient, who readily consented to the operation. The knee, at the time of operation, was very greatly swollen, but there was no indication of the joint having been destroyed. On excision, however, a large amount of disease was exhibited. The inner surface of the patella was quite broken up, and the surfaces of the tibia and femur partly diseased.

Mr. Smith remarked that this case was one of those which showed that, in the performance of operations, after anxiously waiting for improvement, the disease in the joint is invariably found to be worse than was anticipated. He should have operated two months ago, instead of subjecting the patient to delay in the hope of saving the joint. This case presented a good illustration of synovial degeneration—a disease seldom recovered from, as was pointed out long ago by Sir Benjamin Brodie.

Staphyloraphy: Soft Palate closed by first Operation: Two subsequent Operations for Closure of Hard Palate.—Sir William Fergusson, in operating in this case, said that the man had had an extensive gap through both palates. The first operation successfully closed the soft palate; the next operation was done to close the hard palate, but had only succeeded partially, although the parts could not have been placed in bet-

ter position, or have a better chance of success. He accounted for the failure by the difficulty of adhesion over the hard palate, and the readiness with which the contracting granulations tore asunder the stitches in the middle line. The man, although deeply under chloroform, was very restless during the operation ; but this was to be expected, where the surgeon had to come and go so often, as in this operation, and where blood was constantly gurgling over the larynx, and requiring to be swabbed up to allow respiration. The ear, in such a case, might be as useful as the eye, to know when it was necessary to sponge up the blood at the back of the mouth.

Hip-Disease : Excision.—The patient, a boy, had been suffering from hip-disease for four years. He had been in the hospital for some time, and the ordinary treatment had been followed, but without relief. There was much shortening of the diseased limb, with very great fulness of the hip. Dislocation on the dorsum ilii had taken place, and presented the same appearances as the accidental dislocation. There were no sinuses over the joint, but a small opening had appeared that morning on the inner side, and fluctuation was felt in the groin. On making incision into the muscles over the head of the bone, it was found on the dorsum of the ilium, and the joint was quite carious. A quantity of crude, unhealthy looking matter oozed out from the apparently healthy tissue. Sir William Fergusson sawed off the head of the bone, gouged out some carious portions of the ilium, and closed the wound. The cartilage in the excised head was eroded, and at one portion it had inflamed and thrown out an adventitious membrane, so strong that it readily bore the weight of the head when held by the forceps.

Hip-Disease : Examination under Chloroform.—The patient, a boy, had been in the hospital for twelve months suffering from the same disease as the last. His left hip had been operated on, the head of the femur being excised about that time, and the disease had also set up in the right hip. The pelvis was affected, pus coming out freely in the groin ; and altogether the case seemed a hopeless one for operation or improvement. The object of the present manipulation was to ascertain whether there were any pieces of necrosed bone about the joint retarding recovery and requiring removal. Sir William Fergusson could detect none by probing, and he thought it would be very unwise to do more than probe.

THE HOSPITAL FOR SICK CHILDREN.

INJURY TO ABDOMEN : TYPHLITIS : PERFORATION OF THE VERMIFORM APPENDIX : PERITONITIS : DEATH.

(Under the care of Mr. HOWARD MARSH.)

THE following report and remarks are by Mr. R. W. Parker, House Surgeon.

A. E. H., a boy aged 7, was brought to the Hospital in August last, with the following history. While walking in the street with his head turned in the wrong direction, he had run against some iron railings, and struck his abdomen. He went home, but did not say anything about it, as the accident appeared very trivial. He was sick several times during the night, and, on the following day, complained of pain and tenderness "in his stomach." On being questioned by his mother, he told her about his accident. Next morning, being the second since the injury, he was brought to the hospital, and saw Mr. Marsh. At this time, he complained of pain and tenderness in the abdomen, for which poultices were ordered, and rest in bed enjoined. Until the following Saturday, on which day he was again brought to the hospital, he kept his bed, felt and looked ill, his diet being milk and beef-tea : his bowels had not acted since the previous Sunday ; the pain in the abdomen was worse ; his bladder was full, and he could not empty it. Chloroform was administered, in order that a more careful examination might be made than was possible without it, on account of the pain. The urine was drawn off, and, on manipulation, there was now felt an induration, apparently in the abdominal parietes in the right iliac region, but no fluctuation ; the abdomen was much distended. He was sick after the chloroform, and looked ill ; the vomiting continued all Saturday and Sunday, until 2 P.M., when he died.

Post Mortem Examination Thirty-six Hours after Death.—On opening the abdomen, a quantity of fœtid gas escaped. The intestines were distended with air ; they were glued together with recent peritonitic lymph. A small round mass of hardened fæces was found in the right iliac fossa, near the vermiform appendix, which, on examination was found to be perforated ; the appendix was glued to the colon by recent lymph ; the intestines were otherwise healthy.

REMARKS.—The case is interesting in the following points.

1. The illness was thought to result from *injury* to the abdomen ; and application was, therefore, made to a surgeon, who considered it an incipient abscess in too early a stage for any active interference, and typhlitis was scarcely suspected.

2. The *vomiting*, after the chloroform—by no means an unusual occurrence—at first excited no alarm, and ice and the usual remedies were ordered, but without any relief.

3. The *accident*, which was a very slight one, and which, under other circumstances, would have been harmless, was in this case sufficient to set up acute peritonitis, where it had probably existed for some time previously in a subacute and localised form.

4. How far the *manipulation*, which was nevertheless gently and carefully performed, may have helped the ulcerative process to perforate the appendix, is a subject for serious speculation.

5. Whether the *vomiting*, which quickly and persistently followed on the chloroform, brought about the fatal event earlier than would otherwise have been the case is another point, which adds a certain medico-legal interest to a very instructive clinical study.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

DIURESIS AND DIURETICS.—Dr. E. Verdun has published a treatise on this subject, in which he studies it from the anatomical and physiological point of view. He observes, with M. Gubler, that the rapidity of the circulating current needs to be augmented at the same time as the intravascular pressure, in order that the quantity of urine secreted may be increased ; in other words, there must be active vascular tension in the vessels of the kidney. Whenever augmentation of tension is accompanied by stasis of blood in the capillaries, as in inflammation, the arrest of urinary secretions is the consequence. He specially recommends a diuretic oxymel, composed as follows : Tincture of digitalis, 10 *grammes ;* watery extract of ergot, 10 *grammes ;* bromide of potassium, 30 *grammes ;* laurel-water, 30 *grammes ;* gallic acid, 5 *grammes ;* oxymel of squill, 500 *grammes ;* syrup, 4.15 *grammes.*

TREATMENT OF POISONING BY HYDRATE OF CHLORAL.—Dr. Erlenmeyer, junior, remarks that the quantity of hydrate of chloral required to produce poisonous symptoms is undetermined. The smallest quantity known to have produced poisoning is two and a half scruples ; while, on the other hand, as much as 460 grains has been taken without danger. The symptoms of poisoning by chloral are, diminished frequency of respiration, redness of the conjunctivæ, contraction of the pupils, lividity of the lips, and falling of the lower jaw : the state of the pulse has varied very much in several cases. The most important indication is the removal, as quickly as possible, of the chloral remaining in the stomach, or its dilution by water containing tea, coffee, or rum. The second indication is to restore the respiration. Not much benefit is to be expected from the use of strychnia, physostigma, morphia, camphorated ether, or ammonia, which are supposed to act as antidotes to chloral. Transfusion of blood may perhaps be found useful, as it has already been in poisoning by chloroform.—*Med.-Chir. Rundschau*, October 1872.

LOCAL USES OF TANNIN.—Dr. G. P. Hachenberg (*New York Medical Record*, August 15th, 1871) reports several cases of the use of this remedy in prolapsus uteri. A glass speculum is introduced into the vagina so as to push the uterus into its place. Through the speculum a metallic tube or syringe, with the end containing about thirty grains of tannin, is passed. With a piston, the tannin is now pushed against the uterus, the syringe withdrawn, and the packing neatly and effectually completed, with a dry probang, around the mouth and neck of the womb. After the packing is completed, the probang is placed against the tannin, in order to hold it, and the speculum is partially withdrawn. The packing is now fully secured and the instrument removed. The application of tannin holds the uterus firmly and securely in place, by corrugating and contracting its parts. At first, the applications may be made weekly, finally but once or twice a month. It not only overcomes the hypertrophy and elongation of the cervix, but even, the writer thinks, induces slight atrophy. As a remedy for leucorrhœa, where the seat of the inflammation is at the mouth of the womb, or within the vagina, it gives speedy relief. Dr. Hachenberg also reports a case of chronic ulceration of the rectum, which was cured after a few weekly packings of tannin. He has found, moreover, that in affections of the throat, direct applications of tannin to the diseased parts give satisfactory results ; and that no remedy has given such satisfactory results in certain forms of chronic ophthalmia and opacity of the cornea as pure well triturated tannin placed under the eyelids once a week. The application is not very painful, and the tears soon dissolve the tannin.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 9TH, 1872.

MR. STANSFELD'S APPOINTMENTS.

THE appointment by Mr. Stansfeld of ten Inspectors under the Public Health Act has caused an outburst of not unnatural but rather unreasonable disappointment, and of comment which is more angry and spiteful than useful or well founded. Those who regard the matter from a large public and professional point of view will not, we think, concur in the tone and spirit of a good deal of this criticism.

Mr. Stansfeld has appointed ten lawyers and a Royal Engineer to these inspectorships, or rather, as we understand, to subinspectorships. There is a manifest incongruity and absurdity in these appointments as they stand. The consequent state of things is this. Local sanitary authorities will appoint to the responsible, difficult, and highly invidious duties of local medical officer of health, practitioners who themselves largely depend for their bread upon the good will of the chief creators of nuisances, and upon the sovereign pleasure of their employers, who are commonly also largely interested in a very lenient view being taken of particular cases of nuisance and particular causes of injury to public health. Under the scheme of legislation which was submitted to the President of the Local Government Board by the Joint Committee on State Medicine of the British Medical and Social Science Associations, these difficulties would have been obviated. The medical officers of smaller districts, acting under the advice and assistance of a medical officer of a whole country area, and shielded by his initiative, would have been guided, assisted, and sustained in their proceedings by an officer giving his whole time and devoting a complete round of scientific attainments to the work, and assuming before a county authority the whole of the public responsibility in difficult cases. How necessary is such a shield, the persecution at Evesham which we last week recorded will at once serve to illustrate. In each great district, a legal and an engineering expert would have given their services.

This plan was, however, rejected by Mr. Stansfeld upon the ground of an alleged political difficulty in creating county boards for sanitary purposes, while they did yet exist for other purposes. The consequence has been the passage of an Act faulty in principle, and necessarily employing an imperfect and defective series of instruments. The Public Health Act employs small local and interested boards as its authorities, local practising medical men as its medical officers of health: and it is a natural complement of its machinery that it should employ young barristers as its inspectors. There is something extremely grotesque in bringing legal attainments of a high order, such as these gentlemen no doubt possess, to bear upon the choice of disinfectants, the relative suitability to local circumstances of this or that system of sewage-disposal, of earth-closets or of ash-pits. Elementary chemistry would be of more avail in settling doubtful questions concerning the pollution of rivers, and the condition of water, air, and soil, than a profound acquaintance with Blackstone or even a familiarity with the canons of Roman law, which is, we believe, the valuable and in its way admirable accomplishment of one of the new inspectors.

But, on examining the actual and probable duties of the inspectors under the law as it is, it is not surprising that Mr. Stansfeld chose some barristers as his instruments. "The local medical officers of health", it is argued, "are to be the expounders of the necessities of the public health, and to initiate the required reforms. They will be perpetually at loggerheads with 'their authorities'; and, if doctors be appointed, they will always be siding with their own brothers, and will keep the central board in perpetual hot water. Medical officers will be likely enough 'to blunder into difficulties and quarrels', and medical inspectors will enlarge the blunder. The Act is only 'tentative'; that is, it is designed to do the minimum amount of work in the minimum area; and to hand over the superintendence of its operations to a 'medical hierarchy', will be to realise the worst fears of those who are afraid of doing too much." Such an argument is perfectly consistent with the original character and scope of the Bill; nor is it possible to deny that a main want of the new local authorities for a long time will be advice in interpreting their powers as health-authorities, in advising as to the form of procedure in difficult cases, and in watching the points at which the codified law works with undue friction, those at which it shows surplusage and overlapping, and those at which it is cumbrous, defective, or otherwise inefficient. It may, indeed, be noticed that a large part of the reports of all of our most efficient medical officers of health is taken up by comments upon the working of various clauses of various Acts, and by regrets that such clauses are inefficient or contradictory, or leave gaps which need to be filled. Had these reports hitherto been regularly brought under the attention of persons of legal education associated with the central government, it is probable that they would have received earlier and greater attention, and that sanitary law would not now stand in such urgent need of remodelling. There is reason to be satisfied that an adequate proportion of well-trained lawyers should take part in the administration of the sanitary law; and it is quite probable that ten will be not too many to unravel the intricacies of the questions which will arise, and to advise local boards on their duties, powers, and modes of procedure in bringing the law into action. But it may fairly be argued—and it is difficult to see how such an argument is to be answered—that the object of a Public Health Act is the public health; that the ultimate operations for that purpose are not legal, but medical, chemical, and engineering operations; and that the best authorities on the British constitution may be very indifferently acquainted with human hygiene, or the physical laws of watershed or drainage, and the relative propriety, under differing circumstances, of varieties of sanitary construction.

Dr. Rumsey's proposal for bringing to bear upon each circuit a combined staff of medical, legal, and engineering inspectors, is the necessary and inevitable solution of the question. It is possible that, by a rearrangement of the medical and legal staff now at the disposal of the Local Government Board, this may be effected. The medical inspectorial staff of the Privy Council is now at the command of the Local Government Board; and their chief, Mr. Simon, is the medical officer of that board. Adequately strengthened, there is no reason why the two sets of inspectors should not work together.

The cry of treason and of incapacity raised against Mr. Stansfeld by writers in the *Lancet*, is the natural consequence of their open and indecent bids for office during the progress of the Bill. Disappointment is the just punishment of their sycophancy. A cynical student of human nature could not desire a more lively picture of human foibles than could be derived from placing side by side—if any one has preserved them—the successive articles in which the wisdom, goodness, and beneficence of Mr. Stansfeld were trumpeted while the possible keys of office still dangled in the air; those in which, at the last moment, it was declared that all defects were unimportant provided certain applicants for office whom "it could name" were provided for; and the final outburst of anger and spitefulness when that solitary aspiration which limited our contemporary's notion of health-reform was disappointed. In days when that journal was supposed to represent a large professional following, such a display of venality would have been degrading and mischievous to the profession. Since the famous deputation on the Medical Reform Bill, which showed that, after a year's incessant appeal to the profession, the *Lancet* represented only itself and half a dozen members of its staff, its acts concern only those gentlemen or their immediate friends.

Mr. Stansfeld as little deserves the present abuse as the past flattery. If the appointment of ten legal subinspectors under the Public Health Act be wrong, it is only a minor and partial wrong. The main fault lies in the defects of the measure itself. It is a partial, ill-conceived, and narrow measure; avowedly tentative, it is, in fact, ill directed, and uses machinery which is throughout insufficient and wrongly arranged. So far as it can be made to work in the present small areas, with the present small authorities, and with the present lack of chief medical officers and large authorities over large areas, there seems no reason why it should not be worked by a combination of the medical and legal inspectors of the Local Government Board, who are all disposable for the purpose. Critics who pretend that it might have worked well if they had only been paid to undertake the superintendence of its operation, fail, from introspective intensity of thought, to consider all the aspects of the question, and will commonly find it difficult to inspire others with the fulness of their own convictions. To have supported Mr. Stansfeld in his largest errors of legislation, and to urge now the formation of a cabal to exclude him from Parliament because he has disappointed a few office-seekers, is a conceit which lacks intelligence and generosity. Those who could forgive him for large shortcomings, and put up with the fag ends of reform, may pardon personal disappointments, and seek to aid in the useful application of a measure with which they were previously well satisfied, rather than threaten to devote their whole energy and gigantic powers of mind to picking holes in it. The policy of the Joint Committee is of a quite opposite character. It will continue its exertions to secure a larger measure of reform, and will aim at furthering improved legislation. It will do nothing to obstruct or injure whatever success it is possible for the Act of last session to achieve. It has loyally opposed Mr. Stansfeld's views, and endeavoured by open discussion face to face with him, and by collecting the opinions of the most experienced sanitarians throughout the country, to contribute to his knowledge, and to bring about his conversion to our views; which, indeed, he largely adopted in principle, though but to a small extent in practice. That work will be continued. To wage a petty war of personal animosity is unworthy of men acting from no personal motives, and of a profession which has in all things regarded above all the public good. The main thing to be contended for at the present moment is the formation of large areas by the combination of small, under the powers of the Bill; in the future, the constitution of county boards, and the appointment of county medical officers as the chief bearers of sanitary responsibility. Mr. Stansfeld is a man to be met by argument, by a repeated, clear, and full enunciation of facts. He is new to sanitary legislation. He has preferred—erroneously, as we think—a rapid and piecemeal to a more deliberate and broadly founded legislation. That is a legitimate cause for quarrel with him, and we entertain it warmly; but there is not probably any statesman of purer political morality, or one less open to the charge of political nepotism. It is not by spiteful combinations, or by wild schemes of vengeance, that this great question will be successfully solved. Calm and thinking men will repudiate such schemes; and they have no place in the councils of the profession, however readily they may fall from pens urged by a bilious disappointment and controlled by no responsible intelligence.

THE ANATOMY OF THE BRAIN.

I.

THE labours of Stilling in Germany and of Lockhart Clarke in England towards the elucidation of the anatomy of the central nervous system have to some extent been rivalled by those of Dr. J. Luys, physician of the Salpetrière in Paris, which are very noteworthy, although by no means equalling in importance, ingenuity, accuracy, and skill the great work accomplished during the last twenty years by our illustrious countryman, Lockhart Clarke. The labours of M. Luys deserve to be more categorically described and more widely known in this country than they hitherto have been. His *Researches on the Cerebro-Spinal Nervous System*, published in 1865, are known here only to a select few. They are completed by the *Photographic Iconography of the Nervous Centres*, which he has just published. This aims at describing and displaying the exact connexion of the different parts of the vast nervous apparatus. The scheme which results from his laborious study is often in direct contradiction with received ideas. We avail ourselves of an able analysis of his labours by Dr. Strauss in the *Gazette Hebdomadaire* to give here a concise statement of his results., confining ourselves for the moment to stating without criticising them.

In speaking of the cerebro-spinal nervous system, it is naturally classed in three divisions—the brain, the cerebellum, and the spinal cord. The brain, properly so called, is constituted of three distinct parts: first, a layer of grey matter, sinuous and bent upon itself, forming the convolutions, the cerebral shell; second, white, the fibrillary matter; third, the central bodies of grey matter, optic thalami, and corpora striata. We pass over the histological characters of the peripheral grey matter. Of the white substance, it may be said generally that the white fibres follow a double direction. All start from the depths of the convolutions, but some converge and connect the cortical layer with the central regions, forming a radiating crown (Reil) around the optic and striated bodies; others affect a transverse direction, and connect the homologous sides of the two hemispheres: these constitute the commissural fibres.

These two orders of fibres, starting from a common origin in the grey substance of the convolutions, soon separate, and the interval which they leave between them constitutes the cavity of the latera ventricles. The converging fibres are the spokes of a wheel, of which the grey cortical matter is the periphery and the optic ganglion the centre, disposed in three groups—anterior, median, and posterior; forming collective bundles, they enter a corresponding portion of the optic thalamus. Some penetrate it directly and terminate in its nuclei of grey matter; others are reflected forward into the corpus striatum. The commissural fibres consist of a series of transverse bundles, more

or less arched, conjugating the homologous regions of each hemisphere, and constituting as a whole the vault of the corpus callosum and the white anterior commissure. The optic ganglion, the centralising apparatus of all these fibres, has been studied by M. Luys with great care. He finds in it—first, a series of little isolated collections of grey matter, veritable centres of reception of the converging cerebral fibres; second, a central region of grey matter spread out along the third ventricle, and prolonging into the brain the grey matter of the spinal axis. His plates display four centres of the optic ganglion. They are situated superficially, and their projections form the different eminences observable on its surface; each may be considered as a veritable ganglion, receiving afferent and emitting efferent fibres. The nerve-cells here met with are for the most part bipolar, and greatly resemble those of the spinal ganglia. M. Luys names these centres anterior, mean (*moyen*), median, and posterior; each of them receives fibres which are nothing else than the radical filaments of sensitive cranial nerves (nerves of special sense); it emits others which terminate in the peripheral cortex of the brain, and serve the intellectual elaboration of the senses. Thus, the anterior centre receives the fibres of the tænia semicircularis, which itself communicates indirectly with the external root of the olfactory nerve; the efferent fibres (cerebral) pass to the convolutions of the hippocampus. Comparative anatomy, M. Luys observes, throws a brilliant light on these connexions. The development of the anterior centre of the optic ganglion on the one hand, and that of the convolutions of the hippocampus on the other (Treviranus), are proportionate in the vertebral series to the development of the olfactory nervous apparatus.

The mean centre (*centre moyen*) receives, very probably, fibres of the corpora geniculata, which are in direct connexion with the optic bands, and certainly fibres of the tuber cinereum, from which start the grey optic fibres. The connexions of this centre with the optic nerve are then indubitable. As to the efferent fibres, they are represented by the series of converging cerebral fibres which terminate in the antero-external substance of the hemispheres. It follows, therefore, that "the visual impressions are principally elaborated in the convolutions of the anterior and external regions of the brain."

The median centre is a discovery of M. Luys: it has not been described by any previous anatomist, probably because this centre does not, like its homologues, form a projection on the surface of the optic thalami. It constitutes the veritable *punctum centrale* of the brain; its afferent fibres are ascending, and proceed probably from the subjacent regions of the spinal axis. Its efferent fibres radiate in all directions and place it in relation with the convolutions generally. M. Luys concludes that this centre receives impressions of general sensibility, and transmits them to all the points of the cortical surface of the brain.

The posterior centre is in connexion, by its afferent fibres, with the original radicals of the auditory nerve, probably through the medium of the fibres of the white posterior commissure; by its efferent fibres it enters into relation with the posterior convolutions, towards which there principally are conducted acoustic impressions. By a legitimate physiological induction, these different centres may then be designated olfactory, optic, general, sensitive, and acoustic centres.

The central grey region of the optic thalamus must be distinguished from the nuclei which we have just described. It consists of a layer of nerve-matter spreading itself out on the walls of the third ventricle in the form of two little bands, and becoming continuous with the grey substance which lines the fissure of Sylvius and the canal of the spinal cord. It constitutes, then, the cerebral prolongation of the grey spinal matter. Thus, the optic thalamus appears, anatomically, as a collection of ganglia; physiologically, as the centre of the brute sensorial impressions, the true *sensorium commune*.

M. Luys' researches on the corpus striatum have been elaborate and novel. Three orders of fibres terminate in the grey nuclei which it contains. They are—1. The anterior spinal fibres (motor); 2. The converging cerebral fibres which we have already mentioned (cortico-striate); 3. Cerebellar fibres. The corpus striatum constitutes, then, as it were, "the common reservoir of the three sources of cerebral, cerebellar, and spinal innervation."

To sum up: each cerebral hemisphere may be regarded, schematically, as formed of a hollow sphere (convolutions), from the concavity of which start a multitude of radiating fibres, which terminate in a central nucleus (optic thalamus and corpus striatum). The two hemispheres are united and, as it were, conjugated by transverse fibres (commissural fibres), which secure the perfect synergy and unity of action of the two parts of the two halves of the encephalic apparatus. Hence, the simple and precise anatomical definition at which the author arrives: "The brain is the totality of the convolutions united together from side to side, and united also to the optic thalamus and the corpus striatum."

ALBINISM AND THE MARRIAGE OF COUSINS.

G. Arcoleo (*Centralblatt*, No. 28) has made some remarkable observations on the occurrence of albinism in certain towns of Sicily. In a population of 255,000, living in five towns, were 62 albinoes, or 1 in 4,000; 24 of these were not living at the time of making the observations. Of the whole number, 34 were males, and 28 females. They were members of twenty-four families, but in only three of these were all the children albinoes. In one case, a pair of twins was observed—one normal, the other an albino. Six of these persons were married, and all but one had children, none of whom showed the least albinotic taint; nor was there any history of this defect in the parents or remoter ancestors. In several cases, it was noticed that, while the one parent of an albino was blond, the other might be dark. While, therefore, inheritance had plainly nothing to do with this peculiar condition, the writer thought he found strong support for the theory which connects albinism with consanguineous marriages. Other supposed causes, such as climate, privations, etc., were plainly without influence. On the other hand, in five of the twenty-four families, the parents were related in the second degree (? cousins); and some other consanguineous marriages had been contracted in previous generations. Although, in the other cases, no such relationship could be traced, the social and political conditions of Sicily were thought to make it probable that such relationships might exist, though unsuspected by those concerned. The insular position, the want of intercommunication between different parts of the island itself, the jealousy and repugnance shown by the Sicilians themselves towards foreigners, are all conditions which must cause considerable intercrossing of the same elements. For instance, one of the families containing albinoes was that of a fisherman in Palermo, one of a race of people who are confined to one quarter of the town, and notoriously marry only among themselves. Moreover, other diseases, supposed to be connected with consanguineous marriages, are, as a matter of fact, particularly common in Sicily—*e. g.*, deaf-mutism, rickets, idiocy, and epilepsy. In support of the theory, it is also urged that albinism very frequently occurs in the oases of the African coast, where there must be the same isolated condition of the population as in an island.

THE PATHOLOGY OF CEREBRAL HÆMORRHAGE.

Dr. Zenker of Erlangen, in a communication made to the last meeting of the Society of German Naturalists and Physicians, confirms in its essential points the statement made several years ago by Charcot and Bouchard, and by Charlton Bastian, that the disposition to cerebral hæmorrhage consists in the formation of minute aneurisms. Having examined all the cases of spontaneous cerebral hæmorrhage that have come under his notice during several years, Dr. Zenker in every instance found miliary aneurisms, both in the wall of the hæmorrhagic deposits, and in other parts of the brain. They appear to the naked eye as little fluctuating tumours as large as a pin's head (rarely larger), and assume all the ordinary forms of aneurism. Usually the inner coats of the vessel give way, and a dissecting aneurism is formed. The disease may remain at this stage for some time, or there may even be recovery, a small pig-

mental mass being left. In other instances, all the membranes burst, and hæmorrhage into the brain takes place.

As to the origin of these minute cerebral aneurisms, Dr. Zenker does not entirely agree with MM. Charcot and Bouchard. These observers have called in question the dependence of these aneurisms on atheromatous degeneration; Zenker, however, is convinced that they have their origin, just like aneurisms of the larger vessels, in atheromatous disease of the inner coat of the arteries. These minute aneurisms may indeed be present, without any evident sign of disease in the arteries at the base of the brain. On microscopic examination, however, of the aneurisms and of the arterial twigs on which they are seated, the inner coat is found to present changes corresponding to the uneven thickening which occurs in atheroma of the larger vessels. Thus the researches of Charcot and Bouchard do not subvert the old doctrine of the dependence of cerebral hæmorrhage on vascular degeneration, but give it an important confirmation.

PROFESSOR SPAETH has been elected Rector of the University of Vienna.

MR. BIRKETT has been elected an Examiner of the Royal College of Surgeons of England, in place of Mr. Busk, resigned.

THE London Edinburgh University Club will dine at St. James's Hall Restaurant on November 14th; Dr. Halley, honorary treasurer, in the chair.

CARDS have been issued for *soirées* by Dr. Braxton Hicks, the President of the Obstetrical Society, and by the President of the Hunterian Society.

THE new premises of the Medical Society of London are at No. 11, Chandos Street; not at No. 10, as was stated by mistake in the JOURNAL of October 26th.

THE vacancies in the medical staff of the West London Hospital have been filled by the election of Dr. Fish and Dr. Ferrier, the latter being the able and accomplished physiologist and Professor of Medical Jurisprudence in King's College.

MR. EDWARD BICKNELL has been publicly presented with an illuminated address and a handsome silver tea-service, on the teapot belonging to which is inscribed, "Presented to Edward Bicknell, M.R.C.S., on his retiring from the office of Surgeon to the Coventry Provident Dispensary."

AN interesting lecture was given on Wednesday evening at the Marine Aquarium at the Crystal Palace. It was followed by a *soirée*. This admirably constructed and extremely well managed institution will reward lovers of marine zoology, and indeed all lovers of the beauties and marvels of nature, for a journey from afar. It is as much a model for imitation as is that at Brighton of faults to be avoided and an ignorance which is inexcusable.

TO the periodical literature of Guy's Hospital is now added a *Gazette*, giving useful lists of the cases in hospital, with notes of interesting clinical particulars and hospital news. In a large school, such a Gazette must be very useful; and, as furnishing an outlet for, and giving encouragement to, the literary and professional activity of students, it may also be useful. Early training in thinking exactly is greatly aided by the practice of reducing all observations to writing; and that which is intended for publication is commonly prepared with care.

THE Herefordshire Medical Association held its fourteenth annual meeting on October 30th—H. Vevers, Esq., presiding. The annual report condemns "the gross impropriety of appointing persons uneducated in sanitary science as sanitary inspectors to form the medium of communication between the local and central sanitary authorities." The financial statement showed an annual receipt of £6 7s. 6d., and an expenditure of £4 4s. 1d. on postage, printing, and stationery.

GREAT regret is expressed at Prague at the death of Dr. Treitz, who for twenty years has held the Professorship of Anatomy at the University. He poisoned himself whilst suffering from an attack of melancholia.

THE vacant post of Demonstrator at the Charing Cross Hospital, to which we last week referred, is likely to attract the attention of several men of established reputation. We hear that Dr. Murie, late Prosector to the Zoological Society, is likely to be amongst the candidates. It is doubtful if this country possesses any comparative anatomist who has enjoyed such opportunities as Dr. Murie, and he has ably profited by them. His contributions to the anatomy of the higher vertebrates are rare examples of successful industry and skilful research.

A GOOD EXAMPLE.

IT will be remembered that a few weeks since the Reverend Canon Charles Kingsley, in his presidential address to the Birmingham Midland Institute, recommended with great earnestness and eloquence the teaching of the art, and also the encouragement of the practice, of preserving health. We have just learnt from the Birmingham papers that this good advice has been followed by an anonymous benefactor investing £2,500 to establish a professorship on that subject.

CHOLERA IN AUSTRIA.

CASES of cholera, with deaths, are of daily occurrence in Buda, Lemberg, and Prague. In consequence, Baron von Eibisfeld, Governor of Lower Austria, and Dr. von Karajan, Consulting Sanitary Officer, have been called by the Emperor to Buda to report on the health of Vienna, and on the precautionary measures taken against any outbreak of cholera in that city. The first question, says the *Wiener Med. Wochenschrift*, may for the present be answered satisfactorily so far as cholera is concerned; but as to precautionary measures, nearly every thing is as yet to be desired.—In the province of Galicia, from October 1st to 15th, cholera broke out in eighty cantons, disappearing from sixty-five others in which it had been present. During the time above mentioned, the disease prevailed in thirty-two districts and two hundred and forty-seven cantons, 5,577 persons being affected; of these 2,822 recovered, 1,682 died, and 1,003 remained under treatmeent.

PRIZE.

THE Royal Institution of Science, Literature, and Arts, in Venice, offers a medal of the value of 3000 *francs* (£120), to be awarded in 1874 to the author of the best essay on the following subject: "The advantages derived by the medical sciences, especially physiology and pathology, from modern discoveries in physics and chemistry; with a retrospective view of the systems which prevailed in medicine in past times." The competition is open to foreigners; and the essays may be written in French.

THE INFANT LIFE PROTECTION ACT.

THIS useful piece of legislation has, we are glad to see, attracted attention abroad. The following circular, dated October 15th, 1872, signed by the Ministers of the Interior, and of Clerical, Legal, and Medical Affairs of Prussia, has been addressed to all the principal provincial and district authorities, and to the heads of the police in Berlin.

"Infant protection societies have, in several of the larger towns of Prussia, undertaken the bringing up of nurse-children by persons of good character, under special inspection. But, since the circular order of July 17th, 1840, which made the reception of nurse-children dependent on police-licence, has been abrogated by the trade-regulations of June 21st, 1869, the action of these societies has necessarily become more and more limited, in consequence of the means at their disposal not being sufficient for the number of children requiring help, and also because they are deprived of the legal support, under the protection of which they were able to afford essential assistance to the police authorities, and thereby increase their circle of operation.

"As now, on the one hand, the mortality among children during the past year is relatively the largest, and the illegitimate children, who are given to strangers to nurse, contribute most of all to this mortality; and as, on the other hand, the humane endeavours of the 'Infant Protection Societies' and their beneficial influence on social life would

be essentially promoted, if the law afforded them sure protection; it appears requisite, in the interest of the common weal and of humanity, to consider more closely whether legislative interference for the protection of the 'nurse-children', according to the English example, should not be introduced. We therefore suggest to you to inquire into and report on the number and the fate of children under one year old, in your district, given into the charge of strangers for hire, and on the action of the Infant Protection Societies.

"We also look for adequate proposals for the enactment of such legal measures as, following the example of the British Act of Parliament, shall appear calculated to counteract successfully the present gross neglect of nurse-children."

The circular also contains a translated copy of the Infant Life Protection Act.

INFLUENCE OF EDUCATION ON PUBLIC HEALTH.

In 1827, Double noticed the influence which education exercised on the public health; and, a year later, Mélier showed that in those departments of France where the numbers of children at school were greatest the mortality was least, with a few exceptions which could be explained by the action of special influences. M. Du Mesnil has recently again investigated the subject, and has given the results of his observations in the *Annales d'Hygiène Publique*. From a comparison of the reports on recruiting for the army with those on the progress of education, he has found that those departments in which the proportion of illiterate persons is g eatest, present also the lowest duration of life, and the smallest average tature; while, in those where primary instruction is most completely carried out, the people live longer and are of larger build. He finds also that the numbers of recruits rejected as unfit for military service is greatest in those departments, where education is most neglected. M. Du Mesnil also gives some statistics of the progress of the population in France. In the years 1840 to 1845, the population increased at the rate of 1 in 180; in 1846-1850, the rate of increase was only 1 in 350; and, in 1854, the number of deaths was greater than that of births. During the thirty years commencing in 1836, the average yearly increase of population in France was only 0.44 per cent., while in Prussia it was 1.62 per cent. To the objection, that it is unreasonable to ascribe diminution of mortality, increased duration of life, and increase of the population, to a better development of instruction, as many other factors have to be taken into account, he answers that a large proportion of the latter have a close connection with education, and that ignorance, misery, and mortality, are inseparable.

THE PUERPERAL TEMPERATURE COMMITTEE.

It will be remembered that the Obstetrical Society of London appointed a Committee to collect evidence on the temperature of puerperal fever. The results of the work of the Committee are about to be arranged and a report drawn up on the subject; and it is desirable that those gentlemen who have received and used the charts forwarded to them by the Committee should return them at once to the Secretary, Dr. Edis, 23, Sackville Street. Chart-forms for recording observations may still, we understand, be obtained by application to the Secretary.

THE HEALTH OF BIRMINGHAM.

Under the heading a "Medical Officer Wanted", Mr. Thomas Plant of Birmingham has issued the following statement.

It is nearly ten years since I first drew the attention of the Town Council to the importance of appointing a medical officer for the borough. In 1864 and in 1867 I got memorials to the Town Council signed by the leading tradesmen, merchants, manufacturers, magistrates, and most of the physicians of the town. Those documents, praying for an officer of health, were in due course discussed in the Council Chamber. The main features contained in the memorials were, that Birmingham suffers most severely at certain seasons from preventable epidemic diseases; and, from the want of a responsible medical adviser, much mortality has been the result. A large number of the Council supported the proposition, but on a division it was lost. The same fate befel subsequent efforts. Birmingham, through its local representatives, has hitherto failed to see the vital importance of such an office; but our local legislators, though somewhat cautious to move in these matters, have been in most cases the more decided for action when urgent necessity for a change is put forth and reiterated. We have this point established during the recent municipal contests. Upwards of one-half the wards were polled on the 1st November, and most of the candidates expressed their approval of the appointment of a medical officer. Nothing than this can be more in accordance with the letter and true spirit of the Municipal Act. Health is the cardinal condition. This was the prime object of the Local Government Board Act, passed in the last session of Parliament. A medical officer would advise and direct the Board in times of excessive mortality, such as has visited this town during the last three months. I feel assured that the intelligence of the Council will approve of the project. It will be the province of a medical officer to trace localities of zymotic diseases on their first appearance, as evidenced by the death-returns published by the Registrar-General every week. Immediate action will save epidemic consequences. It is much to be regretted that municipal elections have everywhere assumed a political character. This is a complete perversion of the object of the Municipal Act—*Salus populi lex suprema*. The intention of the Municipal Act was doubtless the health of the people. When men take the office of town councillors, it becomes their duty to do all in their power to promote the sanitary improvement of the community whom they represent. It may be thought very well for members and their friends to sit down to a good dinner and plenty of wine at the Queen's Hotel, next Saturday, November 9th, and there exchange complimentary toasts and friendly greetings; but, whilst reviewing the municipal events of the year, the knowledge that the Town Council, as guardians of the public health, have been reminded over and over again that a high death-rate has stricken most parts of the borough for the last three months, and that no special remediable measures have been adopted, will be a reproach to those whose responsibilities and special duties have been thus neglected.

In a postscript he adds:

Since writing my letter, we have the quarterly returns of the Registrar-General. In eighteen of the largest English towns the death-rate for last quarter averaged 24.2 per 1,000; in Birmingham, however, it was 24.7. The death-rate in the borough in the third quarter of the three years 1869, 1870, and 1871, was 23.0, 23.9, and 24.6 respectively. The Registrar-General observes that "these figures show a slow but steady increase". Seven hundred and seventy-eight deaths resulted from the principal diseases of the zymotic (preventable) class against 712 in the corresponding three months last year. The Report says: "Wholesale infant mortality, from diarrhœa and other causes (scarlatina, small-pox, fever, etc.), is going on in Birmingham, which, from the culpable negligence by which it is produced, might almost be called infanticide." He adds, "It is upon this large proportion of more or less preventable deaths that we must hope for the influence of more effective sanitary organisation". Could words more forcible and conclusive than these be set forth in appealing for the appointment of a medical officer for the borough?

DR. DAREMBERG OF PARIS.

It was with feelings of very great regret that we heard a few days ago of the death of this eminent scholar: indeed, we may say that our sorrow had something of a peculiar and personal character, for the readers of this Journal may possibly lose the pleasure and advantage of becoming acquainted with some of the results of his historical researches, which he had consented to furnish to our pages. In the last number of the *British and Foreign Medico-Chirurgical Review* there is a notice of his latest work, the *Histoire des Sciences Médicales*, from which we learn that the professor had been induced, by his high sense of duty, to remain in Paris during the siege by the Germans, and that the anxiety and bodily fatigue and privations which he had then undergone had affected his health to such an extent that it was not probable that he would ever entirely recover. To this he alluded in the opening lecture of his first (and, unhappily, last also) course, delivered at the Faculty of Medicine last autumn. After the finishing of his course in the spring, he was ordered to give up all literary work, and he had, we believe, made arrangements for the performance of his professional duties by deputy during the ensuing winter. For a time he appeared to improve, as he was able to assure us in his own hand-writing; but we believe (for we have not yet heard all the particulars of his death) that the heart-disease from which he suffered was somewhat suddenly and unexpectedly aggravated during the last few weeks of his life, and that during part of that time his sufferings were very great. He died on October 24th, at the comparatively early age of fifty-five, when his

mental powers and activity were in full perfection, and just as a fresh field of influence and usefulness, and one to which he had long been aspiring, seemed to be opening before him. The establishment of the Professorship of Medical History at the Faculty of Paris, as mentioned in the *British and Foreign Medico-Chirurgical Review*, forms an interesting page in the history of medical science in France ; and when Dr. Daremberg was appointed to fill the place, it was universally felt that no fitter person could have been found. His previous lectures at the College of France, and his numerous publications relating to medical history and literature, were amply sufficient to show that for once the right man had found his right place. We have not time at present to give anything like a detailed account of his published works ; it will be sufficient to mention his translations of Hippocrates and Galen, and his editions of the texts of Celsus and Oribasius, of which last work the fourth and concluding volume has not yet appeared, but is, we believe, almost finished. But, alas ! *pendent opera interrupta*, and a large mass of valuable but unfinished MSS. are left behind, which it is probable that no one will be able to utilise as they deserve. Besides his studies connected with medical history and antiquities, which was his special and favourite occupation, he was a frequent contributor to the *Journal des Débats* of articles on various literary and social subjects ; and he was one of the librarians at the Mazarine Library, which was a post that he especially enjoyed, and for which he was eminently fitted. He had travelled over great part of Europe, and visited all the principal libraries, in order to copy or collate the Greek and Latin medical MSS. To this country he came several times, and published the result of his researches in his *Manuscrits Médicaux Grecs d'Angleterre*. His own library, which he had been gathering together for the last five-and-thirty years, consists chiefly of a collection of works relating to medical history and literature, which is probably more extensive and complete than any in existence ; it also contains a very large number of classical works, and would altogether make a most valuable nucleus for any public body (such as the University of London) which is beginning to form a library on a large scale. We ought not to conclude this hasty and imperfect tribute to the memory of a most estimable and worthy man without adding that, though Dr. Daremberg had for many years given up the general practice of his profession, he was always ready to give the benefit of his medical advice to those who had need of it, as was the case during the siege of Paris, and especially at the little village of Mesnil, near Maison-Laffitte, where for the last twenty years he had passed the summer months, and where his professional skill was much appreciated by his poorer neighbours. With respect to his general character, it will be enough to say that all those who had the pleasure of making his acquaintance in this country esteemed him as a most agreeable man, of great learning, intelligence, and ability ; while those who were admitted to his more intimate friendship, discovered that he was also most conscientious and high-principled, and actuated by genuine but unostentatious religious feeling. He leaves many friends behind him to regret his loss.

" Multis ille bonis flebilis occidit,
Nulli flebilior quam mihi !"

CHELTENHAM SEWAGE-FARM.

THE sewage of the town of Cheltenham, after passing through tanks, where the solid matter is precipitated, flows by gravitation over a farm of 127 acres, about three miles from the town, which has been purchased for the purpose by the Town Commissioners. This farm is divided into seven lots, and is yearly let by auction, it being a condition that the sewage liquid shall be applied in the discretion of the borough surveyor, under whose management the irrigation works are placed. With the exception of one lot of six acres the farm is ordinary pasture ground, the excepted field being laid down with rye grass. The third annual letting of the farm was held on Thursday last, and a very large company attended the auction. The total result of the letting was £815 : 1 : 6 for the year. The pasture land was let subject to the condition that it be mown not more than twice during the year ; the rye grass land was subject to no such restriction. The cost of the farm to the town of Cheltenham, with the necessary irrigation works, was about £18,000. Such part of the liquid sewage as is not required on the farm is supplied to neighbouring farmers at a charge of fifteen shillings per acre.

THE GUILDHALL LIBRARY.

THE Guildhall Library was opened on Tuesday evening by a very numerously attended *soirée*, at which a magnificent display of objects of artistic and antiquarian interest were shown. Dr. Sedgwick Saunders is the Chairman of the Library Committee, and to him great credit is due and is awarded for his highly successful and continuous exertions to make the City Library in some respect worthy of the Corporation. A large number of leading medical men received invitations, and they were present in great force.

THE OBSTETRICAL SOCIETY OF LONDON.

AT the meeting of the Obstetrical Society on Wednesday, an interesting discussion took place on a paper read by Dr. Meadows "On a Case of Extrauterine Fœtation, where Cæsarean Section was performed," the child being extracted alive and the mother dying, apparently from exhaustion, on the following day. There was a very full meeting. Dr. Meadows thought that, where the diagnosis was certain, and the fœtus living and viable, hysterotomy should be performed. The fœtus should be removed and the placenta allowed to remain, trusting to its becoming absorbed when no longer needed. The wound should be closed by sutures and treated as in ordinary cases of ovariotomy.

PREGNANCY AT AN ADVANCED AGE.

DR TURNER ANDERSON reported to a recent meeting of the Louisville College of Physicians and Surgeons the case of a woman delivered at the age of fifty-one of a still-born child at full term. She had given birth to a living child seven years before ; since that time, she had menstruated irregularly. She was exceedingly thin, and her hair was white. Dr. Speed gave details of the case of a lady aged fifty-three, whose youngest child was nine years old.

THE MIDDLESEX HOSPITAL MEDICAL SOCIETY.

THE opening meeting of this venerable society was held in the Board Room of the hospital on October 31st, Mr. Andrew Clark, President, in the chair. The Society was instituted in the year 1774, two years after the foundation of the Medical Society of London, by the students of the hospital, who were granted the use of the Board-Room by the hospital authorities, on the condition that they "defrayed the cost of their own candles." The society continues to fulfil the original design of its founders, to encourage discussion amongst the students of subjects connected with medicine, surgery, and the collateral sciences. At the opening meeting for this session, Mr. R. H. Lucas, Resident Medical Officer, read an interesting paper on the use of the thermometer in disease. There was an attendance of about forty students, while several members of the staff of the hospital were also present. A discussion of some length followed the paper of the evening. An interesting pathological specimen of a fractured rib puncturing the intestine was exhibited by Mr. Jackson.

THE MEDICAL OFFICERSHIP OF HEALTH FOR ST. GEORGE'S, HANOVER SQUARE.

DR. CORFIELD, whose high claims to the office we recently pointed out, has been elected to the post of Medical Officer of St. George's, Hanover Square. This appointment leaves a vacancy at Islington. The authorities at Islington will not, however, have any difficulty in finding a worthy successor to him. Mr. Haviland, who was within an ace of receiving the appointment last year, is one of the ablest, most trustworthy, and laborious sanitary authorities in the profession. His ability and industry have been amply recognised by the reception accorded to his maps of the topography of diseases, by the most eminent British and foreign authorities, and by the profession at large. Other candidates will, we believe, also appear, but it will be difficult to find any whose claims can equal those of Mr. Haviland.

THE PROPOSED MEDICAL MICROSCOPICAL SOCIETY.

THE preliminary meeting, held for the purpose of forming the proposed Medical Microscopic Society, was held on Friday, November 1st, at St. Bartholomew's Hospital—Mr. Morrant Baker in the chair. A good deal of discussion ensued on the proposed Society, and delegates from the various hospitals were appointed as a committee.

SCOTLAND.

DR. D. CAMPBELL BLACK has been appointed an extra-physician to the Royal Infirmary of Glasgow.

THE LATE SIR JAMES SIMPSON.

A BUST of the late Sir James Y. Simpson, by Mr. Brodie, has been placed in the library hall of the University of Edinburgh. It was presented by the family of the late distinguished physician.

MEDICAL OFFICER OF HEALTH FOR GLASGOW.

THE Police Board on Monday, November 4th, unanimously adopted the minute of the Health Committee, and appointed Dr. J. B. Russell Medical Officer of Health for the city of Glasgow.

PROFESSOR HUGHES BENNETT.

WE regret to hear that Dr. Hughes Bennett of Edinburgh is again compelled, in consequence of the state of his health, to relinquish his intention of fulfilling his professorial duties this year at the University. Dr. McKendrick, who acted for Dr. Bennett last year acceptably, has been reappointed by the University Court to undertake the lectures on Physiology.

ABERDEEN MEDICAL STUDENTS' JOURNAL.

WE understand that the medical students of the University of Aberdeen propose to issue a Medical Journal, which shall appear once a fortnight. Three advanced students will act as editors. The first number was, we understand, published on Wednesday. It bears the name of the *Aberdeen Medical Student*. The undertaking shows very gratifying vigour in the Aberdeen school. We wish the promoters of the journal every success.

THE BUILDINGS OF THE UNIVERSITY OF GLASGOW AND THE WESTERN INFIRMARY.

THE Committee on Subscriptions report that during the last six months the amount received has been £7,131, of which £1,765 is for the University buildings, and for the Infirmary £5,366, making the total sum collected £156,162. Upwards of £36,000 are still required for indispensable works, while to build the hall and complete the spire about £60,000 more are required. For the Western Infirmary a sum of £13,500 is demanded for the cost of the building now in course of erection, and to complete it, £30,000 in addition.

THE EDINBURGH INFIRMARY AND THE LADY-STUDENTS.

THE case concerning the voting of firms at the annual meetings of contributors raised in January last was before the Second Division of the Court of Session on Tuesday and Wednesday last week. The Court ultimately decided to allow the respondents, before answers, "to print and box such extracts of the records of the Infirmary as they might think fit, bearing upon certain facts set forth by the respondents." This interlocutor will allow the respondents an inquiry into the averment of custom.

OPENING OF THE MEDICAL SCHOOLS.

THE winter session in the Scotch medical schools has just commenced. In the University of Edinburgh, the session was opened, on November 2nd, by Principal Sir Alexander Grant, by an interesting address.—At the Edinburgh School of Medicine, Dr. Angus Macdonald delivered the introductory address. There was a large attendance of the lecturer's students and members of the profession. He welcomed Dr. John Duncan as lecturer on systematic surgery, and Dr. Claud Muirhead as lecturer on the practice of medicine.—The formal opening of the Glasgow University session took place on November 4th, when Principal Barclay delivered the introductory address. The medical session actually commenced on October 20th, by Dr. Leishman.—The medical classes of Anderson's University were opened on October 29th, by an address from Dr. J. G. Wilson.—The medical session at the Aberdeen University commenced on October 30th.—The winter session of the University of St. Andrew's commenced on November 5th. Principal Shairp delivered an introductory address on the position of the education question.

IRELAND.

THE winter session has commenced in the medical schools. In Dublin the session of the Royal College of Surgeons was opened by Dr. Davy; that of the Catholic University by Dr. Lyons; of St. Vincent's Hospital by Dr. Cryan; of the Ledwich School of Medicine by Dr. Travers; and of the Meath School by Mr. Langley.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION (IRELAND).

AT a meeting of the medical officers of the Abbeyleix (Queen's County) Union, held on the 17th October, 1872, Dr. Swan in the chair, it was proposed by Dr. Hanrahan, seconded by Dr. Fitzpatrick, and resolved: "That we give our full adhesion to the rules and regulations of the Poor-law Medical Officers' Association of Ireland; that we approve of the project of having a meeting in Dublin of the county representatives of this association, for the purpose of submitting a report to Sir Dominic Corrigan, and other members of the city, county, and University of Dublin, and as many other members of Parliament as may attend, with the view of having our grievances brought under the notice of Parliament next session; and that we will endeavour to secure the co-operation of our own county and borough members for the same object." Dr. Stoney proposed, Dr. O'Kelly seconded, and it was resolved:—"That our present salaries being inadequate to meet the increased rate of living, we trust that the friendly disposition evinced by the guardians in removing our legitimate grievances on former occasions will be manifested now, by so increasing our salaries as to enable us to maintain the position befitting our profession; and we respectfully submit that, owing to the additional expenditure incurred now, a salary of £120 a year would not leave us in as good a position as when we were originally appointed at £80."

TRINITY COLLEGE, DUBLIN.

THE new Professorship of Comparative Anatomy will have an endowment of £300 or £400 a year. The first holder will, we believe, undoubtedly be Dr. A. Macalister, Professor of Zoology; and in future the two chairs will go together, with an endowment, jointly, of £600 or £700 a year. Practically, the election may be considered as virtually decided. Trinity College will have in future two Professors of Anatomy; viz.: 1. Pure Anatomy, Human and Comparative; 2. Mixed Anatomy = Medical and Surgical Anatomy. They will each have an income of £700. Both professors must attend two hours daily in the dissecting-room.

THE LONDONDERRY ELECTION.

DR. EVORY KENNEDY has announced his intention to withdraw from the contest for the representation of the borough of Londonderry in favour of Mr. Palles, the new Attorney-General for Ireland, rather than split the Liberal interest. We regret that loyalty to his political party has induced him to adopt this course, as we have no doubt that he would have proved to be an able ally to Sir Dominic Corrigan during the ensuing session.

THE ADMINISTRATION OF ANÆSTHETICS.

ABSTRACT OF THE SECOND REPORT OF THE NITROUS OXIDE COMMITTEE OF THE ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

THE second and final report of the Joint Committee appointed by the Odontological Society of Great Britain and the Committee of Management of the Dental Hospital of London to inquire into the value and advantages of the protoxide of nitrogen as an anæsthetic in surgical operations, was presented at the meeting of the Odontological Society on Monday evening. The discussion on the report is adjourned until the next meeting of the Society, on December 2nd, at 8 P.M. By the courtesy of Mr. Thomas Underwood, Honorary Secretary of the Committee, we are enabled to publish an excerpt of the report.

The points to which the Committee directed their attention were chiefly the following.

1. The physiological action of the gas and the methods of resuscitation in threatened death.
2. The possibility of prolonging its anæsthetic effects.
3. The best methods of preparing, storing, and administering the gas, and the modes of meeting anomalous effects produced by its administration.
4. Any other additional information which might come to their knowledge.

Dr. Frankland, Mr. Coleman, and Mr. Braine were appointed to carry out individually experiments to ascertain, if possible, the physiological action of the gas. The conclusions which the two first named gentlemen consider deducible from their investigations are given in the report.

With regard to the question whether nitrous oxide is decomposed when it is respired, a series of experiments were made by Dr. Frankland on a young and tame rabbit, and the results are given. Although the results do not admit of being used for the absolute solution of the problem proposed, nevertheless—as the observation of a manometer showed that the gases suffered but a very small diminution of volume during respiration—they may, the experimenter thinks, be safely taken as proving that not more than a very small proportion of nitrous oxide, if any, was decomposed, since the percentage proportion of this gas underwent no diminution during the progress of respiration. It was also shown, Dr. Frankland believes, by his experiments, that nearly the whole of the oxygen absorbed by the animal was employed in the oxidation of carbon; that the united volumes of nitrogen and nitrous oxide suffered a corresponding slight augmentation; and, thirdly, that the volume of nitrogen in the mixed gases experienced an apparent slight reduction during their use in respiration, whilst that of nitrous oxide underwent a slightly greater increase. But, with regard to the last results, Dr. Frankland admits that they may be considered within the limits of experimental error.

Mr. Coleman proceeded also to determine the question whether nitrous oxide was or was not decomposed when respired. He deduces, from his experiments made on the expired air of the human subject, the conclusion that, if nitrous oxide gas be at all decomposed in the blood, it must be only in very small quantities.

The majority of the Committee adopt the opinions advanced by these two gentlemen, and recommend that, in the event of alarming symptoms presenting themselves during the administration of the gas, it be immediately suspended, and no impediment be offered to the free admission of air into the lungs.

Prolongation of the anæsthesia, the Committee state, may be accomplished in mouth operations by "a nose-piece", and by throwing a jet of gas into the mouth at each inspiration while the operation is proceeding, the nose being kept closed by a spring clip; in operations on other parts of the body, by checking and re-supplying the gas through the face-piece from time to time, as circumstances may require, insensibility can be kept up for several minutes; and the Committee direct the attention of surgeons to this fact especially, because many accidents have lately occurred from the administration of chloroform. The Committee point out the great improvements carried out in the administration of nitrous oxide, and in its storing and liquefaction.

The Committee have now in their possession the records of 58,000 cases in which the gas has been administered in this country. This extended experience enables them to add that the occasional occurrence of vomiting, hysteria, etc., which occur under the influence of the gas have been less manifested than usual, from the better administration of the anæsthesia and the purer character of the gas.

Its mode of producing death they believe invariably to commence at the lungs, and that artificial respiration will resuscitate the animal as long as the heart continues beating. Nitrous oxide mixed with chloroform did not answer in the hands of the Committee; but the latter as an adjunct was found to be of service in special circumstances.

The Committee complete their report by expressing their firm conviction that nitrous oxide is the safest anæsthetic known, and that not a single fatal case has occurred which can be fairly attributed to its action.

ETHER *v.* CHLOROFORM.

MR. J. T. CLOVER, F.R.C.S., writes to us on this subject, to which we have recently invited professional attention.

In discussing the merits of ether and chloroform as anæsthetics, there are two questions which ought to be considered separately. 1, Which is the less likely to cause death? 2, Which leaves the patient in the more favourable condition afterwards?

As to the safety of chloroform, my experience of it during the last twelve years, since I adopted the plan of measuring the chloroform and air, so as to insure that there shall not be more than three minims and a half in each hundred inches of air, has been so favourable that I have never felt the need of another anæsthetic on the ground of safety. I have administered it without rejecting a single case as unfit for it, and to many persons whose heart and lungs were in a morbid state. I have never had a death from it or from any anæsthetic.

I have experimented with stronger doses, and found that the tendency to produce cardiac syncope increased with the dose. This tendency of chloroform to depress the action of the heart has not been sufficiently recognised; and many surgeons, regarding failure of respiration as the danger to be chiefly watched for, do not habitually keep the pulse under observation.

A stronger dose than I have mentioned may be inhaled safely whilst respiration is carried on regularly; but when, as often happens, the pungency of the vapour induces the patient to hold his breath and then breathe very freely, a state of rigidity sets in. This condition, when the patient after a full inspiration holds his breath and strains, is one of the greatest interest. In any case, the first effect is to make the chloroform enter the blood more freely, for blood will take up more chloroform in proportion to the atmospheric pressure, just as water does the carbonic acid in the making of soda-water. If the proportion of chloroform in the air-cells be small, it soon becomes so reduced by absorption into the blood that, after twenty or twenty-five seconds, the blood passing through the lungs gets so little that the patient may be less narcotised than when the rigidity commenced. When, however, the quantity of chloroform is above four per cent., the heart soon begins to fail, and, as the blood now circulates more slowly through the lungs, another condition favourable to the absorption of chloroform is induced. If chloroform be administered without due means to prevent a large dose from being given, and without watching the pulse, I have no doubt that it is more dangerous than ether.

As to the question, whether ether or chloroform leaves the patient in the better condition, I should say that a patient kept quiet during an operation for half an hour would recover better from chloroform than from ether. The point may be considered as doubtful, and perhaps the after-effects of ether would be less unpleasant if we could contrive a better way of administering it. As it is usually given, the patient gets very little fresh air, and carbonic acid does not escape so freely as it ought. I have lately been giving ether by a modification of my chloroform apparatus, which supplies the patient with air charged with ether. It consists of an oval piece of glass as large as the face, and set in a frame which keeps it a little distance from it. The sides are closed in with a curtain all round, and into this chamber air and ether are supplied in a slow current. I find that this produces less coughing and less opposition than other ways of giving it. The patient's face can be seen. The eye can be examined by pushing the curtain in front of the finger and raising the eyelid. As I hope to write shortly a further description of this apparatus, I will not further occupy space now.

MR. J. WARRINGTON HAWARD, Assistant-Surgeon to the Hospital for Sick Children, and Surgical Registrar to St. George's Hospital, writes as follows.

I am glad to see a leading article in the JOURNAL calling attention to the claims of ether as an anæsthetic, and to the practical demonstration by Dr. Joy Jeffries, during the recent Ophthalmic Congress, of the

American mode of administering it. I can fully endorse a great deal of what Dr. Jeffries says about ether; but there are one or two points upon which, for those not familiar with its administration, it will be useful, I think, to make a few remarks.

I may say, in passing, that Dr. Jeffries—owing, doubtless, to the shortness of his visit to London—has somewhat misconceived our opinion of ether; for he says (*Boston Medical and Surgical Journal*, Oct. 3) that the time taken to etherise a patient "was universally thought to be so great as to practically exclude the anæsthetic in hospital practice"; and to his paper on the subject he gives the title of "Reintroduction of Ether into England". But for more than two years past (owing greatly to the representations of Dr. Bigelow) I have been in the habit of giving ether largely both in public and private practice, and, so far from its being practically excluded from hospitals, have administered it for the majority of the operations at St. George's Hospital during that period. Moreover, I had advocated its use in a paper read before the Royal Medical and Chirurgical Society in October 1871, in which I proved its superior safety to chloroform, and described the method of its administration.

With regard to the method of administering ether-vapour, it is quite true that Dr. Jeffries gave it in a manner which brought the patient under its influence in as little time as or less than chloroform would have required; but there are certain decided inconveniences attending this method, which make it worth while, I think, to take a little longer time. Dr. Jeffries pours a quantity of ether on to a folded towel, and keeps this tightly over the patient's face till he is insensible; and directs that the patient should be held down by main force if necessary, which it certainly usually is, if ether be given thus. The objections to this plan are—1. That it is painful to the patient to commence the inhalation with so strong a vapour; 2. That a good deal of ether runs on to his face and neck, sometimes producing blistering; 3. That to give it thus to an adult often necessitates several assistants to hold him down; 4. That a large part of the ether soaks through the towel, and evaporates from its outer surface, which, besides being wasteful, fills the room to an unnecessary extent with ether-vapour. To avoid these inconveniences, I am in the habit of using a cone of felt covered with mackintosh cloth for an inhaler, and of giving the ether gradually at first, but, as soon as the patient becomes a little stupified, pushing it as rapidly as possible. The felt is just sufficiently absorbent to prevent the ether from running on to the patient's face, and the mackintosh prevents its evaporation from the outer surface of the inhaler; and, if it be given gradually at first, the patient does not exhibit the almost involuntary resistance which is sure to be provoked by beginning with the administration of a suffocating vapour. As soon, however, as he is a little narcotised, the more rapidly it is given the better; and I quite agree with Dr. Jeffries that the majority of failures in etherisation are simply due to its too sparing administration. With children, to whom any anæsthetic is necessarily alarming, it is well to give it rapidly from the first; and with them, of course, the necessary restraint is easy.

As to the muscular relaxation, it is not that ether will not produce this quite as completely as chloroform, but that this occurs later in the administration than with chloroform, so that the patient needs to be more deeply narcotised before it is produced. A person is completely insensible long before muscular relaxation is produced; and his perfect quietude is not so thoroughly to be depended on, except in the very deep stages of narcotism. It is for this reason that I do not think ether so easily applicable to ophthalmic operations, though I am quite aware that it can be used for these with perfect success. For operations on the interior of the mouth also, such as that for cleft palate, when the anæsthetic requires to be administered at intervals as rapidly as possible, it is certainly less convenient than chloroform; and, as children take the latter with comparatively so much less danger than adults, there is the less objection to giving it in these cases. I may, however, mention that the opinion I expressed in the paper above alluded to, as to the less frequent occurrence of after-sickness from ether, has been confirmed by subsequent experience.

MR. FRANK UNDERHILL, M.B., Tipton, writes to us:

I have just read with great pleasure the extracts from Dr. Jeffries's article, published in last week's JOURNAL, regarding the use of ether as an anæsthetic, and the remarks made by you upon the subject. Having lately returned from a visit to the United States, where I had good opportunities for inspecting most of the large hospitals, and of seeing ether administered a great number of times, I am persuaded that the advantages claimed for it by our American brethren are fully proved by facts. During the whole of the time I was in the country—a period of nearly a year—I never saw or heard of a death which could be justly attributed to its use. I was present in one instance where a patient died after having been etherised, but the fatal result was most probably owing to other circumstances having little connection with its administration, more particularly a large dose of chloral previously given, in order to find out by experiment whether insensibility could be more speedily produced after its use. In very few instances is the use of ether followed by the sickness we so constantly see after chloroform, provided a sufficient quantity have been given at first. I have carefully observed the pulse and respiratory functions in numerous instances, and have found them little, if at all, affected. Patients are undoubtedly rather longer, as a rule, in getting under its influence, and longer in recovering from the effects, and give one the impression of being excessively drunk. That the muscles are perfectly relaxed, I have had demonstrated over and over again. One thing alone would be sufficient, even were others wanting, to justify its more frequent use; and that is, that its administration need not be entrusted to skilled hands, but that almost any one can, in an emergency, give it without danger. I have failed to perceive the unpleasant smell noticed after its administration in some of the London hospitals, and believe this to have arisen from some impurity in the drug. The numerous failures which have followed its use in this country may probably be put down to the same cause. I believe the time to be close at hand when chloroform, except on special occasions, will be considered a thing of the past, and that the advantages of ether will be every day more conclusively demonstrated.

A REPORT OF LEAMINGTON AND ITS WATER-SUPPLY.

(FROM OUR SPECIAL CORRESPONDENT.)

I.

RECENT circumstances have pointedly directed attention to the alleged existence of typhoid fever in Leamington, and to the state of the water-supply. There is always a lesson in public medicine to be learnt from the investigation of disputed cases such as this. Without regard, therefore, to any other scientific and hygienic interests, we have caused an independent inquiry to be instituted.

There can be no question that the water-supply of Leamington has been unsatisfactory for some years past, in the sense that the water has looked muddy, and has been wanting in clearness and brightness, and has not been "clean water." In a memorial signed by fourteen of the medical men, and presented to the Local Board of Health about five months ago, the expression is that the supply from the river Leam in its present state is not satisfactory, and it was founded on the above condition, and not upon its having been known to produce disease or any estimation of its albuminosity. It is to be recorded, however, that a possible source of sewage-contamination some little distance from the town then existed and was at once cut off.

The object of the memorial was to produce improvement in a quiet manner; but there happened to be before the authorities a project for boring an Artesian well, which was supported by some and opposed by others, and the said memorial was interpreted so as to strengthen the hands of the former; the state of the present water-supply began to be criticised in all quarters, and much feeling was aroused between the majority, who held that the water was wholesome, though not clear, and the few who held that it was absolutely poisonous. A few cases in which it was reported to be offensive and which caused great excitement at the time, seem clearly traceable to local causes, *i.e.*, in the drain or pipe or tap of the particular house—in one case a soiled cloth was found hanging over the tap. Public and, we may say, party feeling in this matter has been gradually becoming more excited during the term preceding the elections to the Local Board of Health (which took place last week), and reached a climax when, on the 29th ult., the verdict of a jury in Paddington upon Miss Ellen Sarah Hiscocks as dying of typhoid fever threw public blame on the water-supply of the town. Into the merits of this verdict we do not propose to enter in this place. We proceed to inquire—*first*, what is the present state of the water-supply at Leamington? *secondly*, is there any typhoid fever there? and, if so, is it due to the water?

The present water-supply is derived entirely from the river Leam above the town.* It passes first into a "subsiding tank," and thence into two of three "filter beds," the third one being unused for a week for purposes of cleaning, and this in rotation; the bed of the filter is six feet in thickness, and of the ordinary sand and gravel construction; the

* There is an additional source from a spring on Lord Aylesford's farm some distance above, but it is only used occasionally to supplement the others; and, as it has not been so used for many weeks, we omit further description of it.

surface of each is about six hundred square yards. We inspected carefully the bed that was being cleaned, we did not detect the slightest tinge of sewage-matter in any form nor by any sense, nor have the workmen ever known the tanks to be at all offensive. From the filters the water is pumped to covered reservoirs on the Campion Hills, about one mile and a half from the town, to which it is conveyed again in iron pipes. In this last circumstance and in the gravel filter we find the key to the coloured condition of the water, for the pipes have become in parts oxidised, and have in parts retained mud as we have ourselves been witness. The water brought direct in glass from the covered reservoir is very little tinged after standing two days, whereas the same water delivered through town pipes is of an unmistakable buff-colour, and its taste, though not disagreeable, is slightly earthy and slightly chalybeate. It may here be stated that all pipes recently and in future to be laid down are to be enamelled.

In these sources of water-supply we find no evidence of sewage-contamination; the only source is soakage into the river from villages along its course; we have not yet accurate evidence on this point, but the nearest possible source seems to be three miles away, and the one generally referred to (Southam) is twenty miles, so that this may be practically regarded as mythical. We know of no instance of sewage conveyed by a swiftly flowing river under these circumstances without undergoing oxidation.

In accounting for the colour of the water, we must not omit to notice the "dead ends," or terminations of the pipes, say at the end of a row of houses: the "silt" or "gravel" which the water contains is driven up to these ends and accumulates for some few hours, then when taps are turned on and pressure relaxed, and perhaps the engines stopped, the accumulated sand is brought back by the stream, which it colours quite deeply enough to frighten an ordinary person, but this again is not what we mean by unwholesome water.

Thus far we have spoken of the public town-supply; but many houses have their own wells, and in making inquiries upon the state of this well-water, we find the advantage of wholesomeness to be on the side of the town water—the clearer one is treacherous, the less attractive is the safer. We have, indeed, collected many authenticated instances of typhoid fever (in Leamington, but *not recently* occurring) distinctly traceable to local contamination, *i.e.* to soaking of sewage *on the premises* into the well *on the premises*, and the cases ceased when the well was bricked up and *the town water introduced*.

With regard to our second question, we will say, in brief, that there are cases of typhoid fever in *one locality* in Leamington. They do not appear to be due to drinking town water. The cases are not many, probably about six. This is not, it may, perhaps, be said, a large number for any town at this time of the year. But when we find a group of cases together, it becomes imperatively necessary for the sanitary authority to inquire if there may not be a common cause and a common remedy by its removal. The cases we allude to are in Gas Street and Tachbrooke Road and neighbourhood, and we do not blame the town water for them, for in two cases the supply is from a well in the garden. The first case of all is said to have been imported from Birmingham, and the houses we refer to are situated on the *same line of sewer* as the first infected house, and we have reason to believe that the drains are untrapped. With regard to these cases, we propose to make more detailed inquiry next week, meanwhile we would say to our Leamington friends "Do not blame your town water for bad and poisonous qualities from which it is free, but there is room for improvement in your filters and your pipes, and it behoves you to look at once and efficiently to the trapping and the disinfection of your sewers, especially in the district we have referred to."

The Local Board of Health in Leamington bear an excellent character for their constant attention to the best interests of their handsome town, and we are sure that the many excellent medical practitioners there will be ready to second their efforts.

PUNCTURE OF STRANGULATED HERNIA.—Dr. Chauveau adds to existing records (*Journal de Médecine et de Chirurgie Pratiques*) two cases of strangulated hernia in which, by capillary puncture and aspiration of the gas and liquid contents of the bowel, strangulated herniæ were rendered reducible.

BLEACHED TINCTURE OF IODINE.—The *Pharmacist and Chemical Record* (July 1872) gives the following formula for the above preparation:—℞ Tincture of iodine, pure glycerine, āā ℥i; sulphite of soda, ʒi. Rub the salt to a powder in a small mortar, and add the glycerine gradually; then pour in the tincture of iodine and triturate gently until a solution is effected, and the mixture assumes an amber colour. It is asserted that the properties of iodine are increased by the addition of the sulphite of soda, and that the glycerine enhances the value and convenience of the preparation for local application.

DR. DRUITT.

ON Thursday, October 31st, several influential members of the profession met at Mr. Haynes Walton's, with a view to initiate a movement for the recognition of the public and professional labours of Dr. Druitt, formerly Medical Officer of Health of St. George's, Hanover Square, late President of the Metropolitan Association of Medical Officers of Health, and author of the *Surgeon's Vade Mecum*. Dr. Druitt has been for a long time in failing health, and is now compelled to leave this country for a period of a year or more, in order to seek a warmer climate.

There were present on the occasion: Mr. Prescott Hewett (in the chair), Sir James Paget, Drs. Quain, Beale, Wm. Farr, Forbes Winslow, Greenhalgh, Meadows, Ballard; Messrs. Savory, Henry Lee, Spencer Wells, Henry Smith, Christopher Heath, Ernest Hart, W. Adams, Haynes Walton, and Arthur Norton. Letters were referred to from Sir William Gull, Sir Thomas Watson, Sir William Fergusson; Drs. Arthur Farre, Barnes, Webb, Semple, Cholmeley, Laycock (Edinburgh); Messrs. Quain, Lane, Thomas Bryant, Jonathan Hutchinson, and E. Newton, requesting to be associated with the movement.

Mr. NORTON explained the object of the meeting.

Mr. WALTON remarked that no one had worked more arduously for the profession and for the public than Dr. Druitt, and few men were more favourably known. His earliest professional reputation was acquired from his elementary surgical work, the *Vade Mecum*, which had been a text-book for students for about thirty years, and is still a favourite among the handbooks of surgery. As a medical journalist, he had laboured to advance the science of medicine and surgery, and himself had contributed many valuable papers on practical subjects. His latest literary production was an exhaustive article on Inflammation in the new edition of Cooper's *Surgical Diictionary*. For ten years he had been President of the Metropolitan Association of Medical Officers of Health, and for several years the Medical Officer of Health for St. George's, Hanover Square. Dr. Druitt had taken a prominent part in the issue of reports connected with the office of health which had proved invaluable sanitary records, and he had on several occasions given important evidence before the Royal Sanitary Commission. In 1866, he had visited Amiens, where the cholera was then raging, for the purpose of gathering facts with a view to organise means to prevent the spread of that disease, which was then threatening to invade this country. Almost solely by Dr. Druitt's investigations in the West End of London, it was proved that the death-rate amongst the inhabitants depended not so much upon the locality as upon the diet, habits, and mode of living of the several classes. Mr. Walton concluded with a regret that Dr. Druitt was now obliged to resign all appointments and to desist from literary work.

The following resolutions were carrried unanimously.

1. Proposed by Sir James Paget, seconded by Mr. Henry Smith, "That Dr. Druitt's services to the public and the profession as a medical officer of health, as a medical journalist, and as an author on professional subjects, are such as to deserve public recognition; that the present is a fitting time for testifying a friendly sympathy with him in his illness, and appreciation of his services, and that a subscription list be opened for this purpose.

2. Proposed by Dr. William Farr, seconded by Mr. Spencer Wells, "That, considering the nature and the extent of the public services rendered by Dr. Druitt, the subscription list be opened to others than the members of the medical profession."

A general committee was formed comprising the names above-mentioned, with power to add to their number. Mr. Haynes Walton, 1, Brook Street, Hanover Square, was requested to act as Treasurer; and Mr. Arthur T. Norton, 6, Wimpole Street, Cavendish Square, as Honorary Secretary.

Subscriptions may be sent to the Treasurer or Secretary, or may be placed to the account of the "Druitt Testimonial Fund," Union Bank, Argyle Place, Regent Street, W. Amounts received will be acknowledged in the medical papers.

A CENTENARIAN.—The *Relampago Medico* quotes from a newspaper a statement that a man named Gervasio Guzman has lately died at Aranda, in Spain, at the age of 112, retaining to the last his mental powers and the use of his limbs. It is stated that he left twenty-two sons, the youngest of whom is thirty years old; and that his widow survives him.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Queen's Hotel, Birmingham, on Wednesday, the 13th day of November next, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

37, Great Queen Street, 24th October 1872.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT MEETINGS.

THE next meeting is appointed for Tuesday, November 12th, at 4.45 P.M., at the General Hospital, Maidstone; WILLIAM HOAR, Esq., in the Chair.

Dinner at 6.30 P.M., at the Mitre Hotel.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary.*

Rochester, November 4th, 1872.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETINGS.

THE next meeting will be held at the Fountain Hotel, Canterbury, on Thursday, November 14th, at 3 o'clock; Mr. WILKS, of Ashford, in the Chair.

Dinner at 5 o'clock precisely. Charge 5s., exclusive of wine.

All members of the Branch are entitled to attend, and to introduce friends.

The following papers have been promised. 1. Mr. Rigden: Are the number or extent of the Cicatrices of Vaccination a test of the security against Small-Pox? 2. Dr. Joyce: Case of Acute Inversion of the Uterus. 3. Dr. Parsons: Case of Incarcerated Placenta.

The Committee appointed to consider Mr. Reid's motion relative to Medical Officers of Health and the Association, will report.

Gentlemen who intend to be present at the dinner, are particularly requested to inform me on or before Tuesday, the 12th instant.

CHARLES PARSONS, M.D., *Honorary Secretary.*

2, St. James's Street, Dover, November 1st, 1872.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

THE November meeting of the members of this district will be held at Mellison's Hotel, West Street, Brighton, on Tuesday, November 19th, at 3 o'clock; Dr. WITHERS MOORE in the Chair.

A contribution is promised by Dr. Milner Barry of Tunbridge Wells, entitled "A Note on the Treatment of Purpura Hæmorrhagica."

Members are requested to attend prepared to express their views on the Public Health Act.

On this occasion, the Directors of the new Marine Aquarium offer free admission to the members from 3.30 P.M. to 5.30. The building will be illuminated, and the tanks lighted up, for the first time in public, by gas-light; and the manager, Mr. Lord, has kindly promised to conduct the members and direct attention to the characteristics of the more remarkable occupants of the tanks.

Dinner will be provided at Mellison's Hotel, at 5.45 precisely. Charge 5s., exclusive of wine.

THOMAS TROLLOPE, M.D., *Honorary Secretary.*

35, Marina, St. Leonard's-on-Sea, November 1872.

SHROPSHIRE SCIENTIFIC BRANCH.

THE annual meeting will be held in the Natural History and Antiquarian Museum, Shrewsbury, on Wednesday, Nov. 20th, at 1.30 P.M.; Dr. H. NELSON EDWARDS, President of the Branch, in the Chair.

Papers will be read, and interesting specimens and objects exhibited.

Gentlemen intending to read papers will kindly communicate with the Honorary Secretary.

The Dinner will take place at the George Hotel at 4 o'clock, for 4.30 exact time. Members can introduce friends.

SAMUEL WOOD, F.R.C.S., *Honorary Secretary.*

Shrewsbury, October 30th, 1872.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ORDINARY MEETING.

THE first meeting of Session 1872-73 was held at the Midland Institute, Birmingham, on Thursday, October 10th, at 3 P.M. Present: THOMAS EBBAGE, Esq., President, in the chair; and forty-four members.

New Members.—Thirteen members of the Association were elected members of the Branch.

Communications.—1. *Removal of the Upper Jaw.* Mr. LAWSON TAIT showed a lad, aged 16, from whom, nineteen days previously, he had removed the left upper jaw for a benign epuloid tumour. No special difficulty had been met with in the operation. The wound healed by first intention, and the patient was up and going about on the fifth day.

2. *Uterine Polypi.*—Mr. TAIT showed two uterine polypi, both removed by the *écraseur*. The patient in one of the cases was apparently at the point of death from hæmorrhage, and Mr. Tait had made up his mind to perform transfusion, when signs of rallying set in, and obviated the necessity.

3. Mr. TAIT exhibited a new Intrauterine Stem of Vulcanite, self-retaining.

4. *Oxalic Calculus.*—Mr. BARTLEET showed an oxalic calculus removed by lateral lithotomy on the previous day. The patient, a male, aged 22, had suffered from symptoms of stone for fifteen years. The calculus weighed 1,220 grains.

5. Mr. FURNEAUX JORDAN read a paper entitled Notes on a Few Surgical Operations.

6. Dr. JAMES THOMPSON read a paper entitled Remarks on the Treatment of Hæmorrhoids.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE first ordinary meeting of the session was held on Thursday, October 31st, at the Royal Hotel, College Green; T. G. STOCKWELL, Esq., President, in the Chair. There were forty-eight members present and eight visitors.

Communications.—1. Mr. Tibbits showed a case of Excision of the Hip-joint, where the patient was able to walk four miles three months after the operation.

2. Mr. F. Lansdown showed a case of Extensive Ulceration cured by Skin-grafting.

3. Mr. Tibbits gave a *resumé* of his paper on the Injection of Liquor Ammoniæ into the Veins, read before the Society in May last; and Dr. Davey and Mr. Stockwell joined in the discussion which followed.

4. Mr. Green read a paper on Deaths from Chloroform, especially advocating the use of galvanism in cases of partial asphyxia from chloroform vapour. This was followed by a discussion, in which Messrs. Stockwell, Bleeck, Tibbits, Board, T. Clark, E. Prichard, Dr. J. G. Davey, and Dr. Shingleton Smith joined.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: ORDINARY MEETING.

THE ordinary meeting of the South Wales and Monmouthshire Branch was held at the Town Hall, Pontypool, on Friday, October 25th. Present: T. J. DYKE, Esq., President, in the Chair; and fifteen members.

New Members.—Six gentlemen were declared members of the Branch.

Epidemic Puerperal Peritonitis.—Mr. EVAN JONES (Aberdare) introduced a discussion on the duties of practitioners in charge of large manufacturing populations, in reference to visiting or declining to visit cases of epidemic puerperal peritonitis in consultation. The occasion for the consideration of the question arose out of circumstances which occurred during a recent outbreak of the disease in Aberdare. The subject was postponed for further details, to be given at the next meeting.

Entropion.—Dr. WILLIAMS (Pontypool) exhibited a case showing satisfactory results of an operation for entropion. A ligature had first been passed from near the margin of the tarsal cartilage upwards to just below the eyebrow, then tied firmly and allowed to ulcerate through.

Abdominal Fistula.—Dr. WILLIAMS also exhibited a case in which abscess of the abdominal wall had been followed by a fistulous opening communicating with the intestinal canal in the right iliac region.

Fœtal Remains passed per Rectum.—Mr. EVAN JONES related a case in which, from time to time, during a period of two years, portions of a fœtus had been expelled *per rectum*.

Pulmonary Hydatids.—Mr. H. N. DAVIES (Cymer) related a case in which pneumonic symptoms (lasting eighteen months) had been followed by expulsion of a mass of hydatid cysts (arranged like a bunch of grapes), mingled with pus and blood.

Chorea during Pregnancy.—Dr. DAVIES (Ebbw Vale) gave particulars of a case of chorea, occurring to a woman for the third time, in the pregnant state. The symptoms commenced in the fifth month.

Till the seventh, she was treated in the ordinary way ; premature labour was then induced, but no improvement followed, but rather the reverse. She was then given a dose of chloral hydrate (two scruples) and succus conii (one drachm). This was followed by twelve hours' consecutive sleep. She awoke tranquil, and freed permanently from choreic symptoms.

Committee of Council.—The PRESIDENT gave notice that he would, at the next meeting of the Branch, bring under its consideration the constitution and mode of election of the Committee of Council, and move a resolution thereon.

Medical Officers of Health.— The PRESIDENT read an address on "The Duty of a Medical Officer of Health and how to do it."

Thanks were subsequently voted to the President for his paper. [It will be published in an early number of the JOURNAL.]

The Next Meeting was fixed by the Council for the 31st January, 1873, at Brecon.

Dinner.—The members subsequently dined together at the Clarence Hotel.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 25TH, 1872.

J. COOPER FORSTER, Esq., Vice-President, in the chair.

Caries of the Knee.—Mr. WARRINGTON HAWARD exhibited a case of caries of the knee-joint, treated by the local application of sulphuric acid. A boy, eight years of age, had suffered for eighteen months from progressive disease of the knee-joint. He was much emaciated, pale, and very weak ; took food ill, and was in much pain from frequent startings of the joint; there was considerable fever, and he had a wearied and anxious expression. The right knee-joint was much swollen, and discharged, from openings on each side, a large quantity of foul pus ; matter had also burrowed in the neighbourhood, and sinuses discharged both above and below the joint. He was placed under ether, and the joint examined with the finger. The ligaments were found quite dislodged, allowing free lateral movement; the cartilages were destroyed over a great part of both articular surfaces ; and the joint-ends, with numerous carious patches, were surrounded by the thickened and suppurating synovial membrane. The ends of the tibia and femur were not expanded, and the disease was limited to the joint. Sulphuric acid was freely applied, after the manner introduced by Mr. Pollock, to the carious joint-surfaces, and, of course, necessarily to the synovial membrane. The result of this was the separation of parchment-like sloughs from the bone, the rapid diminution of suppuration and pain, the healing of the sinuses, and a corresponding improvement in health. In two months, the sinuses were nearly all healed ; and, in six months, there was ankylosis of the bones. The boy is now in excellent health, and walks about actively with a firm and useful limb. This is the first case in which this treatment has been applied to a large joint ; but one was mentioned in which Mr. Pollock had thus treated the wrist-joint. It was pointed out that the cases to which this treatment was especially applicable were those which have their origin in chronic synovitis, and which go on to ulceration of the cartilages and superficial bone-caries, in which the acid acted beneficially, not only upon the bone, but by destroying the thickened and suppurating synovial membrane.—Dr. THEODORE WILLIAMS wished to know of what strength the acid was. —Mr. JOHN CROFT said that he had used it in two cases—one of diseased cranial bone, and the other tarsal bone. Both were successful. —Mr. LAWSON referred to the success of Mr. Pollock's cases, in which he had used the application diluted fifty per cent., but afterwards the pure acid. He said that Mr. Fitzpatrick had recommended and had used Vienna paste in caries. Hydrochloric acid had also been employed with great benefit. It seemed, he thought, only necessary to apply some strong escharotic.—Mr. BERKELEY HILL said he had used Ricord's paste with charcoal in necrosed tibia. The bone came away, and granulations sprang up, and thereby the process became shortened. —The PRESIDENT said he would be disposed to try it.—Mr. DE MORGAN said that he had used potassa cum calce in a case of diseased tarsus, and in the course of time the patient was perfectly well. The salt produced no injury. He was now using nitric acid in a case, but he could not say as yet with what benefit. He preferred acid to gouging. He thought this mode more rational.—Mr. HAWARD, in reply, said that he used the acid of the strength of one part to two of water. The acid, he thought, acted with a power according to the degree of death of the part. The pain lasted about half an hour after the application of the acid. Vienna paste, he thought, gave more pain, and did not act so well.

Dr. ANSTIE read a paper on a case of Syphilitic Paralysis, with Atrophy and Repair of Muscle ; and Mr. COOPER FORSTER one on a case of Cystitis treated by Injection of Opium into the Bladder. Abstracts of these papers have not been forwarded to us. We are accordingly unable to present a full and intelligible report of the very interesting and instructive discussion which followed both.

In the discussion on Dr. Anstie's paper, Mr. LAWSON, under whose care the patient had originally been, stated that the triceps had wasted to such an extent as to prevent the patient from following his employment. —Dr. CHOLMELEY had had a similar case with thickening of the cervical vertebræ, in which iodide of potassium and the faradaic current had proved successful.—Mr. NUNN related an interesting case of syphilitic paralysis of the fifth, ninth, and other cranial nerves, in which the bichloride of mercury had answered.—Dr. ALTHAUS was of opinion that the combination of iodide of potassium and electricity had proved best, and that in some cases of syphilitic hemiplegia or paraplegia of long standing iodide of potassium had proved of no service; but that in recent cases of the latter it was of great benefit. The other cases required also electricity.

In the discussion on Mr. Cooper Forster's paper, Mr. CROFT remarked that he was a total disbeliever in opium being taken up by unbroken mucous membrane and producing any effect, and related the case of a lady with cystitis, in which he had injected two drachms of liquor opii sedativus in an ounce of water. The fluid was retained an hour, and repeated from day to day, without effect on the bladder or on the constitution.—Dr. BRAXTON HICKS had used morphia locally as less irritating, in quantities of one, two, or three grains. One female took eight grains, and was much affected by the opium, but her very marked constitutional symptoms were almost gone next day. He had observed that a residuum of cystitis remained after this mode of treatment, which could be relieved by astringents.—Dr. GLOVER remarked on the question of absorption of opium by mucous membrane, that in a case of irritability of the rectum in a woman who was in the habit of taking a grain of morphia by the mouth daily, he had ordered a suppository of two grains of opium. It made her sleepy.—Dr. ANSTIE thought it very extraordinary if the mucous membrane of the bladder did not absorb. With regard to the rectum, he had found opium there as potent as taken by the mouth. He did not believe that the bladder did not absorb.—Dr. BRAXTON HICKS said that not less than two or three grains of morphia would produce any effect. He believed its effect in cystitis to be local. He used it primarily, and afterwards some other application.—Mr. DE MORGAN remarked that the absorption or non-absorption of the opium might depend on the condition of the wall of the bladder. If not covered by secretion, would it not be absorbed? He knew that belladonna was.

MEDICAL SOCIETY OF LONDON.

MONDAY, OCTOBER 28TH, 1872.

THOMAS BRYANT, Esq., President, in the Chair.

Aortic Aneurism: Occlusion of left Carotid Artery.—Dr. COCKLE read a paper on the connection between occlusion of the left carotid artery and the existence of laminated clot in the sac of aortic aneurism. He said that the mere pathology of aortic aneurism was, as it were, exhausted, and that the chief interest would henceforth centre in the treatment of the disease. Of late a marked impulse had been given in such direction in Italy, Russia, and this country. In Italy, Ciniselle had achieved satisfactory results from the employment of galvano-puncture, but still, as it seemed to the author, there were certain drawbacks in the employment of this agent. He had ventured to bring forward a series of cases to show that there existed a connection between occlusion of the carotid artery and the formation of clot in the aortic sac. In the first category were cases in which nature had thus filled the aneurism, and in a second category were cases in which the result had been artificially induced either with indirect or direct intent. The case in which the artery was tied by Mr. Heath with the direct intent of checking the aortic aneurism is published in the *Transactions* of the Clinical Society for 1872. Remarks were then made as to the proximate causation of the formation of clot in the aneurism ; and, hinting at the difficulties of explanation, the author concluded by briefly alluding to the possible accidents attendant on such, contending that in no wise did they contraindicate the operation. A short discussion followed.

CORRESPONDENCE.

THE WORKING OF THE PUBLIC HEALTH ACT.

SIR,—The manner in which the sanitary legislation of 1872 has been recently handled by some leading organs of literature and science, ought to encourage those who, like yourself, have consistently maintained that the Government, with perhaps the best intentions, has pursued an utterly mistaken course, and adopted a measure of organisation full of errors and fallacies. Much especially has been said in our profession about medical inspectors and medical officers of health; but, on the other hand, it has been insinuated that this is only a doctor's question, and that no one out of the profession cares about these appointments. To refute so untrue a charge, it may suffice to refer to articles in journals of the highest character and reputation. Take, for instance, one on October 5th last in the *Builder*, representing architects and engineers; and another in the last number of the *Quarterly Journal of Science*, representing physicists, biologists, and chemists. These hold precisely the same view as yourself of the sanitary enactments of the past session, respecting the health-office and its relations to the public and the profession. The undue share of responsibility and direction assumed by the central authority is more particularly dwelt on in the former; the erroneous and detrimental method of appointing officers of health in the latter.

A skilfully written official article in the *Times* of October 17th, entitled "Medical Officers of Health", called forth a most forcible, though very calm and judicious, comment in the *Pall Mall Gazette* of the same date, penned as it must have been with marvellous rapidity, which neatly and philosophically disposes of the misgiving and forebodings of the writer in the *Times*, while it shows the fallacy of his sentimental appeal to all the good qualities of human nature to reverse the uniform and inevitable current of public administration. I could not do justice to this incomparable summary of the question by quoting from it, and therefore content myself by urging your readers to examine for themselves not only this critique, but also those articles in the scientific journals before mentioned. The *Pall Mall Gazette* of this year has on several occasions done excellent service to a just and reasonable cause. It is also due to Dr. Anstie, who has long and firmly stood by the State Medicine movement, to notice his vigorous support of right principles in the *Spectator* of October 12th. An able editorial article, entitled "The New Sanitary Inspectors", in the following number of that thoroughly independent paper, is also calculated to enlighten public opinion on the subject. But the writer assumes that only *one* principal inspector can be appointed to a circuit (Poor-law Inspector's District); and that, for obvious reasons, it might not always answer to make a zealous medical sanitarian that single inspecting chief. Without raising the question whether our profession cannot show as large a proportion of men qualified for office by common sense, general information, tact, and knowledge of the world, as any other calling, it seems to me clear that the nation must make up its mind to employ three principal inspectors in each circuit—one legal, one engineering, and one medical. There are at present inspectors more than enough, under the Central Board, to effect this arrangement. It is only necessary to secure an equal proportion of medical inspectors, and a proper coadjustment of functions in each circuit. The Lunacy Commissioners afford an instance in point; a barrister and a doctor acting together in each circuit of visitation.

But of far greater importance than Government Medical Inspectors are County Medical Officers of Health; and, if both these orders of medical functionaries be not conceded, as they ought to be, by the State, let us by all means endeavour to secure the latter under a good county administrative authority.

A curious example of the perversion—I hope not wilful—of suggestions made by sanitary reformers, is to be found in an article on the Machinery of the Public Health Act, in the *Saturday Review* of October 26th. "If," says the writer," .... "the appointment of medical inspectors to the exclusion of all others is seen to be unnecessary, in another light it will be seen to be positively injurious to sanitary progress." Of course, this writer (probably a lawyer) believes, or wishes others to believe, that every doctor is sure to run his head against a wall. But who ever advised that medical inspectors were to be appointed "*to the exclusion of all others*"? or, as this writer elsewhere says, "that the inspectors appointed by the Local Government Board should necessarily belong to the medical profession"? Where did the critic find such a demand, except as a figment of his own fancy? Before any one presumes to write on this question, he should make himself master of the controversy. I am, etc., HENRY W. RUMSEY.

Cheltenham, November 1st, 1872.

PROFESSOR HUMPHRY'S LECTURES AT THE COLLEGE OF SURGEONS: THE ACTION OF THE INTERCOSTAL MUSCLES.

SIR,—I quite agree with the expression of my friend and former pupil, Dr. Arthur Ransome, in the JOURNAL of October 26th, respecting the complex nature of the action of the intercostal muscles. Indeed, I remarked in my lectures (see the JOURNAL for June 29th, 1872, p. 686) that it is a subject which "must be approached with care, as it is not a simple problem, many points requiring to be taken into consideration." I only endeavoured to suggest an additional element in the consideration of this mode of action, which, taken in conjunction with the greater fixity of the upper ribs in comparison with the lower, would, it seemed to me, give an inspiratory action to the internal intercostals in that part of their extent in which that action has been denied to them. Perhaps I should rather say that it has the effect of neutralising the tendency which the direction of these fibres in the debated region gives them to act antagonistically to the intercartilaginous fibres during the movement of inspiration. It must, at any rate, have some influence in that direction; and the view harmonises with the absence of these muscles in that part of the chest in which, as expiratory agents, they would be most efficient. That is to say, if they be expiratory muscles, we should expect them to be present at the posterior part of the chest rather than in any other place.

"The motion of each rib upon a horizontal axis passing through the costo-vertebral joints", is not, as Dr. Ransome considers, unnoticed by me. On the contrary, it is assumed throughout, and is the motion indicated by the diagrams 6 and 7 of my lecture; and it is the expiratory tendency resulting from this motion which I conceive to be counteracted in the manner there described. Neither can it be quite correctly said that I have ignored the "third or vertical axis of movement, which permits the lateral or outward motion of the ribs, and causes a considerable separation of their ends"; forasmuch as this is the motion which gives rise to the throwing out of the extremities of the seventh, eighth, and ninth ribs, referred to in the second paragraph on page 687 of my lecture. I did not, however, enter further upon it, because it did not appear to me materially to affect the point at issue.

I quite admit that, if the lower ribs were more fixed than the upper, the internal intercostal muscles would draw the upper ribs towards them, and so would have an expiratory action; and this would be the case not only with the parts lying between the ribs, but with those, also, between the cartilages, and with the external intercostals likewise. This, however, is not the condition in the ordinary acts of breathing. I would further admit that the internal intercostals, and the external also, are assistants to expiration by exerting a certain pressure upon the lungs in the intercostal spaces. Indeed, I apprehend that all the intercostal fibres are thus combined in the act of expiration, and that they also are all combined in the act of inspiration; but that their chief effort—the chief effort of all the internal, as well as of all the external, intercostal fibres—is during inspiration.

I am, etc., G. M. HUMPHRY.

Anatomical Museum, Cambridge, October 30th, 1872.

TREATMENT OF TIC DOULOUREUX BY ICE.—In the *Mitt. des Aerztl. Vereins in Wien*, No. 7, 1872 (*Phil. Med. Times*), W. Wentteritz relates a very stubborn case of facial neuralgia in a lady, which had not yielded to any of the means applied. A smooth piece of ice was stroked gently over the affected side of the face every five minutes. The painfulness of the application was lessened by holding some alcoholic fluid in the mouth until a slight feeling of warmth was excited. The pain, which disappeared in twelve hours under this treatment, had not returned ten months subsequently.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 31st, 1872.

Coates, William Harrison, Henley-on-Thames
Smith, John Frank Shersley, Greenwich

The following gentlemen also on the same day passed their primary professional examination.

Day, Edmund Overman, Guy's Hospital
Draper, Matthew Ryder, London Hospital
Reid, Mathew, Guy's Hospital

As an Assistant in compounding and dispensing medicines.

Hunt, Harry Richard, Westmoreland Road, Walworth

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen were elected Fellows of the College at a meeting held on October 16th.

Daniel Carmichael, Bedlington, Northumberland; John Lowe, Edinburgh; William Ketchen, Middlesbrough, Yorkshire: James Seaton, Leeds; William Joseph Hepburn, Dublin; and Charles Edward Underhill, Edinburgh.

The following gentlemen passed their final examinations during the October sittings of the examiners, and were admitted Licentiates of the College.

Robert Laidlaw, Saltcoats; Oswald Gillespie Wood, Kingston, Canada West; John Martin, Cork; and Joseph Allen Whyte, Charleston, South Carolina.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH: DOUBLE QUALIFICATION.—The following gentlemen passed their first professional examination during the October sittings of the examiners.

Peter Henry M'Laren, Bedlington; Robert Shaw Hunter, County Down; John Martin, County Down; Adam Smith Court, Barrow-on-Humber; and Robert Vandeleur Kelly, County Westmeath.

The following gentlemen passed their final examinations, and were admitted L.R.C.P.Edin. and L.R.C.S.Edin.

Robert Alexander Lithgow, Belfast; John Francis Malony, Ennis; David Protheroe Saer, Pembroke; Richard Atkinson Jackson, Lancaster; John Cochrane, Edinburgh; William Bower, Lincolnshire; Thomas Small, Forfarshire; George Merriman Hirons, Worcestershire; Charles Braid, Cheshire; Jacob Daniel, Bombay; Finlay Macnab, Glasgow; Alexander Scott, Ireland; William Henry Anderson, Lincolnshire; Jacob John Versfeld, Cape of Good Hope; John William Bell, Brydekirk; Arthur Graham, Hendon; and Wm. Ashe Smith, Armagh.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK INFIRMARY—House-Surgeon: £105 per annum, furnished apartments, attendance, coals, and gas.
BROMSGROVE UNION, Worcestershire—Medical Officer for the Bromsgrove District; £60 per annum.—Workhouse: £30 per annum.
CAMBERWELL, Surrey—Dispenser: £90 per annum, residence, coal, and gas.
CENTRAL LONDON OPHTHALMIC HOSPITAL—Assistant-Surgeon.
CHARING CROSS HOSPITAL MEDICAL SCHOOL—Demonstrator of Anatomy: £150 per annum.
CHELSEA, BROMPTON, and BELGRAVE DISPENSARY—Physician.
CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Assistant-Physician.
CONVICT PRISON, Spike Island—Medical Attendant: £300 per annum, rations, fuel, light, and unfurnished quarters.
CRAIGNISH, Argyleshire—Parochial Medical Officer.
DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION—Medical Officer: £200 per annum and residence.
DURHAM COUNTY LUNATIC ASYLUM, Sedgfield, Ferryhill—Assistant Medical Officer to the Female Department.
EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road—House-Surgeon: £60 per annum, board, washing, and residence.—Registrar.
FRIENDLY SOCIETIES MEDICAL INSTITUTE, Northampton—Medical Officer: £180 per annum, with residence.
FULHAM UNION—Medical Officer for District No. 5: £50 per annum, and extra fees.
GENERAL INFIRMARY, Northampton—House-Surgeon: £125 per annum, furnished apartments, board, attendance, and washing.
GRANARD UNION, co. Longford—Temporary Medical Officer for the Finea Dispensary District.
HERTFORD—Physician to the Hertford County Gaol.—Physician to the Herts Reformatory.
HOSPITAL FOR WOMEN, Soho Square—Two Clinical Assistants.
HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square—Two Consulting-Physicians.
LEPER HOSPITAL, Waterford—Apothecary.
LIVERPOOL—Third Medical Inspector of Emigrants at Liverpool: £300 per ann.
LONDON FEVER HOSPITAL—Resident Medical Officer: £200 per annum, residence, coal, gas, and attendance.
MANCHESTER ROYAL INFIRMARY—Two Assistant-Physicians.—Two Assistant-Surgeons.—Ophthalmic Surgeon.—Obstetric Surgeon.—Dental Surgeon.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Honorary Assistant-Physician.
ROYAL MEDICAL BENEVOLENT COLLEGE, Epsom—Treasurer.
ST. THOMAS'S HOSPITAL—Surgical Registrar.
SEAMEN'S HOSPITAL (late *Dreadnought*), Greenwich—House-Surgeon.
SHEFFIELD PUBLIC HOSPITAL and DISPENSARY—Assistant House-Surgeon: £65 per annum, apartments, washing, and board.
SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds—Resident Medical Officer and House-Surgeon.
TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser: £100 per annum, furnished apartments, coal, gas, and attendance.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BLACK, D. Campbell, M.D., appointed an Extra-Physician to the Royal Infirmary of Glasgow.
*FERRIER, D., M.D.Edin., M.R.C.P.Lond., appointed Junior Physician to the West London Hospital.
*FISH, J. C., M.D., appointed Junior Physician to the West London Hospital, *vice* *F. Simms, M.B., resigned.
*JEAFFRESON, C. S., Esq., appointed Honorary Surgeon to the Newcastle Eye Infirmary, *vice* J. B. Fife, Esq., resigned.
LOWE, John, M.B., Assistant Medical Officer to the Durham County Asylum, appointed Assistant Medical Officer to the South Yorkshire Asylum at Wadsley, near Sheffield.
*PRESTON, T. J., Esq., appointed Resident Medical Officer to the East Grinstead General Dispensary, *vice* W. Dixon, M.B.
THOMPSON, Wm., M.D., elected House-Surgeon to the Richmond Hospital, Dublin.
*THOROWGOOD, J. C., M.D., appointed Physician to the West London Hospital, *vice* *Henry Maudsley, M.D., resigned.
WARD, Joseph, Esq., appointed Resident Surgeon to the Birmingham General Dispensary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

GORNALL.—On November 5th, at Beech House, Warrington, the wife of *John H. Gornall, Esq., Surgeon, of a daughter.
KEMP.—On August 27th, at The Terrace, Wellington, New Zealand, the wife of *William George Kemp, L.R.C.P.Lond., of a daughter.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. J. Matthews Duncan, Edinburgh; Dr. Rumsey, Cheltenham; Dr. Alexander Ogston, Aberdeen; Dr. G. M. Humphry, Cambridge; Mr. James Lane, London; Mr. Sidney Turner, Norwood; Dr. J. C. Murray, Newcastle-upon-Tyne; Mr. Page, Belfast; Mr. Fradelle, London; Dr. Henry Thompson, London; Mr. Furneaux Jordan, Birmingham; Dr. Broadbent, London; Dr. T. R. Fraser, Edinburgh; Mr. S. Messenger Bradley, Manchester; Dr. Crighton, London; Dr. Procter, York; Mr. G. F. Hodgson, Brighton; Mr. M'Gill, Leeds; Dr. A. W. Edis, London; Mr. Philpot, East Dulwich; Mr. T. Davies, Colwyn; Mr. Underhill, Tipton; Mr. Nourse, Brighton; Mr. P. H. Holland, London; Dr. Stenhouse, London; Mr. Cuffe, London; Mr. Allingham, London; Mr. Smith, St. Helier's; Dr. C. J. B. Williams, London; Dr. J. W. F. Smith, Aberdeen; Dr. J. Crichton Browne, Wakefield; Dr. Parsons, Dover; The Rev. D. Edwards, Llanystumdwy; Dr. Haddon, Eccles; Mr. C. S. Jeaffreson, Newcastle-upon-Tyne; Dr. Conrade, London; Mr. Manson, Howden; M.R.C.S.E.; The Secretary of the Female Medical Society; Dr. Dunbar, Kirkmarden; Dr. Wilson, Glasgow; Dr. F. J. Brown, Rochester; Mr. Unthank, Appleton-Wiske; The Hon. Grantley Berkeley, London; Dr. Cheadle, London; Dr. Drysdale, London; Dr. Copeman, Norwich; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Ransome, Manchester; The Secretary of the Hunterian Society; The Rev. Dr. Haughton, Dublin; Mr. James Robertson, Edinburgh; Dr. Woodward, Worcester; Dr. Gibson, Bedford; Mr. R. M. Mann, Manchester; Mr. I'Anson, Whitley; Dr. Dickinson, London; Mr. J. O. Tomlinson, Curragh; Mr. Alexander, Hammersmith; Dr. Bäumler, London; Our Dublin Correspondent; Dr. Menzies, Naples; Mr. Pendred, London; Major Kemp, Sandgate; Mr. Gornall, Warrington; Mr. T. Plant, Birmingham; The Secretary of the Clinical Society; Dr. Trollope, St. Leonard's-on-Sea; Mr. R. Tickler, Owston Ferry; Dr. J. W. Moore, Dublin; Mr. S. Wood, Shrewsbury; Dr. H. H. Phillips, Reading; Mr. Board, Bristol; Mr. Lawson Tait, Birmingham; Mr. Luke Armstrong, Newcastle-on-Tyne; etc.

BOOKS, ETC., RECEIVED.

Transactions of the Clinical Society of London. Vol. V. London: 1872.
Diseases of the Ovaries: their Diagnosis and Treatment. By T. Spencer Wells. London and New York: 1872.
Chemistry: General, Medical, and Pharmaceutical. By John Attfield, Ph.D., F.C.S. Fourth edition. London: 1872.
The Training of Young Children on Christian and Natural Principles: Addressed to Mothers. By George Moore, M.D. London: 1872.
Rules of Simple Hygiene, and Hints and Remedies for the Treatment of Common Accidents and Diseases. Compiled by D. W. Turner, D.C.L. London: 1872.
The Seventy Third Annual Report of the Dundee Royal Infirmary.
Consumption and the Breath Rebreathed: A Word with Reviewers. By Henry Mac Cormac, M.D. London: 1872.
The Proposed Extension of St. Andrew's University to Dundee. By Alex. Watson Wemyss, M.D. St. Andrew's: 1872.
University College (London) Calendar. Session 1872 and 1873. London: 1872.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY .....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Richardson, F.R.S., "On the Treatment *in extremis* of Fibrinous Deposits on the Right Side of the Heart"; Dr. Routh, "On Certain Forms of Mental Decay, and the Treatment."

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Lockhart Clarke, "On Progressive Muscular Atrophy accompanied by Muscular Rigidity and Contraction of Joints"; and other papers.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. LAWSON TAIT.—We shall be glad to receive particulars when the case is finished.

INQUIRENS asks what are the proper steps to take in removing a lunatic patient from one private asylum to another.

SANITAS (Reading).—The salaries are £800 a year, including travelling expenses. They must live in the appointed districts, wherever they may be; and must give their whole time to the duties, which are such as fully to occupy them.

SICK-CLUBS.—Would some of our members kindly assist me, through the medium of your Notices to Correspondents, in solving the enclosed problems with regard to sick-clubs.—THOMAS DAVIES, L.R.C.P., etc., Colwyn, North Wales.

Sick-Clubs: 1, How to form them? 2, What rules are suitable in a country village? 3, What order is advisable? 4, What about the Manchester Unity of Odd Fellows? 5, Are clubs registered now as formerly? 6, How much should the annual payment be for attendance and medicines per member?

WILL you kindly let me know where I will find the best information on the subject of Intemperance Statistics? I am, etc., INQUIRER.

*** Report of Convocation on Intemperance, and the publications of the Temperance League (Tweedie, Strand).

CONTAGIOUS DISEASES ACTS.

SIR,—In the last number of your JOURNAL, Mr. Worth of Nottingham has published a letter on this subject, which contains so many misreprcsentations and misstatements, that I must beg your permission to make a few remarks in reply.

Mr. Worth, who is a strong opponent of the Acts in question, and advocates the establishment of voluntary lock hospitals in their stead, says: "It is clear that if women will apply voluntarily to hospitals when diseased, there can be no necessity for police spies, or for such hateful perquisitions of healthy women as are carried out under these Acts, and yet the supporters of the Acts have all given most conclusive evidence that women are delighted to apply to hospitals when diseased. Thus the memorial addressed to Mr. Bruce by certain members of the profession, praying for the maintenance of the principle of the Acts, states that women flock in crowds to hospitals when diseased, in order to be treated, and that there is no difficulty whatever in obtaining their attendance."

The memorial in question (which was signed by nearly all the leading members of the profession in the metropolis, and afterwards countersigned by 2456 others in different parts of the country) really says this:

"We know, by long experience of this class, that they will flock in crowds to our public hospitals for admission, although the presence of a number of medical students renders the exposure far greater than in the private chamber of an institution appropriated for this purpose by the Acts. There is no difficulty in obtaining their voluntary attendance for even public examination when sick and incapable of further struggle with disease; but we know that, with rare exceptions, they cannot be induced to seclude themselves for treatment in the earlier and less painful stages of their complaints, when, for obvious reasons, they are most actively instrumental in communicating infection. We, therefore, believe it to be absolutely essential to the success of any Act of the legislature on this subject, that it should provide effectually for the earliest possible detection and treatment of disease in public women, and we are unable to see how this can be accomplished otherwise than by a system of periodical examinations."

This is pretty well in the way of misrepresentation—the *suppressio veri* and *suggestio falsi* are tolerably complete. But a few lines further on I find Mr. Worth quoting the evidence of Mr. Veasey, of the War-Office, given before the Committee of the House of Lords in May 1868. (See Report, p. 13, Q. 109.) Mr. Worth represents Mr. Veasey as saying "that the periodical examinations were unnecessary simply because the hospitals were filled with voluntary patients without it." This is not only a misrepresentation, but a misquotation. Mr. Veasey, in explaining how it was that periodical examinations had then only recently been ordered at Aldershot, really said this: "The power existed, but it was not enforced, because the hospital was always filled without it, and at that time there was not sufficient hospital accommodation." Mr. Veasey was not referring to *voluntary patients* at all; those words have been gratuitously interpolated by Dr. Worth, with the effect of entirely perverting the true meaning of the sentence. The patients alluded to were all under the *compulsory* operation of the Acts, and being known to be diseased were sent into hospital. The hospital being full, it was useless to proceed with the periodical examination of those who remained outside, but as soon as a larger number of beds was provided, the examinations were regularly enforced.

Further on, Mr. Worth quotes me as having said: "Much more good may be done by free hospitals than by police interference; police regulations can get only a certain number of women, whereas free hospitals will be resorted to by all who are suffering from disease, even by those who have contracted it clandestinely, and who would escape the police." This must have been taken from my evidence before Mr. Skey's Committee in 1865 (see Report, p. 300; Q., 3662), but again it is a misquotation; the last sentence is Mr. Worth's, not mine, and though in this instance the meaning is not very materially perverted, I protest against this practice of misquotation as in the highest degree objectionable.

This answer of mine has been repeatedly referred to by the opponents of the Acts; but the date at which it was given—viz., May 1865—is always carefully kept out of sight. At that time, the Act of 1866, which instituted compulsory examination, was not in existence, or, as far as I knew, even thought of. I had then no means of knowing practically how much good might be effected by well conceived and well administered enactments, such as those now in operation. I stated simply the impression then on my mind, which was strengthened rather than otherwise by the short experience which I had had of the futile manner in which the Act of 1864, in itself very imperfect, was then being carried out.

Mr. Worth, who has taken a prominent part in the discussion of this question, is, I presume, well acquainted with the evidence taken by the Royal Commission, where the results of my experience of the working of the Acts of 1866 and 1869 are stated at some length. If truth was his object, why not refer to this, instead of raking up an obsolete opinion given at a time when I had no more practical knowledge of what could be effected by these Acts than probably Mr. Worth himself has at this moment.

Little artifices like these should be reserved for the more congenial columns of the *Shield*. They are altogether out of place in the discussion of an important public question in the pages of a scientific journal.

With reference to the voluntary lock hospitals, which Mr. Worth is anxious to see established, no one, that I know of, has ever argued against them on the ground that females afflicted with venereal disease would not apply to them for relief. When badly diseased, they will probably come fast enough. My own conviction is, not that there will ever be any difficulty in filling such institutions, if properly managed; but that it will be utterly impossible to get the public throughout the country to support them on a sufficient scale by voluntary contributions. Mr. Worth is anxious that their "doors should be opened by Christian charity and not by the police"; but how is it, I would ask, that the Christian charity of those who agree with him as to their necessity, who are so strongly opposed to the present Acts, and who are continually vaunting their numbers and influence, have hitherto shown no sign of contributing anything but talk towards the establishment of such institutions?

But those who, like myself, are advocates of a compulsory system, contend that even if sufficient hospitals could be obtained, the evil would be not more than half provided for. They contend that, in order to effect any decided diminution in the amount of disease, it is essential to have some system which shall insure the seclusion of public women as soon as they become infected, and their detention in hospital until cured. Mr. Worth maintains that both these objects can be obtained under a voluntary system; the supporters of the present Acts maintain that they cannot. My own conviction with respect to the first point is based upon twenty years' experience of the severely diseased condition of the women who apply voluntarily for admission as in-patients at the London Lock Hospital, and of the preference shewn by those who are only slightly diseased to be treated as out-patients. With reference to the second point—namely, that these patients will not remain in hospital till cured—a statement which Mr. Worth asserts to be untrue—it is in evidence before the Royal Commission that at the same institution, in the years 1868-69-70, twenty-five per cent. of the voluntary female in-patients left uncured at their own request and contrary to the express advice of the medical officers (see Evidence, p. 509, Q. 14,522).

I should have been glad to offer some remarks on the curious assertions made by the opponents of these Acts that it is impossible, in a great number of cases to discover syphilitic disease in female patients; but having already trespassed so largely on your space, I shall seek some future opportunity of doing so.

I am, etc., JAMES R. LANE.

Berkeley Street, Piccadilly, Nov. 4, 1872.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Nov. 2nd; The Manchester Guardian, Nov. 6th; The Bath Express, Nov. 2nd; The Orkney Herald; The Kirkwall Guardian; The Irish Times; The Newcastle Daily Journal; The Norwich Argus; The Lincolnshire Chronicle; The Pembrokeshire Advertiser; The Scotsman, Oct. 30th and 31st; The Liverpool Porcupine; The Evesham Journal; The Eastern Daily Press; The Retford News; The Northern Echo; The Herts Guardian; The Jersey Express; The Bucks Advertiser and Aylesbury News; The Newport and Market Drayton Advertiser; The Salopian; The Constitution; etc.

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The BRITISH MEDICAL JOURNAL also says :—"Tried by various methods, the Victoria Wine Company's Wines command warm praise for their excellent qualities and singularly low prices."

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AN ADDRESS
ON
THE WORK OF A MEDICAL OFFICER OF HEALTH, AND HOW TO DO IT.*

By T. J. DYKE, F.R.C.S.Eng., Medical Officer of Health, Merthyr Tydfil; President of the South Wales Branch.

I AM induced to lay before you the following remarks, from the fact of my having received lately very many inquiries from my brother associates, as to what the duties of a Medical Officer of Health were, and how they were to be done. I will hope that it will not be considered presumptuous on my part to thus lay my views before you, when I tell you that, for the last twenty-four years, I have been a watchful student of the causes deteriorating the Public Health, and for the last seven years have held the medical officership of health in my native town, Merthyr Tydfil.

The Duties of a Health Officer.—These have been briefly, yet comprehensively, stated in the minute adopted by the Local Board of Health of Merthyr, in January, 1866.

"1. To ascertain what local causes prejudicially affect the public health in this district, to inform the Board of these discovered causes, and to suggest such means for their removal as medical science can advise.

"2. To seek information of the occurrence of cases of epidemic, endemic, or contagious diseases, and when informed to visit the localities, ascertain the extent of the malady, the local causes likely to conduce to the diffusion thereof, and give such warning as may induce the persons affected to have recourse to medical treatment. In case of an outbreak of small-pox, to inquire into the history thereof, and as to the practice of vaccination in the neighbourhood.

"3. To inspect any meat exposed for sale for human food, whenever required so to do by an officer of this Board, or any police officer, and to give his opinion as to the fitness or otherwise of such meat being used for human food, whenever required by a Justice of the Peace.

"4. Upon any complaint received by him of the emission of any noxious or offensive smell from any process of trade carried on in any manufactory, yard, house, or premises, or of atmospheric pollution from any drains or sewers, to inquire into the causes, and report upon the means for the prevention thereof.

"5. To perform any duties imposed by any Act of Parliament on the Officer of Health, or Sanitary Inspector.

"6. To attend the meetings of the Local Board when necessary.

"7. To report quarterly the nature and amount of sickness and death, the number of births, and of persons vaccinated; and to present annually a report and tabular return of the ascertained sickness and mortality of the district."

The foregoing being a summary of the duties, let me tell you how I have endeavoured to carry them into practical working. Under the seventh heading, it will be observed that quarterly and annual reports had to be prepared and presented to the local authority. After consulting the admirable reports of Dr. George Buchanan, formerly Medical Officer of Health of St. Giles, and Dr. Henry Littlejohn, Health Officer of the City of Edinburgh, I adopted a form of report (a copy of which I lay before you), which I have continued to use and to present to my Board each year. By passing in review the several chapters and sections into which this report is divided, I shall be able, I trust, to convey to you some idea of the subjects with which a Medical Officer of Health will have to become acquainted, and to inform you of the sources from which the desired knowledge may be obtained.

A report on the sanitary condition of a town or district should, in the *first* place, show the numbers of the people, their ages, occupations, characteristics of their dwellings, geological formation of the soil on which those dwellings are placed, the watershed of lands, the aspect of those lands and of the habitations of the people, and the varying meteorological conditions, such as rainfall, exposure to particular winds, variations of temperature, etc., to which the population are exposed.

In the *second* place, statistical information should be given of the marriages, births (legitimate or illegitimate), vaccinations, and deaths.

Under a *third* head should be included all those external circumstances which affect the health of man, such as the quality, sufficiency, and price of food, and the means of earning such sufficiency; the quality and quantity of the water-supply; and the mode of disposing of refuse.

Lastly, the sanitary works that are in progress, or are desirable, the legislative powers which have been given or are wanted, the practical working of the statutes giving those powers, and the imperfections observed in their application; these all require elucidation, and should be plainly set before the governing authority.

Let me now proceed to point out, how the work summarised in the foregoing paragraphs is to be done.

Population.—This will be ascertained from the returns of the last Census, and the most ready sources of information are: 1 The Quarterly Returns of the Registrar-General. These are published at a very small cost; the numbers to be ordered for this year, would be Nos. 93, 94, 95, and 96, which last will be issued on February 1st, 1873. 2. The Annual Reports of the Registrar-General. The last published is for the year 1869, and is numbered 32. For details of population, inquiry should be made of the Superintendent-Registrar of the district; this officer can readily give the numbers of houses in each hamlet or tything or subdivision, the number of separate families, and the totals of these in each subregistration district. Most unions publish half-yearly, "Abstracts of Poor-law Relief," and generally much useful statistical information is printed therein.

Ages and Occupations of the People.—For these, for the present, the census-returns of 1861 must be sought out. I fear that many of these valuable documents will have passed to the butter-merchant; at least, I have wholly failed to obtain copies of certain numbers. These returns are published in *volumes*, and in *tables*; "Volume 3, General Report" and Tables 1, "Areas, houses and population," and 2, "Ages, civil condition, occupation, and birthplaces of the people," are the portions the study of which is essential to the full knowledge of the proclivities of the population to diseases by reason of their residences, ages, or occupations. These tables are published in "Divisions," which correspond in number with those used in the Quarterly Returns already referred to; thus all the details relating to the south-western counties would be found in "Division 5," while those of Monmouthshire and South Wales are contained in "Division 11."

Geological Formation of the Lands.—This would be learned from the coloured Ordnance maps, and from the special sections published by the Surveyor-General. Local inquiries would quickly bring to light any peculiar formation or deposit, such as clay-bands preventing the downward passage of water, or the hard "pans" of certain districts in Surrey and elsewhere.

The Watershed of the surface lands should be carefully ascertained, especially of those areas on which tenements have been built; the aspect of the various subdivisions into which the district may, by natural boundaries, be separated, and of the lines of streets in these subdivisions, should be carefully noted, so that their exposure to particular winds, and hence the liability of the inhabitants to particular acute diseases, may be borne in mind. The elevation of these various subdivisions above the sea-level would also need to be ascertained.

The Meteorological Conditions of the district, such as the atmospheric pressure, prevalence and force of winds, degree of humidity, daily temperature and rainfall, all should be accurately observed and recorded. The books published by Mr. G. J. Symons will be the safest guides as to the modes of observing and recording, while Buchan's *Handy Book of Meteorology* will afford the fullest information.

The Water-Supply of the district should next engage the Health-Officer's most earnest attention. Diligent personal inquiry will be needed to collect all the information attainable as to the sources whence the waters are drawn, the quantities obtainable, and the purity of the supply. The works of reference to which he should have recourse for guidance, are Parkes on *Practical Hygiene*, Bowman's *Practical Chemistry*, and (with especial reference to the polluting presence of ammonia), Wanklyn's *Treatise on Water-Analysis*.

Habitations of the People.—The sanitary condition of each house in the district should be carefully inquired into. This inquiry could not economically be done by the Health-Officer himself, but can be efficiently arrived at, by entrusting the house-to-house inspection to competent observers, appointed and paid by the local authority, and directed by the medical officer. Such an inquiry was made in Merthyr in the autumn of 1866; nearly 10,000 houses were examined and reported on by four intelligent persons; five weeks were occupied in the examination and report, the cost to the local board being £25. This inquiry embraced the following:—The name of the street, number of each house, names of occupier and of owner, number of family and of lodgers; the ventilation, how it was secured, whether by back doors, or by windows whose upper sashes could be fully let down; the number of privies or of water-closets, and the state of these; the water-supply, whence derived, and the state of any back premises, noticing particularly whether any animals or poultry

* Read before the South Wales and Monmouthshire Branch.

were kept there. When these returns were completed, they were tabulated by the medical officer, for *each street* in *each district*, and the results summed up. The usefulness of these returns has been continuous. They now afford standpoints of reference whence to mark the improvements made, and to note the dark spots that call for amendment; by referring to this "Dictionary of Habitations," the state of each house is at once apparent, and upon the occurrence therein of any case of disease, such as, *e. g.*, enteric fever or phthisis, the exciting cause, whether excrementitious exhalations, or dampness of foundations, may be found.

Drains and Sewers.—The Town Surveyor would be the person from whom all details, connected with the drainage and sewerage of the district, may be learned. The lines of these, their formation, the kinds of gully-traps and closet-pans used, the connections between the sewers and cesspools (if any), the condition of these polluting collections, their contiguity to wells or springs, or dwellings; these matters each need, and should have the most careful consideration.

Having thus obtained a full knowledge of the factors of diseases which surround man in his dwelling, and in his journeyings, the Health-Officer should next proceed to seek for statistical information as to the marriages, births, vaccinations, and deaths which have been recorded in the district assigned to his supervision. The sources of information on all these matters are, in each registration district or subdistrict, the Superintendent-Registrar, or the District Registrar of births, marriages, and deaths.

Marriages, Births, etc.—The numbers of births should be ascertained weekly by returns from the District Registrar, and should be classified for male and female, and legitimate or illegimate. The number of marriages would be given quarterly, on application to the Superintendent Registrar, who can also supply a return of the numbers of children, etc., successfully vaccinated. The ages, under one year and above one year, would also be given; by comparing the number under one year of age vaccinated in each quarter with the number of children born in the previous quarter, the Health-Officer would be able to form an opinion as to whether the practice of vaccination was or was not sufficiently carried out. The death-roll should also be obtained weekly from the District Registrar. The return should state the date of death, the residence, names, age, sex, and occupation of the deceased, the cause or causes of death, and whether such cause had been certified by a registered medical practitioner, or by a coroner, when an inquest had been held. I lay before you a blank form of the return which I use. The cost of the weekly returns of births and deaths is £8 per annum; the mean number of births being 2000, and of deaths 1400, out of a population of 50,000. To obtain these returns, application should be made to the Registrar-General by the local authority; the consent being obtained, the District Registrar would weekly fill in and forward the returns, the Local Board remunerating him for his labour, and of course providing him with the forms in blank.

Having obtained these returns, and learned by careful perusal the diseases which have proved fatal, the Health-Officer should make note of every case of *presumed preventable disease*, and inquiry be at once instituted into all cases of epidemic contagious fevers. Indeed, a diligent and constant study of these death-rolls will quickly direct the attention of the Health-Officer to the plague-spots of his district; and, when his attention has been once drawn to them, he will not cease to seek for the causes of disease, and, when they are discovered, he will continuously endeavour to get them removed.

The *Tabulation of the Mortality Returns*, according to districts and streets, etc., will occupy very much of the time of the Health-Officer; but it is absolutely necessary that this should be done, as without such a sorting of the causes of death, and setting down to each locality its due share of the gross mortality, no man can fully perceive the close connection between insalubrious houses, or courts, or alleys, and the death-rate in such places. My habit has been to set down under each division of the district the details of the mortality of each week; thus: Week ending ——, male or female, age, cause of death, age at death. Summing up these each quarter, I obtain the numbers of males and females, the numbers under and over five years, the causes of deaths, and the total of years lived by the whole number. This total, divided by the whole number, yields the average age at death. From this district ledger (as it were), I post all cases of death into the several headings of the general mortality table, placing opposite the name of each disease, under one of the several ages, the score of the particular death of the male or female. The sum of the deaths from each cause, the sums of the deaths from each class of disease, and the total of deaths would be brought out in the columns on the extreme right; while the base line of each column would show the mortality at each age. The table at the end of my second annual report will illustrate my description.

A glance at tables so constructed would point out the excess or diminution of deaths from all causes, and from particular causes. Thus the facts that particular diseases had increased, or diminished, would be plainly displayed. The books which would guide a medical officer in preparing such abstracts of mortality, are: 1, the Nomenclature of Diseases, as published by the Royal College of Physicians; and 2, the Annual and Quarterly Reports of the Registrar-General, already referred to.

Passing on to the *third* heading, the *Food of Man* should occupy the earnest attention of the Health-Officer; the quality of the main articles of food by which human life is supported—flour, oatmeal, potatoes, meat, etc.—should be inquired into. In Dr. Parkes's work already named, all the needful instructions for ascertaining the purity or otherwise of these may be obtained. In addition to ascertaining the quality of the food, the Health-Officer would also inquire into the *quantity* of food supplied; this will largely depend upon the *prices* of food. These may be learned by personal inquiry of the dealers, and also from the Clerk to the Guardians; this officer would give copies of the prices paid for articles of food obtained by the Guardians. These prices may be taken as a fair average of what is paid in the district for the food consumed by its inhabitants. The *means* whereby man obtains his food should next be inquired into; what may be the *rate of wages* earned by the working men in the several branches of trade or commerce carried on in the district would call for much personal inquiry on the part of the Health-Officer. The replies obtained would enable him to form a fair comparison of the rate of wages with the price of food; the conclusion which he may deduce therefrom should be fully set forth. Under this heading should also be considered the *numbers of the paupers* permanently and casually relieved in the district. These numbers would be a very safe criterion of the prosperity or otherwise of the trade and commerce carried on. The facts required may be learned from the half-yearly abstracts published by the boards of guardians. To the question of the water supplied to a district, I have already alluded.

The concluding subject of inquiry comprises the progress in sanitary works, and the working of the legislative powers given by the statutes.

Having carefully mastered the various details above-named, with much labour and long toil, the Health-Officer would endeavour to form some notion of the executive duties he would have to perform. Here, primarily, he should bear in mind this golden rule: the Health-Officer is the *medical adviser* to his Board, and should not, in any instance, proceed to any *action* until so directed by order of his Board. It is not, therefore, necessary that he should seek for nuisances, or interfere in any way in the duties apportioned by the Board to the Surveyor, or to the Inspector of Nuisances; but, as it is necessary that he should be kept thoroughly informed upon every matter relating to the health of the inhabitants, it is absolutely requisite that one (or more, according to the size of the district) Inspector of Nuisances should be placed under his control. The duties of this official would be to inquire into and discover all nuisances, inspect houses let in lodgings and common lodging-houses, diligently seek information of houses overcrowded, visit the localities in which fevers may be prevalent, see to the removal of the fever-stricken to hospitals, inspect slaughter-houses and market-places; in fact, he should be the ever-ready assistant of the medical officer in seeking for the causes which prejudicially affect the public health. The salary of the Inspector, who is subordinate to the Health-Officer at Merthyr, is twenty-seven shillings per week; he is supplied with one suit of clothing annually, and, for additional services during epidemic outbreaks, has received donations of money.

In order that the Medical Officer of Health may know what are nuisances, what are the obligations of landlords and tenants, and what are the modes of procedure by which the former may be removed and the latter fulfilled, it is necessary that he should have a clear apprehension of the laws relating to Public Health and Local Government. In Glen's work on this subject, a most complete, accurate, and understandable digest of these laws will be found. A promise has been made by the head of the Local Government Board that a synopsis of these laws shall shortly be published; when the promise is fulfilled, doubtless much of the uncertainty which now attends the practical application of the statutes will cease.

Having thus sketched out—I trust not too tediously—the various duties of the Health-Officer, I will, in conclusion, add but two or three remarks.

First, as to the amount of time and labour that a medical man would have to devote to the proper carrying out of the work I have described. Taking my own sphere of labour as the basis, I would say that a district such as Merthyr Tydfil is—of 18,000 acres in area, 3000 acres being occupied by houses and gardens, with a population of 50,000, living in 10,000 separate tenements—the time occupied to do the work

efficiently would not be less than one hundred days, allowing ten hours of labour each day.

The costs of the work in Merthyr are £8 a-year paid to the Registrars of Births and Deaths, an allowance not exceeding £10 a year to the medical officer for the purchase of books, instruments, chemicals, stationery, and for the printing of the annual report, and the medical officer's salary of £100 a year; giving a total of £118. You will understand that the medical officer's services are not remunerated at their commercial value.

Secondly, as to the nature of the work which will be required of the Health-officers of the future. As yet, this has not been officially defined, and, therefore, I would earnestly press upon my medical brethren generally not to be too hasty in tying themselves to undertake labours of which they do not know the extent and character.

The Local Government Board have announced that rules and regulations to be observed by local authorities (desiring pecuniary aid in payment of the salaries of Health-Officers and Nuisance Inspectors) are being prepared: it would, therefore, be prudent if both authorities and medical men would wait until those rules shall have been made public. This is more especially necessary, since the Inspectors appointed by the Central Board will have large means granted them to enforce the efficient carrying out of the sanitary laws.

All these are subjects of congratulation to those who have the well-being of their fellow countrymen at heart; and it is to be hoped that the responsible chief of the department, in selecting those divisional officers, whose duty it will be to advise, assist, instruct, gently press, or cogently reason with district authorities, will not be tempted humbly to initiate a practice which is said to have prevailed in the Grand Duchy of "Nebel-und-Regenstein"; where "*it had long been admitted, that the necessity for knowing anything about the functions one might be called upon to discharge, was an exploded fallacy.*"

Outline of Report upon the Sanitary Condition of ————, during the year ——, by ————, Health-Officer.

Duties of medical officer as defined by local authority.

Chap. I.—Numbers, etc., of the Population, Geology, Watershed, and Aspect of the District; Natural Divisions thereof; Habitations of the People; Rainfall, Temperature, etc.

Sect. 1.—Population; area of district.

Sect. 2.—Ages and civil conditions of people.

Sect. 3.—Sanitary topography of whole district, and of divisions, etc.

Sect. 4.—Habitations of the people, characteristics as to site, structure, dampness, ventilation, drainage, etc.

Sect. 5.—Common lodging-houses, houses let in lodgings, slaughter-houses, markets, etc.

Sect. 6.—The weather, rainfall, temperature.

Chap. II.—Water-supply, Food, Wages, Pauperism.

Sect. 1.—Water-supply; quality and quantity, etc.

Sect. 2.—Prices of chief articles of human food, and adulterations thereof.

Sect. 3.—Wages of labouring population, in each of the particular classes of labour in district.

Sect. 4.—Number of paupers relieved.

Chap. III.—Statistics of Marriages, Births, Vaccination, and Deaths.

Sect. 1.—Marriages.

Sect. 2.—Births, legitimate and illegitimate.

Sect. 3.—Vaccinations.

Sect. 4.—Deaths from all causes in whole district.

Sect. 5.—Ditto, ditto, in each division of district.

Sect. 6.—Ditto from each class of disease in whole district, and in each division of district.

Sect. 7.—Ditto from epidemic contagious disease in each division of district.

Sect. 8.—Ditto from tubercular diseases in each division.

Sect. 9.—Ditto from lung diseases, etc.

Sect. 10.—Ditto from accidents.

Sect. 11.—Ditto of illegitimate children.

Sect. 12.—Ditto in union workhouse, gaol, or hospital.

Chap. IV.—Sanitary Improvements, etc.

Sect. 1.—Sanitary works during year.

Sect. 2.—Sanitary works needed.

Sect. 3.—Practical working of sanitary laws.

Sect. 4.—Amendments desirable.

Summary.—Comparisons of rate of Increase or Decrease of Numbers of People; Increase or Decrease of Rate of Marriages, Births, Deaths, Causes of Increased Mortality (if any); Remedial Measures necessary for Removal of Causes, etc.

Appendix.—Table showing Causes of and Ages at Death from each Class and Order of Disease.

Form of Weekly Return to be made by Subdistrict Registrars.

District of Merthyr Tydfil. Subdistrict of ————. Return of Number of Births and Deaths during the week ending Saturday, the —— day of ————, 18—. Births: Legitimate, M., —, F., —, =—; Illegitimate, M., —, F., —, =—; total, ——. Deaths: Male, —, Female, —, =—; total ——.

(The Medical Officer will be glad to have this return every Monday.)

Particulars of Deaths Registered in the week: Register No.; when died; residence; names; sex; age; occupation; causes of death (1, 2); duration of diseases (1, 2); certified or not, or inquest.

RESEARCHES

ON

THE MECHANICAL DILATATION OF THE CERVIX UTERI, AND THE APPLIANCES USED FOR THE PURPOSE.*

By J. MATTHEWS DUNCAN, M.D.,
Physician to the Royal Maternity Hospital, and Lecturer on Midwifery in the School of Medicine, Edinburgh.

Practical Reflections.

The first point to which I would call attention, that arises out of the preceding investigation, is the question, What force is required to dilate the cervix uteri in gynæcological and obstetrical practice? Now, in order to answer this question, it is necessary to point out that, in order to reach a measurement by experiment, we must exclude the element of time as much as possible, because lapse of time permits the introduction of other influences besides force—influences which we may meantime designate vital, and which show themselves by producing spasm and tightness, or relaxation and yielding. Spasm and tightness may be left out of consideration, because they do not mar the mechanical view of the subject; it being a fair object of experiment to find what mechanical force is required to overcome the spasm or tightness, however produced. Relaxation and yielding, however, cannot be left out of consideration, for they may take place through vital actions, and without any application of distending force; and, indeed, I shall easily show that this is the case.

In gynæcological practice, the only good example that I can give of the force exerted in producing dilatation is that required, at a sitting, for the passing of a bougie; for here the shortness of the time used excludes vital relaxation or yielding, or nearly excludes it. Now in practice I have found that the dilatation of the external os uteri and of the cervical canal to the extent of 1-50th or 1-25th inch in diameter requires very little force—so little, that, considering the rough methods of measuring that can be applied, I think it best not to attempt exactness.

Dilatation of the cervix uteri is generally resorted to in practice with a view to relieve or cure spasmodic dysmenorrhœa, or to remove sterility. For these purposes, dilatation of the external os and of the canal of the cervix is probably of no value. The practitioner may think it worth while to try the dilatation of the internal os uteri. If he do this by a conical pointed bougie, he will find distinct resistance, often powerful resistance, to overcome; sometimes resistance invincible at the time, by any force which he feels himself justified in using. I am satisfied that in cases of great resistance, spasm of muscular fibre is added to natural or mere mechanical rigidity; for the practitioner may find himself able on another day, in the same case, to take the part as it were at unawares, and pass the bougie before the spasm is excited. I have no doubt—indeed, I know from my own experience—that frequently when the resistance is great, the practitioner is deluded into supposing he touches the fundus uteri with the point of the probe or bougie when it has only reached the tight internal os, and has not passed through this part; and this delusion gets some support from the cervix, in these circumstances, undergoing elongation, so that the instrument passes the external os two and a half inches, a length of bougie sufficient under ordinary circumstances to reach the fundus.

The force required to dilate the internal os of the cervix varies greatly in different cases, and in the same case at different sittings; this latter variation in the same case being, I believe, the result of spasm. In a healthy woman, the dilatation by bougie is comparatively easy, and

* Continued from page 516 of last number.

causes comparatively little pain ; but in a case of dysmenorrhœa, and in some other conditions, the difficulty may be extreme. I am satisfied that I have frequently applied a forward pushing force at the point of a probe equal to 4 lbs., or even more, and with the wedge or conical pointed bougie a force probably exceeding 200 lbs. on the square inch of surface of part undergoing distension. With this latter instrument, a force probably considerably less is sufficient in ordinary cases to overcome the rigidity. When a great force is applied, the sudden or jerk-like advance of the bougie through the internal os, and the smearing of the instrument with blood, show that the part has not been gradually expanded, but lacerated—an accident which, I think, it is desirable to avoid.

When a tangle-tent is passed through the internal os—that is, along the whole uterine canal—and withdrawn at any time, it shows no constriction (or only constriction at the point where it was encircled by the internal os). This sufficiently indicates, under the light of the experiments here published, that it has enlarged without exerting or overcoming any considerable force. Were any considerable force required to effect dilatation, it would certainly leave its mark upon the tent ; and the absence of such mark is conclusive against the tent having at any part met with a considerable obstacle to expansion. Moreover, when we regard the rate at which the tangle expands in water when under no constraint, and the similar rate of its expansion within the uterus, the conclusion is further established.

In cases of spasmodic dysmenorrhœa, a constriction is frequently observed at the site of the internal os uteri even after the tent has remained twenty-four hours in the uterus (Fig. 4). The experiments detailed in this paper show that a very small force is sufficient to prevent the expansion of a tangle-tent beyond a very slight degree. A tangle-tent expands to a slight degree with a force of sometimes 600 lbs. on the square inch ; but the amount of the expansion is very small, and it is nearly as small under much less resisting pressure. A solid tangle-tent immersed in water under a pressure of 640 lbs. on the square inch, expanded from .29 inch to .31 inch ; under a pressure of only about 210 lbs on the square inch, it expanded in diameter from .24 to .3—that is, three times as much, yet only .06 inch.



Fig. 4.—End of a Tangle-tent as withdrawn from the Uterus in a case of Spasmodic Dysmenorrhœa.

Further, it is certain that a moderate pressure, if continued long, will dilate this internal os ; and that no great pressure acts on the constricted part of the tangle is demonstrated by the facility with which the bulbous end of the tangle, as it had expanded in the cavity of the body of the uterus above the internal os, is pulled through the constricted part in extracting the tent. It is probably a morbid state of the internal os of the cervix that gives it power to resist expanding pressure. The tissues of the whole uterus generally behave as in pregnancy, expanding so as to remove the smallest active pressure on its contents, such as a tent, or bougie, or anything else that is in it, and pressing with no active force, or only very slight force. This condition is illustrated by the expansion observed to be produced by a metallic tent, which cannot possibly exert any expanding force.

The conclusion, then, at which I arrive is, that in ordinary cases the tangle does not expand by exerting force, but, a length of time, at least hours, being allowed, through some vital change in the tissues touched. The superiority, then, as an expander, in ordinary cases of a tangle over a metallic tent, lies chiefly in this, that while the metallic tent cannot enlarge to keep up the irritating or relaxing contact which results in expansion, the tangle-tent does enlarge, and follows the expanding tissues and produces further expansion in the same, but now also continuous, manner as the limited amount of expansion produced by a metallic tent is effected.

In cases of disease, such as is illustrated in the condition of the internal os in spasmodic dysmenorrhœa, active expanding force is required —at least if the enlargement is to be obtained within a moderate space of time, say twenty-four or thirty-six hours.

The study of the action of the sponge-tent strongly confirms what I have said of the tangle-tent. The expanding force of the sponge is very small, acts quickly, and, with appreciable force, only through a very small extent ; yet it is well known that this agent, when already partially expanded and exerting almost no force, dilates the uterus with greater rapidity and to a greater degree than the tangle-tent. The sponge has been often said to be used to dilate the internal os in spasmodic dysmenorrhœa, but I am very doubtful of the accuracy of such observations.

In obstetrical practice, the tangle-tent, the sponge-tent, and the India-rubber bag, are all used in different cases, according to circumstances. The same law that regulates the dilatation of the cervix in gynæcological practice seems to me to be operative also in obstetrical conditions—that is to say, the cervix opens, not so much mechanically forced by the dilating agent, as relaxing and yielding under the influence of its presence. But in obstetrical practice there is an interesting point of contrast with gynæcological ; for I have repeatedly found, in peculiar circumstances which I am unable satisfactorily to define, that when the cervix refuses to yield under mechanical forcing, or maintains a persistent rigidity for many, say six hours, it is the external os that presents the unyielding constriction. The resistance to dilating forces seems here, also, as in gynæcological cases, to be due much more to spasm than to mere mechanical rigidity. In obstetrical cases of this kind, I have thus had a very exact measurement of a lower limit to the power required to dilate rapidly the rigid external os uteri. The common fiddle-shaped bag distended, and exerting its full force of about 20 lbs. on the square inch, is sometimes inefficient even after six hours of action. But such cases of rigidity found in inducing premature labour are exceptional.

Lastly, the investigations published in this paper may give aid to the practitioner in judging as to the most eligible means of effecting dilatation of the uterine cervix for gynæcological and obstetrical purposes. It will be admitted that, *cæteris paribus*, dilatation without causing a wound is safer than, and therefore preferable to, dilatation by cutting or tearing instruments which do wound. This natural opinion is amply confirmed by experience. Again, it will be admitted that dilatation quickly, or by instruments which are not allowed to remain, is safer than, and therefore preferable to, dilatation slowly or by instruments which are left for hours or for a day in the passages. Quick dilatation implies dilatation by mechanical force, or by mechanical force and vital yielding combined ; and, to be advantageous, the rapid dilatation should be effected without inflicting a wound. This estimate of the value of quick dilatation seems to me to be also a natural opinion, and I believe it is confirmed by experience.

For these reasons I prefer the use of the bougie in gynæcological practice, whenever it is capable of effecting the desired work ; and for like reasons and under like limitations I prefer the use of the fiddle-shaped India-rubber bag of Barnes in obstetrical practice.

Appendix.—Notes of some of the Experiments.

1. *The Tangle-Tent.*—An experiment was made to show the rate and amount of expansion of a solid tangle-tent when placed, without constraint, in water, as drawn from the cistern in July.

Time of immersion.	Diameter.
At immersion	.21 inch
30 minutes	.23 ,,
1 hour	.236 ,,
1½ hour	.24 ,,
2½ hours	.26 ,,
3½ hours	.28 ,,
5 hours	.3 ,,
11 hours	.38 ,,
50 hours	.56 ,,

Among several tents tried, that whose measurements are above given retained best its form and smooth surface, and was, therefore, most satisfactorily measured. The others gave nearly similar results, only those of smaller diameter began their expansion a little more rapidly, as might have been expected.

Another experiment was conducted exactly as the former, only in water maintained at a temperature of 98 deg. Fahr.

Time of immersion.	Diameter.
At immersion	.21 inch
30 minutes	.24 ,,
1 hour	.27 ,,
1½ hour	.29 ,,
2½ hours	.32 ,,
3 hours	.33 ,,
5 hours	.38 ,,
11 hours	.47 ,,
23 hours	.5 ,,

The accompanying cut explains the construction of the instrument constructed for testing the tangle-tents. The breadth of the part of the

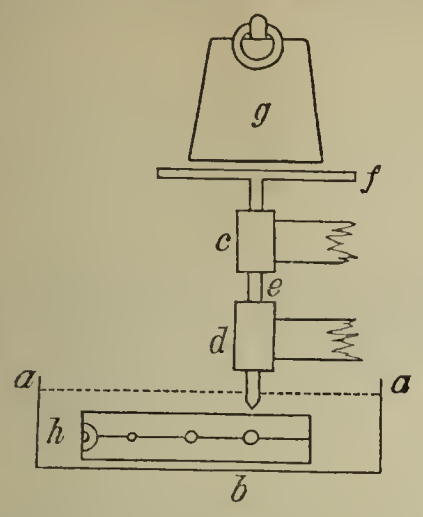


Fig. 5.—Plan of Instrument. *a b a.* Water cistern; dotted line, Upper surface of water; *c d.* The fixed sheath in which moves *e.* The stem of *f.* The tray which receives *g.* The weight superimposed on; *h.* The instrument perforated with three different sized holes to receive the tangle-tents of corresponding sizes. The joint upon which the two limbs move is at *h*; and the holes for the tents are bisected by the line of junction of the limbs.

instrument receiving the tangle, or, in other words, the length of the hole, was one inch.

Experiment 1.—A solid tangle-tent, placed in the largest aperture of the instrument, not quite filling it, but having around it about 1-30th of an inch of free space, when loaded with 8 lbs. in the tray vertically above it, raised the upper limb about 1-20th of an inch a day, a little more on another day, and still a little more on the third day. The whole expansion was very little compared with that in the parts not subjected to compression. The force was equal to about 24 lbs. on the square inch. The number was derived from the applied weight, its leverage, and the horizontal sectional area of the hole in which the tangle was placed.

Experiment 2.—A solid tangle-tent, placed in the middle hole of the instrument, under a pressure of 63 lbs. in the tray, poised on the larger hole, did not in four days elevate it. The pressure on it was equal to 280 lbs. on the square inch.

Experiment 3.—A hollow tangle-tent, placed exactly as the former, only with 42 lbs. in the tray, raised it a little in twenty-four hours. The pressure was equal to 252 lbs. on the square inch. The expansion was to a very small degree.

Experiment 4.—A hollow tangle-tent, placed in the largest aperture of the instrument, with 42 lbs. in the tray, placed vertically above it, was found to have raised it a little in two days, and in another day a little more. The pressure was equal to 155 lbs. on the square inch. The expansion was very slight compared with that in the parts not subjected to compression.

In comparing these results with those which follow, we must remember that the water has by no means such free access to the tangle as in those to be described.

The following experiments were made by encircling tents with India-rubber bands at a given tension, and watching the results of immersion in water.

Experiment 1.—A solid tangle-tent was encircled by successively single, double, and treble layers of India-rubber band 1-10th of an inch broad, at a tension of 3 lbs., and then immersed in water.

Number of layers.	Diameters at time of immersion.	After 24 hours of immersion.	After 48 hours of immersion.
1 layer.....	.36 inch.	.38 inch.	.43 inch.
1 layer..... ..	.36 ,,	.39 ,,	.44 ,,
1 layer.....	.36 ,,	.41 ,,	.432 ,,
2 layers	.4 ,,	.41 ,,	.43 ,,
3 layers	.406 ,,	.408 ,,	.43 ,,

The greatest expansion observed is from .36 inch to .44 inch, and this under a pressure of 166 lbs. on the square inch. The highest pressure here is equal to 500 lbs. on the square inch.

This experiment shows how little is the amount of expansion under strong pressure, and that for practical purposes it is nearly as great under a pressure of 500 lbs. on the square inch as under a pressure of 166 lbs. on the square inch; but the highest power was only shown after two days' steeping, The number given was derived from the formula, $p = \frac{T}{r}$, where T is the tension per lineal inch, and r the radius of the section of the tangle.

Experiment 2.—A solid tangle-tent, roughly filed, was encircled by one layer of India-rubber band, 1-10th of an inch broad, at a tension of 1 lb. In twenty-four hours it expended 50 per cent. This by trial indicates one additional pound of tension—that is, 2 lbs. The band now was .1 inch broad, and the diameter of tent with band .36 inch: after further twenty-four hours of immersion, it measured .385 inch. This indicates a pressure overcome of 120 lbs. on the square inch.

Experiment 3.—A solid tangle-tent was encircled by single, double, and treble layers of India-rubber band, .125 inch broad, at a tension of 4 lbs., and immersed in water.

Number of layers.	Diam. at time of immersion.	After 6 hours of immersion.	After 10 hours of immersion.	After 18 hours of immersion.	After 24 hours of immersion.	After 48 hours of immersion.
1 layer	.24 inch.	.26 inch.	.26 inch.	.28 inch.	.28 inch.	.3 inch.
1 layer	.26 ,,	.26 ,,	.27 ,,	.28 ,,	.28 ,,	.29 ,,
1 layer	.26 ,,	.27 ,,	.28 ,,	.28 ,,	.29 ,,	.29 ,,
2 layers	.28 ,,	.28 ,,	.29 ,,	.3 ,,	.29 ,,	.3 ,,
3 layers	.29 ,,	.29 ,,	.3 ,,	.3 ,,	.3 ,,	.31 ,,

This experiment gives a maximum pressure overcome equal to 640 lbs. on the square inch.

2. *Sponge-Tent.—Experiment* 1.—A filed sponge-tent was encircled by an India-rubber band of 1-5th of an inch in breadth, at ½ lb. tension, with successively 1 and 2 layers.

Number of layers.	Diameter at time of immersion.	Diameter after 48 hours of immersion.	Diameter after 72 hours of immersion.
1 layer.....	.316 inch.	.366 inch.	.366 inch.
2 layers	.35 ,,	.366 ,,	.366 ,,

This indicates an utmost force exerted of about 30 lbs. per square inch, and the expansion is very slight in amount.

Experiment 2.—A filed sponge-tent was encircled by an India-rubber band of 1-5th of an inch in breadth, at a tension of ½ lb., with successively 1, 2, and 3 layers.

Number of layers.	Diameter at time of immersion.	Diam. after 1 hour of immersion.	Diam. after 6 hours of immersion.	Diam. after 10 hours of immersion.	Diam. after 18 hours of immersion.
1 layer.....	.35 inch.	.33 inch.	.33 inch.	.3 inch.	.3 inch.
2 layers ...	.36 ,,	.36 ,,	.33 ,,	.33 ,,	.33 ,,
3 layers ...	.38 ,,	.36 ,,	.34 ,,	.33 ,,	.33 ,,

From this experiment it appears that this tent could not produce a force of 17 lbs. on the square inch; indeed, the pressure of the India-rubber, even when single, overcame the sponge in time.

Experiment 3.—A sponge-tent (not filed on surface) was encircled with an India-rubber band of .15 inch broad, at a tension of 1 lb., with successively 1, 2, and 3 layers.

Number of layers.	Diameter at time of immersion.	Diameter after 24 hours of immersion.
1 layer	.316 inch.	.316 inch.
2 layers	.27 ,,	.26 ,,
3 layers	.316 ,,	.3 ,,

This experiment shows that this tent could not overcome a pressure of 40 lbs. on the square inch; indeed, the pressure of 2 layers and of 3 layers produced further compression of the sponge.

In all the above experiments, the breadth of band given is that measured under tension.

3. *Fiddle-shaped India-rubber Bags.—Experiment* 1.—The manometer was attached to the pump, in order to find how much pressure it could be made to exert, as worked in the ordinary way by the hand. The pump was a new ordinary India-rubber syringe. It was found to produce a force of a little above 25 lbs. on the square inch, and to be stronger than the bags which it had to distend.

Experiment 2.—The largest of the three ordinary fiddle-shaped bags was connected with the apparatus, as in Experiment 1. The highest pressure reached was when the bag still retained its regularity of form; it was a little above 22 lbs. on the square inch. When the bag was further distended by the injection of more water, it lost its form, bulged out at parts, and the pressure decreased. The highest steady pressure with the apparatus at rest was about 18 lbs.

Experiment 3.—The middle-sized bag behaved very nearly as the largest.

Experiment 4.—The smallest bag behaved very nearly as the others.

DESCRIPTION OF INSTRUMENT USED FOR TALIPES EQUINO-VARUS AND VALGUS.

By RICHARD DAVY, F.R.C.S.,
Surgeon to the Surgical Aid Society.

SURGEONS treating the various forms of talipes amongst out-patients, have been much disappointed at results obtained by the use of the ordinary Scarpa's shoes. I find the screw movements irregular, and especially useless at the very time when most required—viz., at the later periods of treatment, because the screws have reached their maximum range of action. The straps used to confine the foot and heel to the sole are complicated, galling, and ineffectual; with infants, quite inoperative, for these little kicking ones cast their shoes as annoyingly as hunters, and frequently ere leaving the surgeon's consulting-room. The sole of the shoe (when retained) wears out speedily by the friction on ground, and so one of the most natural processes of cure is interfered with.

Before entering into detail, I must thank Mr. Annandale, surgeon to the Royal Infirmary, Edinburgh, for his courtesy in allowing me to see his great ingenuity in mechanisms for talipes; and his arrangements for confining the foot have been essentially copied. I must also express my obligations to Mr. Arnold of Smithfield for his great attention to detail in manufacturing these instruments, which he will show to any surgeon interested in such appliances. Fig. 1 shews the instrument applied to the foot and leg. Fig. 2 shews the boot when removed.

The double irons up the leg, and foot-piece joined to them by hinges at the ankle, are as generally made. These irons are fastened by strap in young children below the knee, but in infants above the knee, in order that a better purchase may be gained. The circular joint at the sole of the foot corresponds to the situation of the astragalo-scaphoid and calcaneo-cuboid articulations. Two screws (as shown in the plate) cause (1) the dorsum of the foot to be drawn upwards towards the leg; (2) the anterior part of the foot to be everted or inverted at pleasure. By placing these screws on the inner or the outer aspect of the leg, talipes valgus or varus may be respectively treated. Both screws are worked by a triangular notched key. The boot consists of four flaps: one passes directly over the toes, the dorsum of the foot, and the instep, and effectually confines the heel to the special heel-plate; a second and third, on each side of the anterior portion of the foot, and a fourth the heel, overlap the centre one, and are secured by stout lace passing over special hooks. The sole of the boot is firmly riveted to the iron foot-plates; and these rivets, passing through the sole to the earth's surface, protect the leather and circular hinge from friction during progression.

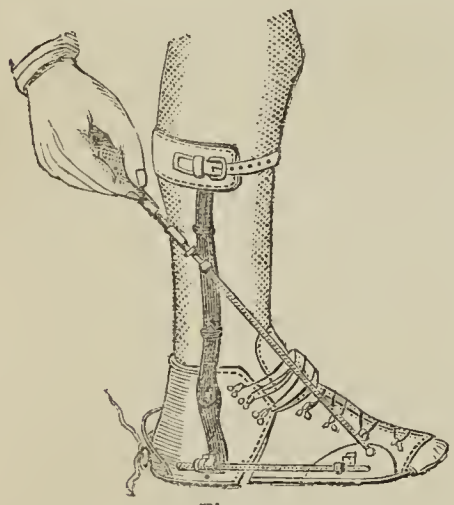


Fig. 1.

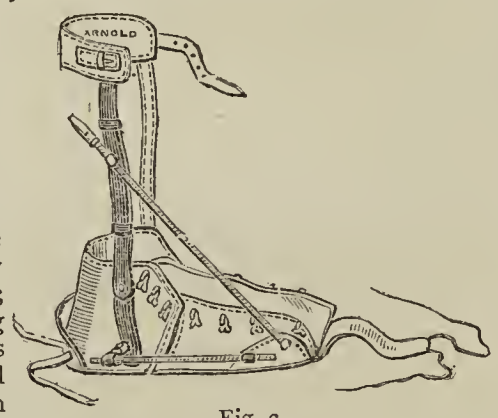


Fig. 2.

A high compliment was paid to this form of shoe by a first-rate instrument-maker, who said that it was old-fashioned, and that the movements were by no means so complicated as many that he could show me. Old-fashioned and simple though it may be, it is now in constant use, doing its required work well, and not liable to get out of order by fair usage.

RARE CASES OF SYPHILIS.*

By CHARLES R. DRYSDALE, M.D.,
Physician to the Metropolitan Free Hospital, and to the North London Hospital for Consumption and Diseases of the Chest.

Syphilitic Infection from Smoking a Cigar.—There are now but few to be found who deny that secondary syphilis may be communicated by such means as kissing, or using a drinking-glass; but every case that proves this clearly is useful.

Isaac S., aged 74, came to the Farringdon General Dispensary on July 8th, 1872. The patient had a copper-coloured eruption on the forehead, and spots of syphilitic roseola and psoriasis on the right forearm, hands, etc. A portion of the mucous membrane of the right angle of the mouth was denuded of its epithelium, red, and covered with false membrane; the whole greatly like what is seen in so-called "mucous tubercles" of the fauces. A small patch of similar appearance was seen on the mucous membrane of the left upper lip. There were indurated glands below the right jaw. The patient said that five weeks before being seen, he had first noticed a spot at the right angle of the mouth. This commenced with a kind of blister, and lumps came below the jaw, which still continued hard. A fortnight or three weeks before he noticed the sore at the edge of the mouth, he had picked up a lighted stump of a cigar, just thrown away by a gentleman, and smoked it. A careful examination of the genitalia of the patient, as well as the inguinal region, gave only negative results. The patient's age, 74, the enlargement and induration of the submental glands, and the history of the sore at the side of the mouth, being the first lesion, pointed to the diagnosis made by me; *i.e.*, chancre of the lower lip, caused by smoking a cigar thrown away by a patient in all probability suffering from syphilis.

Syphilitic Roseola, Hemiplegia, and Aphasia.—Patrick W., aged 36, married, by occupation a horse-hair curler, was admitted into the Metropolitan Free Hospital under Dr. Drysdale. He had been of pretty temperate habits, taking two pints of beer a day. Three years ago he had a sore on his penis, followed by a "red rash" over his body, which lasted some weeks. The present attack came on three months ago, ten weeks after he had a sore on his penis. He went one morning quite well to his work; but, after being there an hour, he fell on his side unconscious. He did not know how long he was in that state; but, when he recovered consciousness, he had lost the power of speech, also the use of his right leg and arm. He was laid up three months, and had never recovered, but was better than at first.

When admitted, on April 30th, 1872, he seemed a strong healthy man in other respects. There was complete loss of power in the right forearm; he could not flex or extend his fingers or hand on the forearm. He could flex and extend his forearm or the arm with a little difficulty, but could not pronate or supinate it. On lying down, he could raise his leg in bed, but could not flex the leg or thigh, or the foot on the leg. He could stand on the left leg, but not on his right. The tongue was protruded straight; the pupils were equal; he could close his eyelids tightly. He could blow his cheeks out without air escaping. The right angle of the mouth was a little higher than the left. He had no pain. His speech was very defective; he used words which he did not intend, in the place of others. He could say "Yes" and "No" very well; but could not pronounce his own name, but said "Pots." He could not pronounce the following letters: B, C, D, E, H, J, K, Q, U, V, W, X, Y, L, using the letter T chiefly for most of them; but the remainder of the letters he could pronounce very fairly. His sight was good, and there was no loss of memory. The urine was normal. There was no wasting of the muscles of the leg or arm. He was ordered ten grains of the iodide of potassium three times a day; and to have the different groups of muscles of the right forearm and right leg galvanised daily with the interrupted current of Stöhrer's battery; also the muscles connected with the right angle of the mouth, and the muscles of the tongue.

May 7th.—He could flex his forearm on the arm, but extension, pronation, and supination were not good. He had not much use of the wrist, and the fingers were a good deal contracted. He could move his toes a little. He could pronounce the letters of the alphabet better.

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

On May 21st, he was in much the same state. The continuous current was ordered to be applied in the form of two of Pulvermacher's chains to the muscles of the arm and leg alternately.

On May 31st, he could flex the foot on the leg better; but movement in the ankle-joint was still very limited, though he could walk better on the right leg since admission. Speech was greatly improved, and he could now pronounce all the letters of the alphabet pretty well, but had some difficulty yet in the pronunciation of B, D, E, K, and H.

On July 1st, he was discharged much in the same condition as above.

NOTE.—This is a very rare case indeed in the history of syphilis, since the syphilis was in its stage of roseola when the hemiplegia suddenly supervened. The treatment followed by the late Dr. James Jones, under whose care in the hospital the patient was during his first attack in 1869, was the administration of a drachm of the liquor hydrargyri perchloridi, with five grains of iodide of potassium in an ounce of water thrice daily. The patient seems not at all likely ever again to recover the use of his arm or leg; and will, in all probability, always be affected with great difficulty in pronouncing words. The use of Pulvermacher's chains was not of much service in this case; there was no other form of continuous current in the hospital.

LONDON DRINKING WATER.

By J. ALFRED WANKLYN, Esq., Corresponding Member of the Royal Bavarian Academy of Sciences.

THE following, which is the first of a series of monthly analyses of the London waters, is intended as a substitute for the analyses published by the Registrar-General.

THAMES COMPANIES.	Parts in a Million (Milligrammes per litre.) Free Ammonia.	Albuminoid Ammonia.
Chelsea Co.—Cab-rank, Horse Guards, Oct. 5	0.00	0.06
West Middlesex Co.—Drinking fountain, Marylebone Road, Oct. 3	0.01	0.07
Southwark and Vauxhall Co.—Red Lion Tap, Kennington, Oct. 2	0.06	0.12
Grand Junction Co.—Cab-rank in Woodstock Street, Oct. 8.	0.00	0.07
Lambeth Co.—Main, Newington Butts, Oct. 9	0.01	0.10
New River Co.—House tap from cistern, Oct. 2	0.02	0.08
East London Co.—Drinking fountain, St. John's Church, Bethnal Green, Oct. 10	0.01	0.04

I have often insisted on the fact that the results given by the ammonia-process of water-analysis and those given by Dr. Frankland's combustion-process are totally at variance and irreconcileable; and, as is well known, attribute the difference to the circumstance that, whereas the one process gives results in accordance with the real quality of the sample of water, the other process is affected by errors so large as completely to overshadow the real quantities which water-analysis is required to measure.

The analysis of the London waters during the past month exhibits these differences in a very striking manner. According to the analysis by the ammonia-process, three of the five Thames Companies—viz., Chelsea, West Middlesex, and Grand Junction—were supplying water of good quality and almost indistinguishably alike, whilst the two other Thames Companies—viz., the Lambeth and the Southwark and Vauxhall—were supplying bad water, nearly twice as rich in nitrogenous matter as the water of the first named companies. According, however, to Dr. Frankland's report, the worst of the Thames waters in October were the Lambeth and the Chelsea, whilst the Grand Junction was hardly distinguishable from the Southwark and Vauxhall. West Middlesex, which alone of the five Thames Companies is represented both by the ammonia-process and by Dr. Frankland as being of fair quality, is represented by the ammonia-process as containing seven-twelfths of the impurity contained in the Southwark and Vauxhall, whereas, according to Dr. Frankland, it contains twenty-five thirtieths, or five-sixths, of the impurity contained by the Southwark and Vauxhall.

Fortunately Government confines itself to the publication of Dr. Frankland's analyses and does not take action upon them. The Chelsea Water Company and the Grand Junction Company have, however, just reason for complaint.

OBSTETRIC MEMORANDA.

CHLOROFORM IN OBSTETRIC PRACTICE.

IN the leading article on this subject in the JOURNAL of November 2nd, 1872, it is stated: "We have already alluded to the immunity from accident which chloroform has enjoyed in the lying-in room, and here there seems no reason to supersede it by an agent which is avowedly less convenient; but outside the domain of the accoucheur it has forfeited its claims to be considered a safe anæsthetic." I think this statement is calculated to do harm in more ways than one, by encouraging an overweening confidence in its administration, and tending to diminish the extreme care that should always be employed, more especially when we consider that it is often requisite to give it for a prolonged period.

When called in consultation in difficult cases of labour, I have more than once been compelled to desist from my efforts at assistance, as in the application of forceps or turning, and direct all my attention to the prevention of what threatened to be a fatal issue from chloroform—the natural desire of the practitioner to watch the details of the operation possibly contributing to this result, as well as the exhaustion induced by the prolonged suffering to which the patients had been subjected before assistance had been sought. Apart from the danger of incautious administration of chloroform, I fear we must admit that the tendency to *post partum* hæmorrhage is greater than when no anæsthetic is employed, more especially in those cases where alcohol has been liberally indulged in as a habit, and where, therefore, a larger amount of chloroform than usual is needed to produce the requisite amount of anæsthesia.

I have long been in the habit of employing equal parts of chloroform and ether in all cases of labour, and consider that the risks, both primary and secondary, are less than when the former is given by itself; there are less nausea and depression, and the tendency to hæmorrhage is diminished.

ARTHUR W. EDIS, M.D.,
Physician to the British Lying-in Hospital, etc.

CLINICAL MEMORANDA.

LIME IN DRINKING-WATER.

I FEEL obliged to Dr. Parsons for his information contained in last week's JOURNAL, relative to the geological formation in the neighbourhood of Frome and Beckington—the more so as I am engaging my leisure moments, at present, in the study of English geology, in order to be prepared, as soon as the Registrar-General's report for the census year 1871 is issued, to ascertain, and, if practicable, establish, what appeared in the JOURNAL of September 28th. I have already studied the subject in connection with old Registrar-General's reports sufficiently to render it interesting, which gives me reason to believe that the "theory" will soon be reduced to science. Meanwhile I may remind Dr. Parsons that housewives in rural districts can, and usually do, make their tea and coffee from rain-water; that country air and exercise enable the system better to withstand the influence of excess of lime than the exhausted air of towns; and that copious draughts of cider tend to prevent phosphatic calculi, although favourable to the formation of oxalic. Lastly, I beg to suggest to Dr. Parsons that he should sound for stone in inflammation of the bladder with phosphatic deposits.

The favourite drink in and around Newcastle is beer, and I am informed that it is preferred when brewed with hard water containing oxide of iron. This I believe to be from the hard water dissolving less out of the malt, and also preventing the wort from fermenting too much.

For the requirements of the body, sufficient lime-salts are present in our ordinary food; hence much lime in our drinking-water is unnecessary, and if not eliminated will be apt to induce disease from its insolubility.

JOHN C. MURRAY, Newcastle-upon-Tyne.

FRACTURE OF THE ILIUM BY MUSCULAR FORCE.

A CASE precisely similar to the one reported by Mr. W. Hyde in the JOURNAL of November 2nd, came under my notice on that day. A young gentleman, aged 17, of good muscular development, whilst running vigorously in a foot-ball match, was suddenly brought to a standstill by a snap in his side, followed by a feeling of "coming in two". Being quite unable to take another step, he was carried to the house, and, on my examining him about an hour afterwards, I found considerable tenderness along the upper head of the rectus femoris, and a piece of

bone, as large as the top of a finger, detached from the ilium. Crepitation was very distinct. Under similar treatment the case is progressing very satisfactorily. GEORGE J. SEALY.

Weybridge, November 7th, 1872.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

THE MIDDLESEX HOSPITAL.

OPERATION DAY, NOVEMBER 6TH, 1872.

ETHER was given instead of chloroform by Mr. G. Everitt Norton, chloroformist to the hospital, and Dr. John Murray, in the first five cases. The ether was pushed rapidly, and produced complete anæsthesia, on an average, in about five minutes. The condition of the patient during and after the administration is given in each case.

Operations for Diseased Bone.—Mr. De Morgan operated on two cases of diseased bone. One was a case of disease of the lower jaw in a girl twelve years of age, which presented nothing worth recording. The second was one of diseased ilium in a man about twenty-seven years of age, connected with long standing hip-disease. There had been numerous abscesses about the joint ; and the head of the femur was dislocated, and lay about two inches above the normal level, where partial ankylosis had taken place. No diseased or loose bone was discovered. A drainage-tube was put in to act as a seton, to excite healing of several sinuses which existed. Both these patients took the ether well and quietly. Sickness occurred in the second case during the anæsthesia, but there was no headache or sickness afterwards.

Cancer of Breast.—Mr. Nunn operated in a case of scirrhus of right breast in a woman aged 45. The indurated mass occupied the upper sternal lobe of the gland. It had existed five months. There were no hardened or enlarged axillary glands to be discovered ; neither was there any pain running down to particular fingers, or symptom of swelling of the arm. Three vessels only required torsion. Mr. Nunn stated that, in operating for removal of a scirrhous tumour of so uncomplicated a character as the one under notice, he endeavonred to avoid perforating the fascia of the pectoralis major, and thus left the muscular vessels unwounded. This obviated a good deal of bleeding, and, by saving ligatures, accelerated convalescence. Anæsthesia ensued quickly in this patient. She suffered from severe headache until next morning, but had no sickness.

Sinus of Foot.— Mr. Hulke operated on a girl aged about 19, who had been two months in the hospital with a sinus near the outer ankle, which had existed four months. Caries was suspected, but none could be detected with the probe. It was hoped that the persistence of the sinus might be due to the movements communicated by the tendons of the peronei muscles, and the foot was encased in a plaster of Paris bandage. As the sinus would not heal under complete rest, it was laid open, and a quantity of soft gelatinous tissue scraped out. No caries could be found. The foot was again encased in a plaster bandage, which, when it had set, was slit up, to prevent undue pressure if the foot swelled. The patient took the ether well, but had headache during the two following days.

Enucleation of the Eye.—Mr. Hulke also operated on the case of a navvy who had long been under treatment for granular ophthalmia. The left eye was very painful, and damaged beyond recovery. It gave him so much distress, that he asked that it might be removed. The loose folds of conjunctiva joining the eyelids and globe were obliterated; and the periocular tissues were all so matted to the eyeball by long inflammatory disturbance, that enucleation was not so easy as it usually is where no inflammation has occurred. The patient took the ether well, but was sick for two days, and complained of a frequent "rising" of the ether.

Enucleation of the Eye.—Mr. Lawson on the 7th removed the eyeball in a little girl with lupus, in whom the left eye was completely lost through destructive inflammation. The lost eye, which was now subject to constant exposure, owing to the eyelid having been in great part destroyed by the disease, was excised in the usual manner.

KING'S COLLEGE HOSPITAL.

OPERATION DAY, NOVEMBER 9TH, 1872.

Cauliflower Excrescence on Left Tibia of twenty years' growth.—This patient was a woman, aged forty-five, but looking more like seventy years of age. Twenty years ago, her leg was burned and never healed, an abscess forming over the site of an abortive cicatrix. The bone beneath this became affected, and the patient went into a hospital in the south of England and had a portion of it removed. The abscess, however, continued, and a cauliflower-growth began in the ulcer. This slowly increased, and gave rise to great pain ; but nothing seemed to arrest its steady progress. During the last two years particularly, she had been suffering greatly. Mr. Henry Smith proposed amputation, to which she readily consented. He accordingly had her brought to the hospital and treated for a few weeks to improve her condition. Her inguinal glands were swollen and her health generally bad, but still he thought it best at once to remove the source of her trouble. He accordingly amputated at the upper end of the tibia, removing all the excrescence. The remaining portion of the tibia was found soft and pulpy interiorly—indeed a mere shell—and Mr. Smith removed nearly the whole of it with a pair of pliers, swabbing out what was left with a chloride of zinc lotion, and then stitching the flaps in the ordinary way. Under the microscope, a portion of this excrescence seemed very like epitheliomatous cancer ; but Mr. Smith thought it could not be called a malignant tumour, since it had lasted so long.

Osseous Tumour of the Lower Jaw, recurring after fifteen years : Removal.—This patient had been operated on fifteen years ago, by Sir William Fergusson. At that time he extracted an osseous tumour, involving the right side of the lower jaw, taking away the mental portion with it. There was only a small cicatrix under the chin now to indicate the site of the previous operation. The disease recurred after some years, probably a new growth, and unconnected with the old tumour ; and the woman, finding it rapidly growing, was anxious to have it removed again. The back part of the bone was quite sound from the ramus and angle. The question now was, how to remove the disease with the least disfigurement to the patient, who depended for her livelihood, to some extent, on her appearance—as she was a nurse ; and Sir William thought it would be much better to make an incision below the jaw, and through it to extract the tumour, than to remove it through the mouth, which would involve a long incision on the face. The incision below the jaw would afterwards be little seen, and would not require to be very large, as the soft tissues would stretch a good deal. During the operation, the maxillary artery was avoided by first sawing through the bone and completely detaching the tumour in front, and then very carefully dissecting it back after it was pulled outward to the greatest possible degree. Some portion of the tumour was left after the bulk of it was removed ; this was afterwards snipped away. The operator laid it down as an axiom in surgery, that "the best operation is always the simplest ;" but the rule has its exceptions in cases such as the present, where appearance had to be studied as much as the removal of the disease.

Excision of the Knee.—After operating in this case in the usual way, Sir William Fergussson remarked how much the knee-joint may be disorganised with but little external indication of the extent of the disease. The woman had suffered pain in the knee, with more or less swelling, for twenty-one years, but during the last two years the pain was very great. On opening the joint, the articular surfaces were found quite destroyed, the remaining surface being occupied by ulcerated patches. In sawing off the head of the tibia, care was taken to aportion the depth to the bottom of the deepest ulcer. A small granule of chalky matter was also found, which was supposed to be the remains of some healed abscess in the head of the bone.

GUY'S HOSPITAL.

OPERATION DAY, NOVEMBER 8TH, 1872.

Amputation of Head of Femur.—Henry Laidlaw, aged 14, came under the care of Mr. Davies-Colley with strumous disease in the joints of the left leg. His father died at the age of 38 of consumption ; his mother is still living and healthy, and the other children are healthy. This boy was in the hospital at the age of four for a bad foot, apparently diseased bone, but nothing more was done for it than poulticing and general treatment. At the end of six months, he left the hospital not cured, and walking with the aid of crutches. He came to the hospital for three years as an out-patient, and under the use of cod-liver oil and quinine the wounds healed, and the foot was much better. He then complained of pain in the knee and thigh, and some time ago sinuses opened about the buttock. He had worked in a tanner's shop,

and had a great deal of standing lately. On admission again, he was pale and anæmic, but had a good appetite. The femur was adducted and rotated inward and semiflexed. The leg was an inch and a half shorter than the other. When Mr. Davies-Colley exposed the head of the femur, it was found that the greater part of it had disintegrated, and he had only the remainder to saw off. This was done, and the wound was closed in the ordinary way.

Necrosis of Right Temporal Bone: Syphilis eight years ago; Several Falls on Head since.—A sailor, aged 29, had a chancre eight years ago. Some time afterwards, a node appeared on the right temporal bone, and this gradually led to necrosis, abscesses forming and opening last March. As the bone was now probably detached and felt slightly movable, Mr. Forster removed it, dividing the skin between the abscesses, and taking away the necrosed bone piecemeal. The whole thickness of the bone was necrosed and thickened. During the operation, the man was under the influence of ether, but immediately afterwards he vomited.

Nævus on Right Side of Tongue Destroyed by Electric Cautery.—This was a nævus-like growth on the tongue of an adult female, which she was anxious to have destroyed. Mr. Forster accomplished this successfully by means of the electric cautery.

INTRODUCTORY ADDRESSES AT SCOTTISH AND IRISH MEDICAL SCHOOLS.

UNIVERSITY OF EDINBURGH.

Principal Sir Alexander Grant, Bart., opened the winter session at the University on Friday, November 2nd, by an interesting address of some length. In paying a very high eulogium on the late Sir David Baxter, who had

"A tear for pity and a hand
Open as day for melting charity,"

he alluded to the large sums given by Sir David for scholarships and other purposes while alive, and stated that by his will he had left £40,000, of which £20,000 were to be applied to the extension of the University buildings, and £20,000 to the further endowment of the chairs in the Faculty of Arts. He pointed out that the medical classrooms, which had become too limited since the advancement of medical science, would now be extended. Other wants, he said, in the shape of buildings, had been long felt, as, for instance, a hall for academical meetings. In all this question Sir David Baxter had long taken a very great interest, and it was chiefly under his advice and encouragement that the authorities had ventured on a plan, soon to be brought before the public, for establishing a medical school in buildings suited to the advanced state of modern science, under the walls of the new infirmary, for remodelling and improving the whole teaching accommodation, and for supplying, if possible, the long-felt desideratum of a hall. The Principal referred in very happy terms to the honours which had been showered on Sir Robert Christison during the past year. He intimated that, during Dr. Wyville Thomson's antipodean scientific expedition for Her Majesty's Government, Dr. Carus, a distinguished German naturalist, would fulfil the duties of the chair. With regard to the number of entries at the University, there had been last year forty-seven more medical students than in the previous year, and the number had been steadily rising from year to year. More than one half of these students were not Scotchmen. He referred to the Syme and Goodsir Fellowships added to the Faculty of Medicine within the past year. The learned Principal concluded by offering some excellent advice to the students, and more especially recommended them to united action to remove the blot in their character of bad behaviour at the rectorial elections, and the reception of the distinguished man of their choice when he presented himself for the delivery of his address.

ANDERSON'S UNIVERSITY, GLASGOW.

Dr. Wilson, Professor of Midwifery, delivered the introductory address. He dwelt on the honourable and beneficent character of the medical profession, and declared that those who entered it should be actuated by a higher motive than the love of gain. The medical man should love his profession and be zealous and enthusiastic about it. Medicine was both a science and an art, and he who would desire to prosecute it successfully as an art, must master it first as a science. He impressed on the students the necessity for spending much time in the dissecting-room and the laboratory, and the rare opportunities for study and observation which these places offered—opportunities which, if neglected now, would be a subject of bitter regret to them when in practice. He dwelt on the facilities for study offered in Glasgow. He cautioned the students against walking the wards of the hospitals without giving special attention to the cases, and urged them to cultivate habits of observation, examine the patients for themselves, form their own conclusions as to the nature of the diseases, and watch the effect of the remedial agents used, remembering that more mistakes occurred through want of care than want of knowledge. He also urged the students to follow courses of systematic reading, not omitting general literature, and pressed on them that, in the medical profession, nothing could be well learnt or done without patient arduous work.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Dr. Davy, Professor of Medical Jurisprudence, delivered the introductory address. He began by paying a tribute to the memory of the late Dr. Beatty. He then proceeded to explain briefly the nature and objects of medical jurisprudence, and the necessity for including it amongst the subjects of a medical education, as there were many important medico-legal questions which medical men might be called upon to decide. Speaking of toxicology, he pointed out how the results of this study had been to suppress, and almost exterminate, the crime of secret poisoning, and also to establish the therapeutic value of many poisons. He then referred to some of the more interesting and important of the recent additions to our knowledge in toxicology. The narcotic properties of chloral hydrate had made it of great value as a therapeutic agent, but both knowledge and caution were required to use it with perfect safety, as fatal consequences had resulted from it having been administered too often or in too large doses. . He called attention to the power which it seemed to possess of neutralising the toxic properties of certain poisons, particularly those of strychnia, and of the active principle of the Calabar bean.

The lecturer then passed on to the subject of phosphorus considered as a poison, and noticed Dr. Köhler's recent investigations respecting the efficacy of turpentine as an antidote to the destructive effects of that substance; after which the antagonistic actions of belladonna and opium were treated of, and the successful application of the former substance by subcutaneous injection in a case of poisoning by opium as recorded by Dr. Hasford Walker, of South Carolina, was mentioned as an example; and as another instance of the value of the same mode of applying remedial agents, he referred to Dr. Patterson's successful treatment of cholera by the subcutaneous injection of solution of the acetate of morphia. Dr. Davy concluded his address by exhorting the students to diligence, declaring that in the honourable competition of our profession there was no place left for the indolent and the incompetent.

Dr. Davy said that there never existed a time when there was so much need on the part of our young men for exertion as at the present; while, on the other hand, there never was perhaps a period when rewards for merit were so liberally held out for their attainment in this and other professions. This, he stated, was in a great measure brought about by the admirable system of competitive examination introduced into the different public services, where it has been found to work so well. And in that honourable competition in the competitive examinations for the medical appointments in the Army, Navy, and Indian Services, it was satisfactory to find that those who had been educated in the Dublin medical schools, and especially in the school of the Royal College of Surgeons, constituted a large proportion of the successful candidates.

CATHOLIC UNIVERSITY OF IRELAND.

Dr. Lyons, Vice-President of the College of Physicians, gave the introductory address. After drawing the attention of the junior students to the subjects which he recommended them to study, he passed on to consider the medical branch of the public service. He severely reviewed the medical service of the army, and advised his hearers not to be over zealous in proffering themselves as candidates for the medical service of either the army or the navy, unless and until the War Department showed a more earnest and practical resolve to deal with the present admittedly stagnant state of the Army Medical Department; for, after fifteen years of service in all climates, they would find themselves in a far less independent position than the private practitioner of the same standing, and who had worked the same number of years.

Dr. Lyons next dwelt on the position of the civil medical officers in the various branches of the colonial service of the State. He read a a letter and report from Dr. Galgey, well illustrating the onerous nature of the duties imposed on this class of hard-worked and meritorious officers, the risks they ran in the climates in which their labours were carried out, and forcibly dwelt on the unfair and ungenerous con-

ditions imposed upon them when accepting office, viz., that no length of service, and no injury to health was to afford any claim whatsoever to retiring pension. Dr. Lyons earnestly appealed to the public guardians of professional honour and interests to direct their early attention to this subject, with a view to procuring from Government a radical alteration in the conditions of service now imposed on the colonial medical officer on his entrance into the service at a time of life when no young man could be fairly held to be competent to bind himself by conditions injurious to his interests in after life. To Sir D. Corrigan, the able representative of the profession in Dublin, Dr. Lyons forcibly made appeal, and further stated that he felt satisfied from what he personally knew of the present colonial minister, Earl Kimberley, that it only needed to have the whole subject fully brought before him to enlist his sympathies on the part of the medical officers who had the honour to serve under him. Dr. Lyons drew attention to the position of the dispensary medical officers in Ireland, and to the practice of giving red tickets. He considered that a tax of a halfpenny stamp on each ticket or a shilling stamp on a hundred would check or remove this grievance; in fact, if the red tickets were abolished altogether, Dr. Lyons thought many plans might be devised for the care of the sick and poor. He dwelt strongly on the unsettled state of the practice of the judges regarding medical certificates. He recommended that all medical certificates should be brought within the rules of statutory declarations, and should in all instances, as they now are in the case of certificates in lunacy, be subject to a shilling stamp. On the approaching legislation for Ireland in regard to sanitary measures, Dr. Lyons trusted that our medical representatives, forewarned by what had happened in the case of the English measure of the past session, would take early and effectual steps to secure a due weight and authority to the faculty of medicine in the plan to be adopted for carrying out the scheme in Ireland. He deprecated the nomination of numerous and ill-paid inspectors from amongst the dispensary officers, and he urged the appointment of specially trained men, educated in all the requirements and details of State medicine to these important posts. With an adequate staff of well trained and well paid medical inspectors, possessed of weight and authority to enforce their recommendations on boards of guardians and other local bodies, he would anticipate large and important sanitary reforms, and substantial improvement in all that related to public health. With local officers ill paid and already overworked, nothing but an idle routine was to be hoped for. The remainder of the address was devoted to a general consideration of the questions of medical and University education at home and abroad, and the special claims of the Catholic University to full State recognition and endowment.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 5TH, 1872.

JOHN HILTON, Esq., F.R.S., President, in the Chair.

Myxomatous Tumours of the Arm.—Mr. CROFT brought forward in the living subject a case of nodular tumours of the left arm. The patient, a waiter, was 18 years of age, and presented a linear series of hard nodules, the largest of the size of a haricot bean, extending from below the elbow-joint to the axilla, with a hard line running between them. Mr. Croft had removed one from the fascia, which appeared to be of a myxomatous character. He had been unable to account for the presence of the disease.—Mr. HULKE referred to a somewhat similar case, in which, after existing for three or four months, the tumours had suppurated. He thought the case to be probably one of an acute inflammatory condition of the lymphatics.—Mr. COOPER FORSTER remarked that in farcy a similar condition was found.—Dr. CRISP said that farcy never existed in man without glanders following. Glanders was not present in Mr. Croft's patient.

Perinephritic Abscess.—Dr. DUFFIN showed the parts from a case of perinephritic abscess. The patient, a lad 14 years of age, had been seized with severe pain in the right loin, extending to the groin and buttock. Some fulness of the loin was found. The boy walked lame, treading on the toes of the right foot, with the body slightly bent forward, and the right knee tending to cross the opposite one. When seated, he seemed to rest almost exclusively on the tuberosity of the left ischium, so as to relax the right lumbar fold. The urine contained one-third of pus, but was acid. The history pointed to the removal of a calculus through the perinæum two years previously. After a few days, pointing occurred at the outer edge of the quadratus lumborum. An abscess containing urinous smelling pus was opened. The orifice was subsequently enlarged, and the finger passed into a funnel-shaped cavity. Through a dimple at the top of this a probe was passed almost vertically downwards towards the base of the bladder. The boy left the hospital much relieved, but was readmitted two-and-a-half years subsequently with the symptoms of uræmia. The specimen showed the right kidney completely disintegrated. The track of the pus from the pelvis of the kidney to the head of the psoas and the edge of the quadratus lumborum could be readily traced. It was rendered probable that the probe during life had passed between the psoas and the dilated ureter, instead of in the ureter, as had been surmised. Dr. Duffin laid especial stress on the value of the position of the limb in the diagnosis. It resembled that assumed in psoas abscess, but differed, inasmuch as the pelvis was more hitched up to relax the lumbar fold; hence the patient seemed to rest on the one ischium only. Dr. Duffin further remarked that this operation had been performed twenty times, eighteen of which were more or less successful. As regards causation, he found that of twenty-six cases, fourteen only had renal or other urinary complications, and that in twelve the abscess depended on other causes.—Mr. HULKE referred to a case under his care in the Middlesex Hospital, in which the abscess had burst into the peritoneum.—Dr. RASCH related the particulars of three cases, all of which illustrated, he thought, the occurrence of perinephritic abscess from catarrh of the bladder.

Multiple Dermoid Cysts.—Mr. HULKE showed a specimen of multiple dermoid cysts from a patient who died of cancer of the uterus and bladder. There was a mass of one primary and several secondary cysts in connection with the uterine appendages; and on the liver, in connection with the peritoneal covering, a number of others containing mortary material. Mr. Hulke, in answer to Dr. Heywood Smith, replied that he had many times found dermoid cysts in connection with other organs than the ovary—under the muscular tissue of the orbit, in the mediastinum, and elsewhere.

Salivary Calculus.—Mr. HULKE exhibited a calculus, weighing 76 grains, which he had removed from the neck of a woman aged 26, at the Middlesex Hospital, by an incision outside the neck. The nucleus was found to consist of a fragment of wood.—Mr. NUNN had met with two instances bearing on Mr. Hulke's case. One was that of a girl from under whose tongue he had removed a seed of hay, covered with phosphate and carbonate of lime. The other case was that of a man who put a piece of serrated glass under his tongue; some time afterwards an abscess formed, and a piece of glass passed out from below the chin.—Mr. HULKE referred to a case in which he had removed a long blade of grass.

Stricture and Diverticulum of the Rectum.—Mr. HULKE exhibited a specmen of syphilitic stricture of the rectum. The peculiarity of the case rested in the congenital abnormality of the part. A large diverticulum, three inches long, lined with mucous membrane, and which had interfered with the diagnosis during life, was connected with the rectum.

Polypus of Uterus.—Dr. CAYLEY exhibited, for Mr. LAWSON TAIT, a polypous cyst of the uterus, of the size of a very large walnut. It hung from the interior wall of the cervix; it caused great hæmorrhage, and was removed by the *écraseur*. It was found to consist of a thick walled cyst, filled with perfectly clear serous fluid. Its outer surface presented the usual appearance of a fibro-myxomatous polypus; and a microscopic examination confirmed this view.

Loose Cartilage.—Mr. A. T. NORTON exhibited a loose cartilage of the size of a florin, which he had successfully removed from the knee-joint.

Chronic Herpes.—Mr. JOHN CROFT exhibited a specimen of chronic herpes, of three-and-a-half years' standing, removed from a girl eight years of age. Some of the vesicles contained blood. It had no connection with the veins beneath. He had pricked one of the vesicles containing blood, and it collapsed. A nævus had been removed close to the affected part.—Dr. TILBURY FOX considered the case to be one of hypertrophy of the papillary structure of the skin. It was only syphilitic herpes which assumed the chronic form.—Dr. CAYLEY thought the case probably one of dilated blood-vessels.—Mr. COOPER FORSTER put the case down as one of nævus.—Mr. WAREN TAY remarked that a characteristic herpetic vesicle does not collapse when pricked.

Serous Cyst of the Anterior Fontanelle.—Mr. CRIPPS LAWRENCE exhibited a congenital serous cyst, which had presented at the anterior fontanelle of an infant. The child died at the age of eight months, of bronchitis. The cyst was deeply connected with the longitudinal sinus.

Mr. LAWRENCE also brought forward a case of constriction and dislocation of the left humerus by the funis. The funis was wound round the neck.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 4TH, 1872.

THOMAS BRYANT, Esq., President, in the Chair.

MR. R. DAVY brought forward some new Retentive Drainage-Wires. After a fine puncture, a piece of wire, having Holt's India-rubber rings attached, was introduced, which answered admirably.—The PRESIDENT asked if the wire caused much irritation.—Mr. DAVY said that the size of the body introduced was material.—The PRESIDENT thought it was an important matter. He had used a roll of gutta percha tissue with much success.

Dr. MAC KNIGHT (United States) exhibited a new Artificial Limb. The material was raw ox-hide, and was very light. The specimen exhibited had been worn for six months. No shoulder-strap was required; a linen cap was put on the limb and drawn down into a bucket, which was a model of the stump, with a little allowance for the circulation of air. The limb could be made for very young children, and was in use by children even three years old. The price of a full-sized limb was about £20.—Mr. DAVY thought that good artificial legs should be washable and noiseless.—Dr. MAC KNIGHT said that one advantage of the leg was that perspiration rather hardened than softened the limb, and that it was perfectly impermeable to water. It was applicable even where there was no stump.

The Relation of Cataract, Stricture of the Urethra, and Enlarged Prostate. By JABEZ HOGG, Esq. Stricture of the urethra had not hitherto been noticed as a predisposing cause of cataract. It might arise from a change in the specific gravity of the fluids and the retention of the urinary salts in disease of the bladder, etc., which was sufficient to cause opacity of the dioptric media, and disorganisation of the vitreous body. The author's daily experience, confirmed by work in the *post mortem* room, showed something more than accidental connection between lenticular opacities and stricture. It was no uncommon circumstance for a patient to complain of failing sight, for which glasses afforded no relief; and the general health being good, with the exception of the inconvenience occasioned by the remains of an old stricture, it was hard to make him believe that this had anything to do with the loss of vision. Nevertheless, it frequently had; and Mr. Hogg, having satisfied himself of this fact, and being particularly anxious to ascertain whether the same circumstances had attracted attention in an institution where many seafaring men were constantly under treatment for stricture and other diseases of the urinary organs, gathered certain facts which seemed to point out a correlation of cataract, stricture of the urethra, and enlarged prostate. The author then related several cases lately under treatment, and stated that the patients were not advanced in life; one, in particular, was only in his 35th year, nevertheless the incipient lenticular affection was certainly coincident with the stricture. The general results of fifty-six *post mortem* examinations were then given, in seventeen of which opacities were detected; three were doubtful, but not free from suspicion, as in each instance the patient complained of defective sight; and five were also set down to amblyopia or amaurosis. With regard to the relative frequency of stricture and prostate enlargements, fifty-three patients suffered from the former, and thirty-five from the latter, disease. The two diseases, frequently, but not always, occurred together; but in three cases only did the existence of stricture admit of doubt. The bladder was diseased in nineteen of the patients, and in two fatty degeneration of the muscular walls was observed. Mr. Hogg stated that well-marked indications of premature old age were noted, and might have exerted some influence as predisposing cataract, but that too much weight should not be placed upon such circumstance, which, in his judgment, did not invalidate his conclusion. Therefore, quite apart from this, he was satisfied that stricture of the urethra, as well as certain morbid states of the prostate gland and bladder, is a frequent predisposing cause of change in the dioptric media of the eye. In conclusion, he stated that, with regard to the supposed cure of organic stricture, it was perfectly clear to him that, since the elastic fibres and the mucous membrane were much thickened and often converted into a dense cicatrix, and the inorganic muscular fibres partly or wholly destroyed, it was quite hopeless to expect to restore the canal to a healthy normal condition, or remove a chronic contracted state of the urethra by the ordinary means employed.—The PRESIDENT said that the paper was suggestive, and that the relation of kidney-disease with eye-disease was important and well known. Obstructions in the urinary passages gave rise to diseases of the kidneys, and he would ask, were those organs diseased in Mr. Hogg's cases? Was cataract more common in females than in males? If so, how were such cases accounted for? Diabetes had not been mentioned, but there were two cases of carbuncle, which was often coincident with diabetes.—Mr. ROYES BELL thought that disease of the prostate was a senile change. He would like to know the number of cases in which albuminuria was present.—Mr. DAVY had not noticed the coincidence of opacity of the lens with urethral disease. He concurred in the President's remarks. The lens was delicate, and soon showed changes in the organisation.—Mr. HOGG said, that in several cases the kidneys were not examined. The presence of sugar had not the same weight now as used to be thought, as it was normal in certain tissues. Albuminuria might also exist without eye-affections. Cataract was more common in females than in males, but was then due to kidney-disease.

HARVEIAN SOCIETY OF LONDON.

THURSDAY, NOVEMBER 7TH, 1872.

C. HANDFIELD JONES, M.B., F.R.S., President, in the Chair.

MR. W. B. OWEN narrated a case of epileptic hemiplegia, occurring in a female under 17 years of age.

Mr. H. POWER read a paper on Wounds of the Eye. The author referred to the necessity of making an accurate diagnosis in every case. The symptoms and treatment of the following were considered *seriatim*. 1. Foreign bodies irritating the palpebræ and conjunctiva, or becoming imbedded in the cornea. 2. Punctured wounds caused by a cutting instrument, involving the middle or margin of the cornea, or the sclerotic, or lens. 3. Severe blows which do not rupture the globe. 4. Rupture of the sclerotic. 5. Burns caused by fire, inducing symblepharon; or by lime, chiefly affecting the cornea. In the treatment, Mr Power advocated the general principles of surgery, insisting on the value of rest. In rupture of the sclerotic, where vision is entirely abolished, he preferred extirpation of the globe to abscission.—The PRESIDENT inquired how strychnia acted in amaurosis, and how sympathetic ophthalmia was set up.—Mr. POWER valued strychnia as a nervine tonic; he explained how sympathetic ophthalmia arose. The question between extirpation and abscission depended upon the state of the deep-seated structures; extensive deep injury necessitating the former, minor anterior injuries the latter operation.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, OCTOBER 2ND, 1872.

T. GALT, Esq., in the Chair.

Retroflexion of the Iris.—Dr. SAMELSON showed the case, of which an account was published in this JOURNAL on September 28th.

Irideremia and Aphakia.—Dr. SAMELSON showed the case which he had presented, in August, to the Ophthalmological Congress. An account of it was published in the JOURNAL of November 2nd.

Abdominal Cyst.—Dr. LLOYD ROBERTS showed an inflated cyst, which had contained eighteen pounds of fluid, which he had removed by abdominal section. He supposed it to be ovarian. It had no attachment to the uterus or its appendages. It was covered with peritoneum, which was intimately attached to it. The woman made a good recovery.

Mammary Tumour in a Child.—Dr. LLOYD ROBERTS showed a child six weeks old who had a congenital tumour of the size of an infant's head attached to the right mamma, probably of a malignant character. He proposed to excise the tumour.

Treatment of Cancer of Uterus.—Dr. LLOYD ROBERTS exhibited and spoke very favourably of the use of the scoop, recommended by Dr. Simon of Heidelberg, for the removal of excrescences from the os and cervix uteri in cases of cancer of the uterus.

Chancre on the Lip.—Mr. CULLINGWORTH showed a case of indurated chancre of the upper lip in an unmarried woman, aged 28, in the sixth month of pregnancy. Secondary symptoms, in the form of roseola on the legs, had appeared during the past week.

Temperature in Rheumatism.—Dr. HADDON read a paper on acute rheumatism in private practice, with special reference to the state of the temperature, as diagnostic of cardiac complication. He narrated five unselected cases, occurring in subjects under eighteen years of age, treated on the alkaline system. The urine was quickly rendered alkaline, and kept so during the continuance of the fever. On an average, the five cases had a normal temperature on the tenth day. In three of the five cases the heart was affected to a greater or less extent; and by diagrams of the morning and evening temperature and pulse, Dr. Haddon pointed out that in these three cases there was observed an evening fall, or a want of the evening rise, during the progress of the fever. The evening fall, or the absence of the evening rise, he had observed to be coincident with incipient cardiac affection, and therefore he concluded it might be diagnostic of this complication.

Excision of Elbow-Joint.—Mr. WHITEHEAD showed a case and drew attention to a few matters in connection with the operation. With the general opinion, that in patients deeply affected with constitutional disease a successful issue must not be expected after excision, judging from his own experience he could only partially concur. He also remarked on the absence in surgical works of explicit reference to the greatest length of humerus that had been excised, leaving a joint of ultimate usefulness. In the case which he exhibited, two-and-a-half inches of the shaft had been sawn off after the condyles had been removed. He drew attention to the subsequent lengthening of the upper arm after the operation; he had observed this in the case shown to be gradual and progressive. Mr. Whitehead's patient was received into St. Mary's Hospital suffering from tertiary syphilis, three years after an injury to her elbow. Her nasal bones were destroyed; the soft palate was ulcerated away, and the right elbow completely disorganised. Nine months after the operation, the woman was able to follow her occupation as a charwoman, with the full use of her elbow, being able to elevate her hand to the back of her head, straighten her arm, and, what is unusual, she had real, and not merely apparent, pronation and supination.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.

GENERAL ANNUAL MEETING, WEDNESDAY, OCTOBER 16, 1872.

HENRY KENNEDY, M.D., in the Chair.

Report of Council for Session 1871-72. Dr. EAMES, honorary secretary, read the annual report, to the following effect. "The Council of the Medical Society of the College of Physicians, in presenting their Annual Report, feel justified in congratulating the members on the continued and advancing prosperity of the society. For the first time, the number of names on the list has reached a hundred—of these, eight are new additions to our ranks; only one member has ceased to subscribe, whilst death has removed but one. The loss of Dr. Thomas Beatty is one which this society, in common with all his friends, must deeply deplore. During his years of office, as President of the College, he most ably conducted the meetings of the Society, and rarely failed to occupy the chair—often at considerable personal inconvenience. In later times, his vast experience and deep research were not wanting at our debates, where his general affability endeared him to all.

"Early last session the Council, convinced of the importance of having the debates reported, took the necessary steps to have this done, and have to thank the College for defraying the expenses thus incurred. This year they think the same arrangement should, if possible, be made. With a view to the more accurate reporting of the debates, and, in order that they may be published, after careful revision, in the *Dublin Medical Journal* of the next ensuing month after the meeting, the Council have recommended that the meetings of the society should, for the future, be held on the second, instead of on the third, Wednesday in the month. The Council further suggest that they should be empowered to withhold from publication in the authorised report of the Proceedings of the Society, any matter which they may consider objectionable.

"There have been held during the past session eight regular and four special meetings, at which the following valuable and interesting papers were read and discussed: Dr. Grimshaw, on the Prevalence and Distribution of Fever in Dublin; Dr. Eames, on the Use of Phosphorus in Diseases of the Skin; Dr. Hawtrey Benson, on Elephantiasis Græcorum; Dr. Stokes, on the Treatment of Small-pox; Dr. Walter G. Smith, on the Use of the Direct Current in Neuralgia; Dr. Hayden, on a new Stethometer; Dr. Malachi Burke, on the present Epidemic of Small-pox; Dr. Foot, on the Treatment of Small-pox; Dr. Lyons, on Some Statistics of Small-pox; Dr. Cameron, on the Inutility of Ordinary Gaseous Disinfection; Dr. Finny, on a case of Atropia Poisoning Successfully Treated by Morphia; Mr. Tufnell, on a Case of Measles, with prolonged Incubation Stage; and Mr. Tichborne, on Disinfection in connection with Small-pox." The Report concluded with a return of the attendance of members of Council.

Election of Officers for Session 1872-73.—The election of officers for the Session 1872-73 subsequently took place, with the following result. *Council:* Lombe Atthill, M.D.; Thomas Fitzpatrick, M.D.; Samuel Gordon, M.B.; T. W. Grimshaw, M.D.; Thos. Hayden, F.K.Q.C.P.I.; George Johnston, M.D.; Henry Kennedy, M.B.; Robert Law, M.D., James Little, M.D.; Alfred H. Mc Clintock, M.D.; Robert D. Lyons, M.D.; J. T. Hawtrey Benson, M.B. *Honorary Secretary:* Henry Eames, M.D.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 16TH, 1872.

THE ADMINISTRATION OF ETHER AS AN ANÆSTHETIC IN GREAT BRITAIN.

ETHER was administered for the first time for producing anæsthesia in this country on December 19th, 1846. The operation was for the extraction of a tooth in a lady. The anæsthetic was given and the tooth extracted by Mr. Robinson, dentist, of Gower Street, at the house of Dr. Boott. The ether answered perfectly, the lady suffering no pain from the extraction. Two days afterwards, the anæsthetic was given at University College Hospital, by Mr. Squire of Oxford Street, in two cases of operation performed by Mr. Liston—one a case of amputation of the thigh; the other evulsion of the great toe-nails of both feet. During the next few weeks, the news of the wonderful powers of ether in destroying sensibility led others to countenance and try its use. From imperfections in the means employed to produce anæsthesia, ether failed at first to gain much confidence from surgeons. The patients were not rendered thoroughly insensible; and their struggles and cries, in their half-narcotised condition, were made the most of by its opponents. Mr. Robinson, however, who had studied and understood its administration more thoroughly than others in this country, was fairly successful. Its value became known on the Continent very speedily, and it was soon successfully employed in Paris and elsewhere. About a month after its first employment in this country, Sir James Simpson of Edinburgh administered the vapour in a case of labour, and ascertained that it was capable of removing the sufferings of the patient without interfering with the process of parturition. It thus became evident to all that the vapour of ether was capable of producing and keeping up complete anæsthesia during all operations. It soon became largely employed at University College, the Middlesex, St. George's, and other hospitals, and ultimately very generally over this country and the Continent. In America, it is curious to observe that, since its introduction in 1846 by Dr. Morton, it was apparently falling into disuse, when the news of its growing popularity in Europe revived its adoption. During its short life of popularity in this country, the late Dr. Snow entered enthusiastically and successfully into the subject of its administration; and full details may be found in his work on *Anæsthetics*, edited by Dr. Richardson after Dr. Snow's death. There appears to be little doubt that ether would very soon have obtained the general confidence of the profession, and would have been as generally employed as chloroform now is, had it not been that, in the following year, the latter anæsthetic was brought forward as superior to ether. Chloric ether, or dilute chloroform, had indeed been employed at the Middlesex and St. Bartholomew's Hospitals for some time, and total insensibility had been pro-

duced by it; but, for evident reasons, it did not come into general use. Complete anæsthesia was rarely obtained by its inhalation.

In the latter part of 1847, chloroform was brought forward by Sir James Simpson, and advocated by him with his remarkable energy and genius. It came to be believed—it is not very clear on what grounds—that the new anæsthetic, chloroform, was safer than ether; and immediately it was used everywhere. This impression regarding the greater safety of chloroform was proved in a few months to be hardly in keeping with the comparative results of the two anæsthetics; for, during the eleven months in Europe, and about sixteen months in America, in which ether was administered before the introduction of chloroform, only one death had occurred, and that, in all probability, not due to the administration of the anæsthetic; while chloroform had only been employed between two and three months when one death occurred from its administration, and others speedily followed in all parts of the country. Still these results of chloroform-inhalation made little impression on the profession. Its great practical value as an anæsthetic for the purposes of operation was unquestionable; and its ready applicability seemed to be greater than that of ether, while at the same time it was backed by an advocate of no mean order, who threw his whole energy and determination into the subject of the general adoption of chloroform, as he did into any question which he took up. It was, we believe, the influence of the great obstetrician of Edinburgh which kept chloroform in its position, to the exclusion of ether, more than any alleged disadvantages of the latter.

Dr. Snow, who became the great and, we may say, first professional "chloroformist", and who, as we have said, was conversant with the administration of ether, showed a preference for the new anæsthetic, chloroform. It may with some reason be said that the accomplished anæsthetist had strong reasons for following this course. There are new, however, grounds for revising his decision. It is stated of him that, on his making the observation that sulphuric ether was much safer than chloroform, he was asked why he did not use ether. "I use chloroform," he replied, "for the same reason that you use phosphorus matches instead of the tinder-box. An occasional risk never stands in the way of ready applicability." We venture to say that Dr. Snow's objections would not now hold good; and that he himself, had he been alive, would have been the first to make public a modified statement of the superiority of chloroform over ether. Neither he nor any other man could at first be unaffected by the general and sudden adoption of chloroform, the more especially as he had to meet the wishes, in large measure, of the operating surgeons by whom he was called in to produce anæsthesia. The weekly deaths from chloroform now occurring would have appalled him, and would have led him to examine the subject again, to improve the methods of administering the safer anæsthetic, and make it more readily applicable. His influence would then have tended perhaps to counteract the too decided and hasty opinion of the profession of the superiority of chloroform.

Chloroform thus fairly placed on its legs, was adopted confidently throughout the country as the safest and best anæsthetic, and remained in Great Britain almost the only anæsthetic employed. Ether was, indeed, not entirely given up; it was employed here and there by dentists, and occasionally by surgeons under special circumstances, but not as a custom. We may mention that for some years it has been usually employed, in an improved manner, at the Hospital for Sick Children, in preference to chloroform, by Mr. Warrington Haward; and latterly by Mr. Butlin; and also by Mr. Haward at St. George's Hospital. We may also mention that Dr. Thomas Jones has, since 1861, constantly used ether at St. George's Hospital and in private operations. Mr. Haward read a paper at the Royal Medical and Chirurgical Society in October last year advocating its use, and pointed out its greater safety and frequent superiority to the popular anæsthetic. Dr. J. Morgan of Dublin has not been behind Mr. Haward in promoting its more general use, and has published a pamphlet on the subject which contains much interesting information. We might mention other names, but these are sufficient to show that ether had not been entirely cast aside, as Dr. Joy Jeffries would wish us to believe, when he "reintroduced" its administration into this country.

The discovery of bichloride of methylene by Dr. Richardson, and the introduction of nitrous oxide into this country by Dr. Evans a few years since, again directed the attention of the profession to the subject of anæsthetics. This JOURNAL recognised at once the great boon offered in the nitrous oxide gas; and, in advocating a full and fair trial of its merits, expressed the opinion that, in certain cases, it deserved the first place as an anæsthetic agent, but that it would not answer as a substitute for chloroform. This prophecy has been fully borne out by the Report of the Nitrous Oxide Committee appointed at that time, an excerpt of which we published last week. The introduction of bichloride of methylene, we fear, promises no greater safety to the patient than chloroform; for several deaths have already occurred within the short space of time in which it has been used. Chloroform in the meantime continued weekly to add to the number of its victims. We advocated more especial care in its administration, and issued broadcast over the three kingdoms practical suggestions for its administration, which were drawn up on the basis of the vast experience of many of our best chloroformists. To further aid the safer use of chloroform, and to obtain every information as to the causes of accident, we at the same time urged the publication in detail of the symptoms and morbid appearances in fatal cases. These have, with a few exceptions, appeared in our pages; and they have been, unfortunately, very numerous. Within the last few weeks, indeed, several deaths have been recorded in London alone from the administration of chloroform and bichloride of methylene. The public were becoming very naturally anxious at the occurrence of so many fatal cases from the use of anæsthetics, and it became the duty of the profession to reconsider the whole subject.

The united sagacity and experience of the most eminent surgeons and chloroformists have been brought to bear, in our pages, upon the elucidation of the causes of sudden death under chloroform, and the means of forecasting or preventing danger, but without throwing much new light upon the question. Mr. Clover thinks his apparatus all-important; Mr. Lister thinks it quite unimportant. Surgeons generally are in doubt how to foresee or to prevent fatalities, which seem to occur under the most various circumstances. It is, indeed, noteworthy that neither Mr. Clover nor Mr. Lister has ever met with any case of death in his practice; and it seems probable that, were the rule always adopted of entrusting a skilled and watchful assistant with the duty of watching the respiration and the

pulse, a considerable proportion of fatalities might be avoided. But they have not, notwithstanding the repeated warnings which the cases published in our columns have afforded; and there seems no adequate reason to believe that any greater impunity will be achieved in the future than in the past. Those who are most accustomed to administer chloroform, and who have also experience in the administration of ether, such as Dr. Jones of St. George's Hospital, are accustomed, when the pulse flags and the respiration wavers under chloroform, to interpose with ether, which again restores strength to the pulse.

In face of the great mortality from chloroform, and of the almost deathless record of ether, it has become our duty to interpose, to call the urgent attention of professional men throughout the country to the claims which ether has upon their confidence, and to urge that the anæsthetic which was thrust out of repute by the ready and convenient fluid introduced by Simpson, shall have an extended and a fair trial. We are glad to find ourselves supported in this view by many experienced manipulators. The papers of Haward, Morgan, and Butlin, afford very strong support to the claims which we urge. We shall be glad to hear further on the subject from all whose experience can contribute to the speedy decision of a question of capital importance. We believe that, since we have taken the subject in hand, a very strong and general opinion has grown up in favour of giving to ether the trial we ask for it; and that it is being largely administered in London and the provinces. We shall be glad to receive for publication short notes of the results, of course, whether favourable or unfavourable.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

We are requested by Dr. C. J. B. Williams to state that his motion, at the meeting of the Royal College of Physicians of London, reported in a recent number of the JOURNAL, was this: "That the College take into consideration its present position with regard to its members, and also to numerous physicians in England who are not members, with the view, if possible, to devise such measures as may render the College the truly representative head of the physicians of England." In this motion, Dr. Williams has in view, not to lower the standard of qualification, but to render the membership more attractive and satisfactory by facilitating the ulterior admission to the Fellowship. There is, of course, no question as to the desire of Dr. Williams to advance the interests both of the Royal College of Physicians and the profession generally by his motion; the purport of which was, so far as we can see, correctly expressed in the brief notice which we gave at the time. It may, however, be seriously doubted whether his proposition would in its effect answer any good purpose. A second year of grace, or of disgrace, as the case may be, would not seriously advance any interest. A College is a guild of which the ethical relations to the profession differ very much from those of an University. An University grants only a diploma of scientfiic knowledge; the Colleges guarantee the professional good behaviour of their members. They impose conditions, and have a right of expelling offending members and fellows. We should be sorry to see the fellowship of the Royal College of Physicians made a less worthy object of ambition than it is by a diminution of the stringency of its conditions; and anything like an indiscriminate addition to the list of members by opening the gates without examination would be really a regrettable injury to the *prestige* of the College, and an injustice to those who have undergone examination. The examination for the membership to those who are already in possession of a diploma is really of by no means a formidable character; and we can find no reason whatever why the existing regulations should be relaxed in the condition of the profession at the present moment. The proposition for enlarging the bases of information for election to the fellowship by allowing any two fellows to submit a recommendation to the Council was first made by us, and promulgated in these columns. Its adoption by the College was welcomed by the members and fellows generally, as affording an assurance that the claims of all who might properly aspire to the fellowship would be brought forward and duly considered. The question was raised at the time, and has since been discussed, whether open and published nomination-lists, on the plan adopted by the Royal Society, would not be preferable. Such a plan has certain obvious advantages, especially in that it removes all suspicion of "Star Chamber" proceedings, in which a man's professional character is subject to secret scrutiny without his having the opportunity of explaining or refuting objections raised. But there are differences in the purposes and constitution of the two bodies which make it doubtful whether any real advantage would result from adopting the scheme of the Royal Society. The Royal Society is a body of limited number: it elects only about fifteen members annually out of a great number of candidates of all professions; and the failure to obtain its fellowship is not at all discreditable or disgraceful to candidates. The Royal College of Physicians sets no limit to its fellows; it is prepared to elect all who have adequate professional claims, and have not sinned against professional ethics or disqualified themselves otherwise for admission. The rejection of candidates publicly nominated would be a very serious matter; and would be the cause, from time to time, of grave heart-burnings and extended scandal. This is not at all desirable; the examples of societies such as that mentioned are not, therefore, fit exemplars for colleges, which select their fellows for reasons collateral to their diplomas and works, as well as for purely scientific reasons. The Royal College of Surgeons avoids all such difficulties by a purely scientific examination for the fellowship. It is not certain that this is the best plan. In any case, it is an entirely different kind of test, and leads to dissimilar results. It is open to debate whether the Royal College of Physicians should adopt a purely examinational test for its fellowship. So long as it aims at something more, at something like a professional censorship of conduct, published nominations and the gossip, canvassing, and scandal to which they would lead will not, we think, be acceptable to the best judging and calmest minds in the body. The Royal College of Physicians is growing in popularity, and has extended its influence by the most legitimate means. Its doors are now very widely thrown open, and it may be doubted whether any efforts to drive in the flocks which still pasture in other fields are really well advised.

THE PUBLIC HEALTH ACT.

We publish in another column the important orders just issued by the Local Government Board on the subject of the appointment of Medical Officers of Health under the Public Health Act, and their duties and remuneration. The orders are accompanied by a judicious letter, of which the following is the gist.

"It is scarcely requisite that the Board should impress upon sanitary authorities the necessity of selecting for the appointments (of medical officers of health and inspectors of nuisances) persons who are thoroughly qualified to discharge the important duties which will devolve upon them; but the Board think it right to point out that this object will not be attained unless the salary which the authorities are enabled to offer is such as to afford an adequate remuneration for the services required.

"In order to promote the appointment of competent officers, the Act has empowered sanitary authorities to unite in making joint appointments; an arrangement which will, in many instances, have the advantage of enabling the authority to obtain the services of persons specially qualified for the work at a saving of cost to each locality.

"It will be observed that the Board have made provision for these joint appointments in their orders; but as difficulties will often arise in the way of effecting the preliminary arrangements necessary for the

purpose, the Board would invite those sanitary authorities, who may desire to make appointments under the order, to place themselves in communication with the inspector of the board for the district, who will be at their disposal for the purpose of assisting in the requisite negotiations, before any joint scheme is forwarded to the Board for their approval."

PATENT MEDICINES.

In a recent number of the JOURNAL (September 21st), we called attention to the history and some of the evils resulting from the sale, by Government, of patent medicine stamps; we now propose to point out some of the abuses and defects of the Act of Parliament which imposed it on the community. The stamp was simply an invention for raising revenue at a time when the Government was involved in a great and expensive war, and it does not contain any provision for protecting the preparations to which it is attached, except that it allows the proprietors of the medicines to keep their composition secret. But in these days the value of a patent medicine does not consist in the virtue of its constituents, but in its name, and the extent to which it has been advertised. It has been asserted that the proprietor of a notorious patent medicine expends £10,000 a year in advertisements alone; and yet, as far as the Patent Medicine Act is concerned, there is nothing to prevent another person from selling a preparation of the same name, provided he is careful to use the Government stamp. For protection in these cases, the original proprietor must appeal to the comparatively recent law regulating the employing of trade marks; but even that Act is not sufficient in some of the older cases, as was proved in a recent trial to establish the proprietorship of the famous Rowland's kalydor, in which evidence was given that several different preparations had been sold under that name. On the other hand, the proprietorship of Glenfield's starch was established, although no medicine label had been employed, and the stamp is, therefore, an useless and superfluous addition to the expense of the article.

But, as a source of revenue, the tax is systematically evaded when it is not likely to be useful in deluding the poor and ignorant. Apart from the difficulty of defining what are and what are not "medicines or medicaments, used or applied externally or internally for the prevention, cure, or relief, of any disorder or complaint incident to or any wise affecting the human body", it is very evident that the tax is extensively evaded in many preparations enumerated in the schedule attached to the Act. Thus we find that "foreign medicines of all kinds except drugs," "waters—*videlicet*, all artificial mineral waters, and all waters impregnated with soda or mineral alkali, or with carbonic acid gas, and all compositions in a liquid or solid state, to be used for the purpose of compounding or making any of the said waters", are sold without the stamp attached; and even rose, ginger, peppermint, and other medicated lozenges are included in the list. It is probable, moreover, that the framers of the Act contemplated taxing cosmetics of all descriptions, as we find enumerated in the schedule aromatic spirits of ammonia, eau de Cologne, numerous tooth-powders, washes, and other external applications. Although many of these preparations are sold with the stamp attached, the great majority of them are not; and it is only too evident that the stamp is used when it is intended they should catch the eye of the poor and ignorant, but omitted from the luxuries of the rich and intelligent, who cannot be misled by it.

Another great evil concerning the strictly medical preparation is, that the proprietor need not have any knowledge of the nature or action of drugs, nor is he obliged to declare their composition, and that the consumer takes them at his own risk. In case of injury to health, or death arising from their administration, the public has no remedy against the proprietor who compounds and recommends them, the vendor who supplies them, or the Government who taxes the one or licenses the other.

It is incredible that an Act liable to so much abuse should have remained so long unabolished; but we presume it is with this as it is with every other social anomaly, that which is everybody's business is nobody's, and the class of the community who suffer most from it are blind to its defects. The old cry of "vested interests" will, no doubt, be raised; but there is not, and cannot be, any vested interests in imposition and quackery. The ordinary channels of patenting inventions which will bear the light will still be open, and the law relating to trade-marks will protect those which now exist. To abolish the patent medicine-stamp will be to forego a small public revenue, but with it will remove many great evils and dangers to the physical and moral welfare of the community which its existence fosters.

Mr. Joseph May has been elected Mayor of Devonport, and Mr. F. Chambers Mayor of Margate—each for the third time.

A Royal decree orders that all ships arriving in Italy from the Austro-Hungarian coast shall go into quarantine. This measure is in consequence of the cholera having broken out in Austria.

Mr. T. L. Gentles, public vaccinator of the South District Derby Union has had awarded to him a Privy Council grant of £79 5s. for efficient vaccination.

Dr. H. B. Leeson, F.R.S., who for many years lectured on Chemistry at St. Thomas's Hospital, died on the 8th instant near Ventnor. He devised a new system of crystallography.

Dr. Dawson Turner, the head master of the Royal Institution School, Liverpool, has thrown into a manageable and convenient form his excellent *Rules of Simple Hygiene*, and they form a very simple, clear, and useful body of directions.

According to a despatch from a correspondent at Dresden, cholera has appeared in that city. Six cases, of which three were fatal, were reported to the police before Sunday last—the first case having come from Pesth. The police, however, announce the disease as being simply the cholera morbus.

In an article on the grouse-disease in last Saturday's *Field* newspaper, Dr. Cobbold announces the discovery of a new entozoon which is called *Strongylus pergracilis*. Commencing with this week's issue, our contemporary is about to publish a series of illustrated articles on the parasites and parasitic diseases of domesticated animals, based on lectures now being delivered at the Royal Veterinary College.

The next meeting of the Association of Medical Officers of Health will be held on Saturday, November 16th, at 7.30 P.M. The President will make some further remarks on the Adulteration of Food, Drugs, etc., Act, especially in reference to the 5th Section. A Narrative of the First Year's Work of the Sanitary Aid Society, at Hastings, by Mrs. Blomfield, will be read.

Mr. R. Rawlinson, C.B., the Government Engineer, lectured on "Domestic Sanitary Works and Arrangements necessary to Comfort and Health," at the Social Science Rooms, 1, Adam Street, Adelphi, on Thursday last. Most of what was said was matter well known to our readers, and has been more elaborately discussed in our reports on the subject. Such lectures, however, serve a very useful public purpose, and we should like to see them repeated throughout the country by medical officers of health.

ROYAL MEDICAL BENEVOLENT COLLEGE.

At a general meeting of the Governors, held at the office, 37, Soho Square, on November 13th, Henry Hancock, Esq., President of the Royal College of Surgeons, was appointed Treasurer of the Royal Medical Benevolent College, in the place of Henry Sterry, Esq., who has resigned on account of ill health. At the same time, Mr. Sterry was appointed a Vice-President of the College; and he will continue to serve on the Council whenever his health permits. The proposal, which has been advertised, to alter the mode of voting at elections, was negatived.

THE REV. MR. WATSON.

WE understand that the Rev. Mr. Watson, whose capital sentence for the murder of his wife was commuted to imprisonment for life, has shown no signs whatever of unsoundness of mind while in prison.

THE CHOLERA IN INDIA.

A TELEGRAM, dated Calcutta, November 5th, 1.2 P.M., in the *Times*, says :—"Since the first outbreak of cholera this year to October 25th, there have been 828 cases and 529 deaths among European soldiers, their wives and children, in Bengal. From the first outbreak at Peshawur to October 29th, the cases of European soldiers were 57, women 8, and children 19 ; deaths, soldiers 45, women 6, children 15. The disease still lingers, but its intensity has decreased."

ST. THOMAS'S HOSPITAL.

A LONG discussion has been raised before the magistrate at Lambeth on a summons for a distress warrant to be levied on the property of St. Thomas's Hospital, to recover £1,930 : 6 : 2 for poor and other rates. Counsel in support of the summons relied on the judgment of Lord Westbury, in the well known action against the Mersey Dock Board ; while Mr. Poland, who appeared for the institution, rested his defence on a portion of the same important judgment. The learned counsel also resisted the application on the ground of informality. In the course of the argument it was stated that, in view of the heavy amount of rates levied on the hospital, the directors had been compelled to reduce the number of beds by 140. One-half the out-patients of the institution, and one-third of the in-patients, come from the parish which levies the rates. The case was adjourned *sine die*.

THE FACTORY ACT.

AT the Birmingham Police Court on Friday, Joseph Cutler, button-manufacturer, Newton Road, Birmingham, was summoned by Mr. Bowling, Subinspector of Factories, for ten offences under the Act. The offences consisted of employing three female children without registering their names and the date of their employment ; employing them without obtaining surgical and school certificates ; and not recording in the register the holidays and half-holidays given. It appeared that the defendant had previously been warned. Evidence was given in support of the charges ; after which Mr. Greenhouse, defendant's bookeeper, who attended to answer the summons, said, "I am sure Mr. Cutler wishes to keep the law." Mr. Goodman, the presiding magistrate : "I do not think so, or he would have made some effort to do so." The bench were of opinion that the maximum penalty would scarcely meet the case. They fined the defendant 30s. and costs in each case ; altogether, £31 5s.

LADY-HISTOLOGISTS.

TWO Russian ladies, Misses Olga Stoff and Sophie Hasse, have employed themselves during the autumn recess in investigating the circulation in the spleen, by means of injection and microscopic examination. Their researches, which were made on the spleens of frogs, pigeons, rabbits, mice, rats, and various other animals, as well as of the human subject, were carried on in Dr. Frey's laboratory. They have published an account of their examination and its results in the *Centralblatt* for November 9th.

THE CHOLERA IN EUROPE.

THE Prussian government has issued a circular requesting that investigations may be made by the district medical officers on the duration of the incubation of cholera, and the means by which infection is conveyed—whether by soiled linen, clothing, rags, textures of any kind, skins of animals, animal and vegetable articles of food, etc. If it be answered in the affirmative that any of these convey cholera, it is further asked how long the contagium retains its activity.—Four cases of cholera were reported last week to have occurred in Vienna. One of the patients only—a man aged 27, admitted into the General Hospital was found to have true cholera ; the other three were cases of gastro-intestinal catarrh, connected in one instance with psoas abscess. It has been decided to provide a number of cholera-hospitals around Vienna. The *Allegemeine Wien. Med. Zeitung* states that, from Oct. 18th to Nov. 3rd, there were 129 cases of cholera in Buda, with 29 deaths ; during the same period one case occurred in the adjoining city of Pesth. Active measures are being carried out in both these places to meet the epidemic. The Hungarian Minister of the Interior, Herr Tóth, has occupied several days in personally visiting the hospitals, prisons, schools, barracks, hotels, and other public buildings in Pesth, in order especially to see that disinfection is carried out ; and has sent to the public papers reports expressing, according to the state of the case, his satisfaction or dissatisfaction. The cholera patients have been removed from the hospital at Buda into private houses and barracks.

EXTRAORDINARY FECUNDITY.

THE American medical journals have recently noticed several very remarkable instances of fecundity. The *Boston Medical and Surgical Journal* states that, on the 21st of August, Mrs. Timothy Bradlee, of Trumbull County, Ohio, gave birth to eight children—three boys and five girls. They are all living, and are healthy, but quite small. She was married six years ago, and weighed 273 lbs. on the day of her marriage. She has given birth to two pairs of twins, and now eight more, making twelve children in six years. Mrs. Bradlee was a triplet, her mother and father being twins, and her grandmother the mother of five pairs of twins.—The *Philadelphia Medical Times* quotes from the *Nashville Journal* a case reported last April, at the annual meeting of the Georgia State Medical Association, by Dr. George N. Holmes ; who reported that, twenty-eight years ago, in Kentucky, he delivered a poor white woman of six babes at one birth. The children were perfectly formed, and weighed each two and a half to three and a half pounds. He had heard that two of the children had died.—Dr. Ed. Mason reported, at a late meeting of the Elmore Medical and Surgical Society, Wetumpka, Alabama, a case in which "a lady bore seventeen children in nineteen years, twice giving birth to twins, and once producing four children at a birth. The latter died, but all the other thirteen survived."

VOX CLAMANTIS.

THE editorial voice of the *Wiener Medizinische Wochenschrift* was last week raised energetically against the indifference shown by the public authorities of Vienna, in regard to the threatened visitation of that city by cholera. We subjoin a translation of our contemporary's remarks, which may too often also be applied to places nearer home. "The danger of cholera to which Vienna is exposed increases every day. From Buda, from Lemberg, and now from Prague, come daily reports of the numbers of persons sick and dead from cholera ; and in the next hour a Job's messenger may inform us that the horrible disease has broken out in this or that suburb of Vienna, and has already carried off one or more victims. How stands Vienna prepared against such a calamity ? What precautions are taken to render the plague less dangerous, or, at least, to limit its spread ? Are the sewers cleansed, whose miasmatic exhalations are known to contribute essentially to the diffusion of cholera ? Are cholera-asylums erected for the reception of the sick ? Are any measures taken for clearing overcrowded dwellings ? Is the disinfection of drains, sinks, and public urinals, carried out in a rational manner ? Is any instruction whatever given to the people as to their mode of living, diet, etc. ? No assuring answer can be given to these or to any other similar questions that might be asked, so long as the magistrates, the council of health, and the sanitary staff, only proceed to issue adequate regulations at a time when these regulations, which ought to have anticipated the calamity, fail in their object because they come too late. For months past, week after week, we have called attention to the approaching danger ; we have urged the adoption of precautionary measures ; but we have not been listened to. The only sanitary measure which has been carried out in any way is disinfection ; and this has been done most irregularly. In some districts it is carried out systematically, in others now and then, in others not at all; and this is the sum of the

precautions taken against an outbreak of cholera. All other measures remain neglected. The schools will have to be evacuated to be used as cholera hospitals; and the children may learn or not—but that is not the affair of the sanitary department. The houses will remain overcrowded, although it is proved that the germs of infection lie in them. An attempt will be made to instruct the inhabitants as to their diet and manner of living, when the disease has already established itself among us. The sewers are not cleansed, because, probably, the season of the year does not allow it. And it is under such auspices that the time of opening of the International Exhibition approaches, the success of which depends largely on the sanitary state of the capital. . . . We fear that it may be with the cholera, as with the small-pox, the existence of which in Vienna was denied until the truthful death-returns, with their terrible numbers, placed the presence of the disease beyond doubt. And the small-pox now flourishes among us more luxuriantly than ever."

MEDICAL MICROSCOPICAL SOCIETY.

A PRELIMINARY meeting of the proposed Medical Microscopical Society was held at St. Bartholomew's Hospital on November 1st, W. Morrant Baker, Esq., in the Chair. The Chairman having made a few introductory remarks, Mr. J. W. Groves explained his reasons for desiring the formation of such a society, and the objects which he had in view for it, and read extracts from communications which he had received from Drs. Carpenter, Burdon Sanderson, Beale, Rutherford, etc. After discussion, it was decided that the Society should exist; and a provisional committee, composed of the Honorary Secretaries of the Royal Microscopical Society and of the Quekett Microscopical Club, besides representatives from each of the London hospitals, was elected. The next meeting, for sanctioning rules, electing officers, etc., will be held in the College Hall, St. Bartholomew's Hospital, on December 6th, at 8 P.M.

HOSPITAL SUNDAY.

THE third annual report of the Committee appointed to establish a Hospital Sunday for the benefit of the principal medical charities connected with Cumberland and Westmorland gives an account of the results of the appeal for 1872. It shows a slight increase in the number and amount of the collections. The following table shows how much each institution has received from this year's fund.

	Appropriated by Ministers.	Appropriated by Committee.	Total.
Cumberland Infirmary ...	£100 7 10½	£145 3 2½	£245 11 1
Carlisle Dispensary	4 2 11	80 12 11½	84 15 10½
Fever Hospital at Carlisle	4 13 4	80 12 10½ / 30 0 0	115 6 2½
Convalescent Institution, Silloth	41 4 11½	80 12 10½	121 17 10
Whitehaven and West Cumberland Infirmary...	48 15 5	112 18 1	161 13 6
	199 4 6	530 0 0	729 4 6

While profoundly thankful for the measure of success which has resulted from their appeal, the Committee have grounds for hope that each year will show an increasing extension of the Hospital Sunday movement, which, in fact, may now be regarded as an established institution in the two counties. Since its commencement, an annual increase in the number of collections has been noticed; and yet, during the past year, the ministers of religion who have responded to the appeal only amount to about a third of the total number to whom the appeal was sent. This great disproportion is a matter of regret, and the Committee hope that it has only to be noticed to be remedied. They have also to notice with satisfaction a further development of the movement at the hands of the working classes, who, being chiefly benefited by the different institutions, have always evinced a warm interest in their welfare. The various clubs and benefit societies, as usual, attended the places of worship in great numbers, and in some instances organised special services; and the working men, too, of one firm in Carlisle, withheld a small sum from one week's wages for the benefit of the fund. Under the name of "Hospital Saturday," this plan has produced large sums in other districts, and is worthy of the highest commendation and imitation.

MULTIPLE BIRTH.

A CASE has lately been mentioned to the Société de Médecine de Toulouse by Dr. Lafarque, in which a woman, on reaching the eighth month of a painful pregnancy, gave birth to three living children at intervals of half an hour or less. They lived a few days. For twenty-five days afterwards, the woman had frequent hæmorrhages; and at the end of the time she expelled a fœtus, apparently of the fifth month, in an advanced state of decomposition. She had recovered at the end of another month.

ALLEGED SUBSTITUTE FOR QUININE.

M. GUSTAVE DORAY, a *pharmacien* residing at St. Lô, has addressed to the Academy of Medicine in Paris a note on the febrifuge and antiperiodic properties of the *Laurus nobilis*. He states that Drs. Letouzé, Alibert, and Scelles, of Mondésert, have given it in thirty-four cases, of which twenty-eight were successful; some being cases of pernicious intermittent and others of obstinate ague. The medicine is given in the form of a powder of the dried leaves, one *gramme* of which is administered two hours before the expected paroxysm. The Academy has appointed a Commission, consisting of MM. Mialhe, Gobley, and Bussy, to report on the value of the remedy.

ANALYSES UNDER THE ADULTERATION ACT.

THE suggestion contained in the resolutions passed by the recent meeting of the Association of the Officers of Health, published in the JOURNAL, deserves serious consideration. It amounts, in point of fact, to this—that there should be one or two laboratories maintained by the metropolitan "food-analysts" for the purpose of getting their analyses properly done; and that, instead of each food-analyst doing his work at home (either personally or by assistant), he should have it done for him by thoroughly competent and properly paid assistants. We look upon the project as a very sensible one, and as being calculated to get over a great difficulty. We cannot conceal from ourselves the fact that, as a body, the official food-analysts appointed under the Act will certainly be incapable of making the analyses which they will be required to furnish. In saying this, we mean no disrespect to the gentlemen in question; for there is not a chemist in the country who would not require some training in order to fit him for the discharge of the duties which will devolve under the Act. Indeed, we are not at all over-estimating the difficulties of the case, in saying that the very methods of analysis by which much of the work will have to be done are yet to be discovered. We will instance butter, the fatty adulterations of which await the discovery of a method for their detection and estimation. We regard the crisis created by the passing of the Adulteration Act as a very serious one; and hope that no false delicacy will lead to the discrediting of chemical analysis in the eyes of the public.

ADDRESSES IN STATE MEDICINE.

DR. LETHEBY'S very able review of Sanitary Legislation in 1872, which appears in the *Medical Press and Circular* of the current week, and Mr. T. J. Dyke's address, which we publish in another column, may be regarded as representative productions of typically excellent and highly qualified medical officers of health. They concur in maintaining, from quite independent standpoints, the views as to recent legislation and the bases of sanitary organisation which the Joint State Medicine Committee of the British Medical and Social Science Associations have established. Dr. Letheby has never taken any active part, or, so far as we know, any part at all, in the prolonged labours of the Joint Committee; and in so far we have sustained a loss, and the public has failed to benefit by his ripe experience and tried sagacity. We have, however, the benefit now of a quite impartial and externa

review by him of the ground which has been traversed, the battle which has been fought; and the result is that he takes his stand on the platforms raised by Dr. Rumsey and Mr. George Hastings; and the objection which we have urged to the division of local authority and the enlargement of the centralising influence is quoted with approval. These extracts and the objection to the insufficient sanitary provisions for the port of London constitute, indeed, the bulk of the address. Mr. Dyke's address speaks for itself: it is the work of one of the most experienced workers and careful thinkers within the domain of state medicine.

SMALL-POX IN VIENNA.

THERE has been a diminution during the last two weeks in the number of cases of small-pox, and also of deaths. In the week ending November 1st, there were daily, on an average, 392 patients suffering from the disease in the hospitals, and 94 deaths occurred during the week; in the week ending November 8th, the number of deaths had fallen to 64, and the average daily number of cases to 375. This diminution in the epidemic is coincident with the opening of a number of additional small-pox hospitals in the suburbs of the city.

THE SEWAGE DIFFICULTY.

THE necessary machinery for treating the sewage at Birmingham with lime, according to General Scott's process, having been completed, a trial was made on Friday at the southern tank at Saltley, in the presence of Dr. Frankland. By the time the tank was full, the sludge was found to have been sufficiently precipitated to allow the supernatant water to flow over the lip of the weir perfectly clarified and deodorised. The whole operation was perfectly free from noxious smell.

VACCINATION AND SMALL-POX.

THE *Allgemeine Wien. Med. Zeitung* states that the following conclusions, though not based on statistical returns, have been arrived at by those physicians who have watched the progress of the present epidemic of small-pox in Vienna. 1. The mortality from small-pox is nearly ten times as great in the unvaccinated as in the vaccinated. 2. The average intensity of the disease is also much greater in the former than in the latter. 3. Hæmorrhagic small-pox is much more common in the unvaccinated. 4. In the children's hospital, where the mortality from variola is very great, and hæmorrhagic cases very frequent, the unvaccinated suffer most. Similar conclusions have already been arrived at in this country; and the experience of the Vienna physicians is an additional testimony to the value of vaccination. We trust that sufficiently careful records have been made during the present epidemic to afford a basis for a statistical statement, when the scourge shall have passed away, of the influence of vaccination on small-pox.

STRICTURE AND CATARACT.

MR. JABEZ HOGG, F.L.S., seems to delight in exposing himself, as it were, of *malice prepense* to critical visitation. The memorable chastening administered in the now defunct *Ophthalmic Review*, on the occasion of the publication of his well known work on the *Ophthalmoscope*, might have served ordinary minds as a lesson. In a paper read at the Medical Society of London, however, he has again tempted the critic's rod, in a manner which may well prove irresistible. The title of his paper, "On the Connexion of Stricture of the Urethra and enlarged Prostate with Cataract," is at once suggestive of a grotesque view of pathology. It is, of course, a well known fact that various forms of kidney-disease—albuminuria and diabetes—are provocative of forms of retinal and lenticular disease. Cataract is more frequent in females than in males. Characteristically enough, however, in this paper, no account is taken of the conditions of the kidney or characters of the urine, but the relation is stated of stricture of the urethra. Some consideration is due to persons of critical temperament as well as to others less sensitive to logical enormities. It should, we think, be the part of a president of a society to intervene to save such members of a society from the sort of shock which the reading of such a paper is calculated to inflict. The fellows of the Medical Society of London more often stand in need of this sort of protection than those of any other society.

ENORMOUS LIPOMATOUS TUMOUR OF THE BACK.

DR. GUSSENBAUER, in a series of extracts from Dr. Billroth's hospital practice which he is publishing in the *Wiener Med. Wochenschrift*, relates in the numbers for November 2nd and 9th a case of lipomatous tumour of unusual size. The patient was a woman aged 51, and the tumour first appeared twenty-five years ago. It commenced near the angles of the scapulæ with a portion about the size of a hand, which extended down to the left of the spinous processes of the vertebræ; it then spread out extensively, so as to cover a great portion of the lumbar and sacral regions. It was 30.7 inches long, 17.7 inches broad at its upper, and 11.8 at its lower part. The circumference of its base of attachment was 36 inches; the greatest circumference of the tumour itself in the transverse direction, 43.3 inches; and in the longitudinal, 72.4 inches. Its lower end hung as low as the popliteal space. The tumour was removed by Dr. Billroth on August 2nd. Erysipelas set in on the fifth day, but was not of long continuance. With this exception, the healing went on favourably, and the patient was discharged cured on September 15th. The tumour, on its removal, was found to weigh 50 lbs. 11½ oz.

SCOTLAND.

DR. J. O. AFFLECK has been appointed Assistant to the Professor of Medical Jurisprudence in the University of Edinburgh.

"THE ABERDEEN MEDICAL STUDENT."

THE first born has appeared, and lent its young voice to the babble of periodical literature; and a very creditable and lusty *vox medica* it is.

> "Thy spirit, Independence, let me share!
> Immortal liberty!"

We shall watch with the greatest interest its upbringing. It is of necessity important that, in supplying pabulum for its nourishment, the greatest care should be bestowed; otherwise its growth may be distorted and stunted, and its desired utility as a member of the Medical School not only lessened, but turned to mischief-making and final annihilation. These thoughts have suggested themselves to our mind, and we humbly offer them. We need hardly recommend that every care should be taken to exclude criticism of any kind likely to reflect on the work of the individual professors. Such a course would inevitably produce antagonism between teachers and pupils, which is most undesirable, and utterly subversive of discipline. The good sense which responsibility tends to produce will, we trust, be a sufficient safeguard in this direction Medical graduates and alumni of the University are invited to contribute, and Dr. Beveridge and Dr. Samuel Davidson have shown a good example in this direction. Abstracts of introductory professorial addresses and reports of interesting cases in the Infirmary make up, with abstracts from other medical papers and with editorial matter, the first and exceedingly creditable number.

THE LORD-RECTORSHIP OF THE ABERDEEN UNIVERSITY.

PROFESSOR HUXLEY and the Marquis of Huntley are the two favourites to be run in the coming contest for the Lord-Rectorship of the Aberdeen University. The result may prove of much importance to the cause of education. It is hoped that the students will consider seriously their responsibility in the matter. The position of affairs is shortly this. Before the election of Mr. Grant Duff, the present Lord-Rector, little more than a very imperfect knowledge of classics and mathematics was considered by the authorities to represent every necessary of a liberal education in arts, notwithstanding the fact that three-fourths of the curriculum was devoted to the study of dead languages. The election of Mr. Grant Duff resulted in the approximation of a curriculum suited only to the

middle ages to one in keeping with the requirements of the nineteenth century. The dead languages were placed more in their proper position, and natural science and other subjects of a more modern and more useful character were encouraged. The results have been most gratifying, and have raised the position of the University and the character of its graduates and alumni. But the war waged against the traditions of the University must be continued, otherwise the good will be undone and advancement cease. A Lord-Rector, determined to fulfil his duty to the University, can bring great influence to bear on the matter, and it is thus highly desirable that he should be a man of mature and independent thought, and an expert in the subject of University education. The Marquis of Huntley has already shown his interest in education, and evidently desires to make himself useful. But he has just become emancipated from student control at an University, and has seen less than thirty summers. This is surely not the man to carry out University reforms well begun, in the teeth of a long, angry, and powerful array of the advocates of the retrograde policy. A Lord-Rector of long experience is required, whose opinions are mature and known; whose fitness for the appointment has been proved by a life of brilliant work; whose sympathies are with the advanced enlightenment of the age in University educational matters; and whose independence as a reformer no one can question. These qualities are to be found in Professor Huxley; and, if elected, he will, we believe, not fail to recognise that the Lord-Rector's duties are more than honorary, and will give his best attention to the affairs of the University. Moreover, his intimate and wide knowledge regarding the necessities of medical education would be of special benefit to the rising medical school of Aberdeen.

IRELAND.

DR. BENSON.

THE retirement of Dr. C. Benson from the Professorship of Practice of Medicine in the Royal College of Surgeons of Ireland, owing to failing eyesight, is announced. The Council have passed the following resolution:—"That the Council receive with the greatest regret Dr. Benson's resignation of the Professorship of the Practice of Medicine, a position which he held in this College for thirty-six years, with much advantage to the School of the Royal College of Surgeons of Ireland and credit to himself, and this regret is increased by their knowledge of the cause which has led to his resignation." It was further resolved—"That a portrait of Dr. Benson be procured and placed in the Board Room, and that a sum of one hundred guineas be presented to him in testimony of his distinguished services in this College, and in token of the personal regard entertained towards him." The reported candidates for the vacancy include Dr. Samuel Gordon, Physician to the House of Industry Hospital; Dr. Little, of the Adelaide Hospital and Ledwich School; Dr. Foot, of the Meath Hospital; Dr. Eames, of Mercer's Hospital and the Ledwich School; Dr. Walter Smith, of the Adelaide Hospital; and Dr. J. W. Moore.

MERCER'S HOSPITAL, DUBLIN

MR. O'GRADY performed the operation of ovariotomy in this Hospital on October 15th. The tumour was multilocular, and contained over twenty pints of fluid. The solid portion weighed 8¾ pounds. The adhesions were very general, and the patient at the time of operation laboured under active peritonitis, of which there were no constitutional symptoms. The clamp came away on the tenth day, and the patient is progressing favourably. This operation has hitherto been attended with considerable mortality in Dublin practice, there having been close upon forty cases of ovariotomy with not more than half a dozen recoveries. Another interesting case is at present in the same hospital, that of a man labouring under a severe sprain of the leg, on whom a popliteal aneurism of the left leg was successfully treated by pressure eighteen months ago, and a popliteal aneurism of the right leg ligatured after an unsuccessful attempt to cure by pressure a few months afterwards. The cure in both instances is perfect.

THE BRITISH MEDICAL ASSOCIATION: ANNUAL MEETING, 1873.

AT the meeting of the Committee of Council on Wednesday, November 13th, Dr. Sibson, Mr. Heckstall Smith, and Dr. Stewart, as a deputation from a general meeting of the members of the British Medical Association resident in the metropolitan counties, presented an address, signed by nearly three hundred members, inviting the Association to hold its next annual meeting in London. Mr. Cooke also attended from Scarborough, to present a similar invitation on behalf of the practitioners of the great watering-place of the north. The invitation to London was unanimously accepted for the year 1873. In accordance with the resolution of the meeting, Sir William Fergusson will preside. We shall of course have occasion again to refer to this subject. It is now ten years since the Association first visited London, meeting under the presidency of the present president of the Royal College of Physicians of London. It had a noble reception, and that visit did much to bring metropolitan and provincial practitioners into cordial and close union, and gave an impulse to the prosperity of the Association. The Association has now grown to dimensions such as were then hardly contemplated. It includes nearly every physician and surgeon of hospital standing, and a large majority of the leading practitioners in London and the provinces. Its meeting in London will be an event of proportionally increased importance; and the efforts of metropolitan members will be called for to make the reception of the large number of visitors who may be expected worthy of the metropolis and of the Association.

AT a meeting of members of the Association residing in the Metropolitan Counties District, held at 37, Soho Square, on Friday, November 8th, 1872, Sir WILLIAM FERGUSSON, Bart., in the Chair, the following resolutions were unanimously passed.

1. Proposed by Dr. QUAIN, F.R.S., seconded by T. HECKSTALL SMITH, Esq.:

"That the following letter, inviting the Association to meet in London in 1873, be adopted by this meeting and signed by the President and members present; and that the Secretaries be instructed to procure as many signatures of other members of the Association as they conveniently can before the presentation of the letter to the Committee of Council.

"'*To the President and Committee of Council of the British Medical Association.*

"'Gentlemen,—We, the undersigned members of the Association residing in the Metropolitan Counties District, hereby cordially invite the Association to hold its annual meeting in 1873 in London.'"

2. Proposed by T. B. CURLING, Esq., F.R.S., seconded by Dr. BEALE, F.R.S.:

"That a Committee of Arrangement be formed for making the necessary preparations for the meeting of the Association.

"That the Committee consist of the Council of the Branch, the representatives of the Branch in the General Council of the Association, and the past Presidents of the Branch; and that they be empowered to add to their number members of the staff of the general hospitals and other members of the Association in the district."

3. Proposed by J. E. ERICHSEN, Esq., seconded by Dr. A. P. STEWART:

"That Sir William Fergusson, Bart., be nominated as the President-elect of the Association for the year 1873."

4. Proposed by ERNEST HART, Esq., seconded by ROBERT DUNN, Esq.:

"That Dr. Sibson, Mr. Heckstall Smith, and Dr. Stewart, be a deputation to present the invitation to the Committee of Council."

ADDENBROOKE'S HOSPITAL CAMBRIDGE.—The balance-sheet for the year ending September, 1872, shows an excess of expenditure over income of £796; and that for the previous year, an excess of £682. The price of provisions is alleged as the principal cause of these untoward results, which have necessitated the sale of £1,000 stock.

REGULATIONS FOR MEDICAL OFFICERS OF HEALTH.

THE following order of the Local Government Board is issued this week.

To the several Urban Sanitary Authorities in England and Wales, constituted by the Public Health Act, 1872, and to all others whom it may concern.

Whereas by Section 10 of "The Public Health Act, 1872", it is enacted that it shall be the duty of every urban sanitary authority to appoint from time to time a medical officer of health, being a legally qualified medical practitioner, and that the Local Government Board shall have the same powers as they have in the case of a district medical officer of an union, with regard to the qualification, appointment, duties, salary, and tenure of office of a medical officer of health, any portion of whose salary is paid out of moneys voted by Parliament:

And whereas it is thereby further enacted, that the same person may, with the sanction of the Local Government Board, be appointed the medical officer of health for two or more sanitary districts, by the joint or several appointment of the sanitary authorities of such districts:

Now we, the Local Government Board, deeming it expedient that regulations should be made with respect to the qualification, appointment, duties, salary, and tenure of office of medical officers of health, to be apppointed by urban sanitary authorities, in all those cases where any portion of the salary of any such officer is paid out of moneys voted by Parliament, do hereby order and direct as follows.

SECTION I.—*Qualification.*

Art. 1. No person shall be qualified to be appointed to the office of medical officer of health under this order, unless he shall be registered under "The Medical Act of 1858", and shall be qualified by law to practise both medicine and surgery in England Wales, such qualification being established by the production to the sanitary authority of a diploma, certificate of a degree, licence, or other instrument granted or issued by competent legal authority in Great Britain or Ireland, testifying to the medical or surgical, or medical and surgical, qualification or qualifications of the candidate for such office.

Provided that the Local Government Board may, upon the application of the sanitary authority, dispense with so much of this regulation as requires that the medical officer of health shall be qualified to practise both medicine and surgery, if he be duly registered under the said Act to practise either medicine or surgery.

SECTION II.—*Appointment.*

Art. 1. A statement shall be submitted to the Local Government Board, showing the population and extent of the district for which the sanitary authority proposes to appoint the medical officer of health, and the salary or remuneration intended to be assigned to him; and where the circumstances render desirable the appointment of one medical officer of health for two or more sanitary districts, statements shall, in like manner, be submitted to the Local Government Board, showing the names of the districts to be combined for that purpose, the population and extent of each district, the mode in which it is intended that the appointment shall be made, whether jointly or severally by the sanitary authorities of those districts, and the amount of salary or remuneration proposed to be assigned to the officer appointed.

Art. 2. When the approval of the Local Government Board has been given to the proposals submitted to them, the sanitary authority or authorities shall proceed to the appointment of a medical officer of health accordingly.

Art. 3. No appointment of a medical officer of health shall be made hereafter, unless an advertisement giving notice of the day when such appointment will be made shall have appeared in some public newspaper circulating in the district or districts, at least seven days before the day on which such appointment is made: provided that no such advertisement shall be necessary for the appointment of a temporary substitute.

Art. 4. Every such appointment hereafter made shall, within seven days after it is made, be reported to the Local Government Board by the clerk to the sanitary authority, or, in the case of a joint appointment, by the clerk to one of the sanitary authorities by whom the appointment is made.

Art. 5. Upon the occurrence of a vacancy in such office, the sanitary authority or authorities shall proceed to make a fresh appointment, which shall be reported to the Local Government Board as required by Sec. 11, Art. 4 of this order; but if the sanitary authority or authorities desire to make any fresh arrangement with respect to the district or the terms of the appointment, they shall, before filling up the vacancy, supply the particulars of the arrangement to the Local Government Board in the manner prescribed by Sec. 11, Art. 1, in regard to the first appointment; and, if the approval of the Local Government Board be given, absolutely or with modifications, the sanitary authority or authorities shall then proceed to fill up the vacancy according to the terms of the approval so given.

Art. 6. If any officer appointed under this order be at any time prevented by sickness or accident, or other sufficient reason, from performing his duties, the sanitary authority or authorities, as the case may be, may appoint a person qualified as aforesaid to act as his temporary substitute, and may pay him a reasonable compensation for his services; and every such appointment shall be reported to the Local Government Board as soon as the same shall have been made.

SECTION III.—*Tenure of Office.*

Art. 1. Every officer appointed under this order shall continue to hold office for such period as the sanitary authority or authorities appointing him may, with the approval of the Local Government Board, determine, or until he die, or resign, or be removed, by such authority or authorities with the assent of the Local Government Board, or by the Local Government Board.

Provided, that the appointments first made under this order shall not be for a period exceeding five years.

Art. 2. Where any such officer shall have been appointed after the passing of the Public Health Act (1872), for one or more sanitary districts, and any change in the extent of the district or districts, or in the duties, salary, or remuneration, may be deemed necessary, and he shall decline to acquiesce therein, the sanitary authority or authorities by whom he was so appointed may, with the consent of the Local Government Board, but not otherwise, and after six months' notice in writing, signed by their clerk, or clerks, given to such officer, determine his office.

Art. 3. No person shall be appointed who does not agree to give one month's notice previous to resigning the office, or to forfeit such sum as may be agreed upon as liquidated damages.

SECTION IV.—*Duties.*

The following shall be the duties of the medical officer of health in respect of the district for which he is appointed; or, if he shall be appointed for more than one district, then in respect of each of such districts.

1. He shall inform himself as far as practicable respecting all influences affecting or threatening to affect injuriously the public health within the district.

2. He shall inquire into and ascertain by such means as are at his disposal the causes, origin, and distribution of diseases within the district, and ascertain to what extent the same have depended on conditions capable of removal or mitigation.

3. He shall by inspection of the district, both systematically at certain periods, and at intervals as occasion may require, keep himself informed of the conditious injurious to health existing therein.

4. He shall be prepared to advise the sanitary authority on all matters affecting the health of the district, and on all sanitary points involved in the action of the sanitary authority or authorities; and in cases requiring it, he shall certify, for the guidance of the sanitary authority or of the justices, as to any matter in respect of which the certificate of a medical officer of health or a medical practitioner is required as the basis or in aid of sanitary action.

5. He shall advise the sanitary authority on any question relating to health involved in the framing and subsequent working of such bye-laws and regulations as they may have power to make.

6. On receiving information of the outbreak of any contagious, infectious, or epidemic disease of a dangerous character within the district, he shall visit the spot without delay and inquire into the causes and circumstances of such outbreak, and advise the persons competent to act as to the measures which may appear to him to be required to prevent the extension of the disease, and, so far as he may be lawfully authorised, assist in the execution of the same.

7. On receiving information from the inspector of nuisances that his intervention is required in consequence of the existence of any nuisance injurious to health, or of any overcrowding in a house, he shall, as early as practicable, take such steps authorised by the statutes in that behalf as the circumstances of the case may justify and require.

8. In any case in which it may appear to him to be necessary or advisable, or in which he shall be so directed by the sanitary authority, he shall himself inspect and examine any animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, or flour, exposed for sale, or deposited for the purpose of sale, or of preparation for sale,

and intended for the food of man, which is deemed to be diseased, or unsound, or unwholesome, or unfit for the food of man; and if he find that such animal or article is diseased, or unsound, or unwholesome, or unfit for the food of man, he shall give such directions as may be necessary for causing the same to be seized, taken, and carried away, in order to be dealt with by a justice according to the provisions of the statutes applicable to the case.

9. He shall perform all the duties imposed upon him by any bye-laws and regulations of the sanitary authority, duly confirmed, in respect of any matter affecting the public health, and touching which they are authorised to frame byelaws and regulations.

10. He shall inquire into any offensive process of trade carried on within the district, and report on the appropriate means for the prevention of any nuisance or injury to health therefrom.

11. He shall attend at the office of the sanitary authority or at some other appointed place, at such stated times as they may direct.

12. He shall from time to time report, in writing, to the sanitary authority, his proceedings and the measures which may require to be adopted for the improvement or protection of the public health in the district. He shall in like manner report with respect to the sickness and mortality within the district, so far as he has been enabled to ascertain the same.

13. He shall keep a book or books, to be provided by the sanitary authority, in which he shall make an entry of his visits, and notes of his observations and instructions thereon, and also the date and nature of applications made to him, the date and result of the action taken thereon and of any action taken on previous reports, and shall produce such book or books, whenever required, to the sanitary authority.

14. He shall also prepare an annual report, to be made at the end of December in each year, comprising tabular statements of the sickness and mortality within the district, classified according to diseases, ages, and localities, and a summary of the action taken during the year for the preventing the spread of disease. The report shall also contain an account of the proceedings in which he has taken part or advised under the Sanitary Acts, so far as such proceedings relate to conditions dangerous or injurious to health, and also an account of the supervision exercised by him, or on his advice, for sanitary purposes over places and houses that the sanitary authority has power to regulate, with the nature and results of any proceedings which may have been so required and taken in respect of the same during the year. It shall also record the action taken by him, or on his advice, during the year, in regard to offensive trades, bakehouses, and workshops.

15. He shall give immediate information to the Local Government Board of any outbreak of dangerous epidemic disease within the district, and shall transmit to the board, on forms to be provided by them, a quarterly return of the sickness and deaths within the district, and also a copy of each annual and of any special report.

16. In matters not specifically provided for in this order, he shall observe and execute the instructions of the Local Government Board on the duties of Medical Officers of Health, and all the lawful orders and directions of the sanitary authority applicable to his office.

17. Whenever the Diseases Prevention Act of 1855 is in force within the district, he shall observe the directions and regulations issued under that Act by the Local Government Board, so far as the same relate to or concern his office.

SECTION V.—*Remuneration.*

Art. 1. The sanitary authority or authorities, as the case may be, shall pay to any officer appointed under this order such salary or remuneration as may be approved by the Local Government Board; and where such officer is appointed for two or more districts, the salary shall be apportioned amongst the districts in such manner as the said board shall approve.

Provided that the sanitary authority or authorities, with the approval of the Local Government Board, may pay to any such officer a reasonable compensation on account of extraordinary services, or other unforeseen circumstances connected with his duties or the necessities of the district or districts for which he is appointed.

Art. 2. The salary or remuneration of every such officer shall be payable up to the day on which he ceases to hold the office, and no longer, subject to any deduction which the sanitary authority or authorities may be entitled to make in respect of Sect. III, Art. 3; and in case he shall die whilst holding such office, the proportion of salary (if any) remaining unpaid at his death shall be paid to his personal representatives.

Art. 3. The salary or remuneration assigned to such officer shall be payable quarterly, according to the usual feast days in the year, namely, Lady Day, Midsummer Day, Michaelmas Day, and Christmas Day; but the sanitary authority or authorities may pay to him at the expiration of every calendar month such proportion as they may think fit on account of the salary or remuneration to which he may become entitled at the termination of the quarter.

Given under our seal of office, this Eleventh day of Novcmber, in the year One thousand eight hundred and seventy-two.

JAMES STANSFELD, *President.*

THE DRUITT TESTIMONIAL FUND.

THE names of Drs. Gream, Porter (Dublin), Messrs. Burney Yeo, and Clover, have been added to the General Committee. The name of Mr. John Wood was inadvertently omitted from the list of those who were present at the preliminary meeting.

Mr. Haynes Walton, the Treasurer, begs to acknowledge the receipt of the following subscriptions up to Wednesday, the 13th inst.

	£	s.	d.		£	s.	d.
Sir James Paget	10	10	0	Mr. Burney Yeo	5	5	0
Miss C. W. Edmonds	10	10	0	Mr. Clover	5	5	0
Dr. Peregrine	10	10	0	Mr. Squire	5	5	0
Dr. Arthur Farre	10	10	0	M. Du Pasquier	2	2	0
Dr. Quain	10	10	0	Dr. Stephen Ward	2	2	0
Dr. Gream	10	10	0	Dr. E. Sheppard	2	2	0
Mr. Prescott Hewett	10	10	0	Dr. Porter (Dublin)	2	2	0
Mr. Walton	10	10	0	Mr. Fayrer	2	2	0
Mr. Churchill	10	10	0	Mr. Dixon	2	2	0
Dr. Webb	5	5	0	Mr. Tegart	2	2	0
Dr. Laycock (Edin.)	5	5	0	Dr. Cotton	1	1	0
Dr. Duncan (Edin.)	5	5	0	Dr. Bishop (Paris)	1	1	0
Mr. Lister (Edin.)	5	5	0	Dr. Boggs (Paris)	1	1	0
Miss H. M. Edmonds	5	5	0	Mr. Gay	1	1	0
Dr. Forbes Winslow	5	5	0				

Subscriptions may be sent to the Treasurer, Mr. H. Walton, 1, Brook Street, Hanover Square; the Secretary, Mr. A. Norton, 6, Wimpole Street; or may be placed to the account of the Druitt Testimonial Fund, Union Bank, Argyll Street, Regent Street. Subscriptions will be acknowledged weekly in one or more of the medical papers.

PROPOSED NEW PROVIDENT DISPENSARY FOR HOLLOWAY.

A MEETING of medical practitioners residing in the neighbourhood, summoned by the Holloway Medical Society, was held on November 1st, "to take into consideration a proposal to form a provident or self-supporting dispensary in Holloway." Mr. W. B. KESTEVEN was called to the chair, and made some remarks on the need of such a dispensary in Holloway, to relieve in sickness poor persons who could not afford to pay a doctor's bill, and who yet were unwilling to seek the medical relief afforded by the parish. These persons frequently prescribed for themselves by making a purchase at the chemist's, or get the chemist himself to diagnose their ailment and prescribe for them. The object of such a really provident dispensary would be to give such persons the opportunity of skilful medical assistance at not more than the cost of chemist's drugs.—Dr. HILLIARD said that it was proposed that the managing committee should be medical men not engaged in the working of the dispensary and an equal number of laymen, and that donations should be received to assist in the working.—Dr. DAVISON objected altogether to the formation of such a dispensary. There were already two free dispensaries in the neighbourhood, where any poor person might have advice and medicine on obtaining a letter of recommendation. There was also already a provident dispensary in Hornsey Road, struggling for existence and burdened with debt, with fees small enough to take in any independent poor person, and with two qualified surgeons on the staff who are always at their post. This provident dispensary could not succeed because of its free rivals. The formation of a new dispensary, depending to any extent on the donations of the public, would add another to the multiplicity of charities in Islington. The proposed scheme had failed wherever it had been tried, except in Nottingham and Camberwell, where there were no free dispensaries to compete with the provident, and where the practitioners are willing to add their club practice to that of the dispensary.—Mr. SOUTTER asked if a plan could not be devised by which the existing free and provident dispensaries and the proposed provident dispensary could coalesce and have one managing and working staff.—Dr. WHITE proposed that, as a dispensary was likely to be a complete failure, a Holloway Medical Provident Club be formed. This would obviate the expenses of a dispenser and dispensary, and all that would be necessary would be a room to issue orders to members for attention by the staff.—After some discussion, this proposal was agreed to, and a committee appointed to draw up details.

COHNHEIM'S RESEARCHES ON THE EMBOLIC PROCESSES.*

THE copious literature on the subject of embolism and its consequences, Dr. Cohnheim remarks, has been chiefly concerned with determining the anatomical condition; the mechanical causation of infarction, etc., has not been explained; and, although Virchow clearly showed that the existence of a collateral circulation was a means of preventing, in many cases, the after-effects of an embolon (infarction), yet the usual explanation, to be found in the German textbooks (Rindfleisch, Förster, etc.), is that this same collateral circulation, leading to rupture of the capillaries, is the cause of infarction. The experiments hitherto instituted have been incomplete, in so far as the conditions induced by the introduction of embola into the circulation have not been under observation from beginning to end. At a longer or shorter interval after the introduction of the embolic substance, the organs have been examined; but the intermediate process has not been objectively determined, and the explanations have been necssarily more or less fanciful. Dr. Cohnheim made his observations on the tongue of the frog, where the circulation could be at any time watched through a low power of the microscope. This organ was found to be well suited for the purpose, not only from the arrangement of the blood-vessels in its substance, but also from the peculiar origin of the lingual artery, along with the carotid, from the aorta, whereby it was possible to throw embola into the lingual and its branches, without, at the same time, plugging other parts of the vascular system. The substance used for injection was that adopted by Panum, viz., wax in minute pellets, coloured black, in the form of an emulsion. When an embolon was lodged in an arterial branch, the first and instantaneous effect was, as might be expected, that the blood was driven with increased force through the branch immediately below, the increased rapidity being continued into its capillaries and returning vein. If the obstructed artery had a collateral anastomosis, the pressure thrown upon the branch below it soon became equalised; but if the embolised artery had no anastomosis beyond the plug, the increased rapidity in the lower branch continued for some time, without leading to rupture and hæmorrhage, and became gradually less. In the obstructed artery the contents were found at rest for a distance on both sides of the embolon, on the cardiac side, as far as the next branch. It was observed, as peculiar to the frog, that the blood did not coagulate in the vessel; sometimes a closely packed column of red corpuscles occupied it, and at other times it was filled with plasma and white corpuscles alone, the variation being probably dependent on the suddenness with which the stoppage in the circulation was brought about. The condition found in the capillaries of the embolised artery, and in its returning vein, differed entirely according as there was or was not a true anastomosis. If there were, beyond the plug and between it and the capillary territory of the obstructed vessels, another branch pouring in, then the circulation in the capillaries and the vein of the embolised artery remained almost unaffected. This observation corresponded with what Virchow had previously determined. If, however, there were no such anastomosis, then very noteworthy consequences followed. An artery that has no anastomosis between the seat of the embolon and its capillary territory, may be conveniently styled, says Dr. Cohnheim, a "terminal artery" (*Endarterie*); and in the case of a terminal artery it was uniformly found, whether the artery were large or small, that the blood in it, and in its capillaries and returning vein, remained absolutely motionless up to a certain point. At the point where the vein opened into another vein coming from a free artery, and in which the circulation might be either of normal or of increased rapidity, there commenced a backward movement of the stagnating blood in the occluded vein. The free vein transmitted the greater part of its blood in the normal direction towards the heart, but at the point of junction, a portion of it formed a reversed current up into the vein of the embolised artery, whereby the stationary column of blood was driven slowly and gradually back through the vein into the capillaries, and even into the artery itself. When, under this steady pressure, the vascular territory had reached a certain degree of fulness, a rhythmical to-and-fro motion set in, and the observer satisfied himself that the blood-corpuscles were really driven forward by the to-and-fro motion as well as by the steady pressure that preceded it. After a few hours, this region had assumed a dusky red colour, and after one or two days it showed itself to the naked eye as a dark-red sharply defined wedge, beside which the rest of the tongue was markedly pale. When the organ was stretched out and examined under the microscope, the aggregate vessels of the wedge-shaped segment were seen to be densely filled with closely packed red corpuscles, which, in the capillaries, had lost their individual contour. All the other tissues within the segment remained unchanged; the epithelium was normal, the ciliary movements uninterrupted, and only a few of the muscular fibres showed a slight change.

Up to this point, the effect of an embolon has been seen to be a steady filling up (*Anschoppung*) of the vascular territory behind it, and so far the process is intelligible. But after the *Anschoppung* has lasted for some time, a new phenomenon appears, viz., hæmorrhage. Along the sides of the capillaries, numerous red corpuscles are seen to mass themselves, obscuring the outline of the vessels, and in some cases completely surrounding them. Where the capillaries lie close together, the red corpuscles agglomerate to form a heap which can be recognised as a hæmorrhagic point by the naked eye; at some points of the capillary wall the number of corpuscles is greater than at others. What is usually seen is that, at certain points, large numbers of red corpuscles slip out of the capillary, generally slowly, one after the other, sometimes more quickly, and collect into a mass. At those points, the condition of the capillary wall was in no wise different from that of the wall at other points, and no part of the whole vascular territory showed the slightest morphological change, even under the highest magnifying power, neither in the capillaries nor in the smallest veins, which are also the seat of small extravasations. The final result of this escape of blood (*Blutaustretung*), which may go on for several days, is that the blood within the dark-red wedge previously described is now located not only in the vessels, but also in the tissues, and so there results what we have long known as a "hæmorrhagic infarct."

Not satisfied with an explanation of these escapes of blood on mechanical grounds, Dr. Cohnheim instituted a set of experiments with a view to determine whether the stoppage of the circulation within a vessel did not produce an effect upon the physiological soundness (*Integrität*) of its walls. To this end, he entirely stopped the circulation in the frog's tongue by putting a ligature round it bodily at its root. On the stoppage of the circulation, the tongue remained pale or red, according as it was much or little injected with blood at the moment of ligaturing, and the relative colours of the venous and arterial blood remained unchanged. If the ligature remained on for some time, the corpuscles underwent certain changes, but no morphological change was observed in the walls of the vessels. The epithelium, the ciliary movement, and the muscular fibres were all more or less affected according to the duration of the ligature, but no changes were made out in the nerve-fibres nor in the connective-tissue corpuscles. The functional condition of the vessels was then tested by removing the ligature. If the ligature had remained on for only twenty-four hours, the circulation soon regained its normal character, the vessels having first dilated and then contracted to their usual calibre. But on the removal of a forty-eight hours' ligature, the phenomena were entirely different. The circulation recommenced without much difficulty, and the vessels dilated; but only the arteries returned to their normal size, the veins remaining dilated. The circulation in them became slower, the white corpuscles collected along the sides, and in a short time the observer could see a copious emigration of them from all the small and medium-sized veins. In the capillaries, there was a limited "diapedesis" of red corpuscles. If the ligature had remained on for sixty hours or thereabouts, the "diapedesis" or hæmorrhage from the capillaries became abundant. If the tongue remained ligatured till the fifth day, the circulation did not re-establish itself at all, and the organ became gangrenous. These results were confirmed by experiments on the lungs and mesentery of the frog, on the rabbit's ear, on the testicle of the dog and guinea-pig, and on the intestine and kidney. Other striking experiments demonstrated that the escape of blood was probably not at all dependent on the nerves, nor on the altered condition of the blood itself; and Dr. Cohnheim concludes that the arrest of the circulation within a vascular territory has such an effect upon the functional soundness of the walls of the vessel, as will account for the escape of blood that was observed in the previous experiments with the embolon. The filled condition (*Anschoppung*) of the vessels behind the embolon passes into a real infarction, by reason of the change which the vessels and, above all, the capillaries undergo in the interval, in consequence of the arrest of their regular blood-current.

In the second half of his monograph, the author applies the results determined by his experiments to explain the occurrence of infarction in the various organs of the human subject, and, in the case of embolic abscess, the causes that determine the specific rather than the mechanical action of an embolon.

Our abstract has necessarily omitted many of the collateral points made out in the research. The entire work may be recommended to English readers, not only for the important facts that it determines, but also for the very complete application of the inductive method that it exemplifies.

* "Untersuchungen über die Embolischen Processe." Von Dr. Jul. Cohnheim, Professor, etc., in Kiel. Berlin. Hirschwald: 1872.

THE MEDICAL ACT: FRAUDULENT USE OF MEDICAL TITLES.

INQUIRIES are, we undertand, frequently addressed to the Secretary of the Shrewsbury Medico-Ethical Branch of the British Medical Association, as to the precise points decided in the important prosecution of Andrews, and the appeal therefrom. We are requested, therefore, to reproduce the following accurate statement of the arguments and decision, which was published in a late number of the *Law Times*.

Tuesday, May 7.—SECOND DIVISION OF THE COURT.—(Before MARTIN, BRAMWELL, AND PIGOTT, BB.) ANDREWS *v.* STYRAP.

The Medical Act (21 *and* 22 *Vict. c.* 90.) *sect.* 40—*Title of "M.D." —"Wilfully and falsely" taking and using the same—Conviction for by justices under the above section—Evidence of the offence—Diploma of foreign university obtained by purchase only.*

A., a druggist, had attended a patient in the capacity of a medical man, and sent in to him a bill for such attendances, headed, "Mr. P. to Thomas Andrews, M.D.," setting out a variety of charges for attendance and medicine, etc. He subsequently wrote a letter signed, "Thomas Andrews, M.D." threatening legal proceedings unless the bill were paid, and he gave a receipt for the bill, when paid, signing it in the same way. There was a coloured lamp over his shop door, on three sides of which the words and letters "Thomas Andrews, M.D." were painted. It appeared that he had obtained by the payment of a sum of money a diploma of doctor of medicine from the University of Philadelphia in the United States, but that he had never been in America, or studied, or passed any examination, for such degree, and he was not registered under the Medical Act.

On appeal, from a conviction by justices under sect. 40 *of the Medical Act* (21 *and* 23 *Vict. c.* 90), *for having unlawfully, wilfully, and falsely taken and used the name, title, description and addition of "M.D.," and "thereby implying that he was then registered under the Medical Act, whereas he was not so registered," etc., it was*

Held by the Court of Exchequer (Martin, Bramwell, and Pigott, BB.) that the conviction was right and must be affirmed.

THIS was an appeal from a decision of justices, convicting the defendant, upon an information laid before them under sect. 40 of the Medical Act (21 and 22 Vict. c. 90) for falsely etc., taking and using the name and title of a physician and doctor of medicine, and it came before the court on a case stated by the justices under the 20 and 21 Vict. c. 43). It appeared from the case that, at a petty sessions in and for the borough of Shrewsbury, on the 21st December, 1871, an information was laid by the respondent against the appellant, a druggist in the said borough, charging him with having, on the 25th September, 1871, within the said borough, *unlawfully*, *wilfully*, *and falsely* taken and used a name, title, addition, and description—to wit, "M.D.," meaning thereby "doctor of medicine," and thereby implying that he, the said appellant, was then registered under the Medical Act, whereas he was not so registered, he, the said appellant, not being a person who was actually practising in medicine in England before the 1st August, 1815, contrary, etc., and upon hearing the said parties, appellant and respondent respectively, by attorney and counsel, the matter was determined by the said justices, and the appellant was duly convicted before them of the said offence, and adjudged to pay the penalty of £20, including costs, to be levied in default of payment by distress and sale of his goods; and in default of sufficient distress he was to be imprisoned for two calendar months, unless the said penalty and costs were sooner paid.

The appellant being dissatisfied with the determination of the justices as erroneous in point of law, applied to them to state and sign the present case for the opinion of this court, from which it appeared that on the hearing it was proved and found as a fact that the appellant had attended a patient, the sister of one Thomas Parton, in the capacity of a medical man, and had, on the day named in the information, sent in to the said Thomas Parton a bill in the following terms:

Mr. Parton, Shrewsbury, 25th Sept. 1871.
To Thomas Andrews, M.D.
To professional attendance, medicines, etc., late Miss Parton £17 8 6

On the 7th November following, the appellant received £5 on account of the said bill, and on the same day sent in to the said Thomas Parton another bill, headed in the same way.

Mr. Parton,
To Thomas Andrews, M.D.,
To professional attendance, medicines, etc., as per items over £17 8 6

And then followed the several items of charge for medicines, attendance, journeys, etc., on the various days specified, from 26th April to 26th August, 1871. This bill was accompanied by the following letter from the appellant to Mr. Parton:

"Sir,—Unless you settle balance of this account before Thursday week, I shall place it in the hands of my solicitor, without further notice. Yours etc., T. ANDREWS, M.D."

The balance of the said account was paid on the following day by the said Thomas Parton, who received the following bill and receipt on the 9th November:

Mr. Parton. Shrewsbury, 9th Nov. 1871.
To Thomas Andrews, M.D.
To professional attendance, medicines, etc., etc., Miss Parton.
Balance of account £12 8 6
9th Nov. 1871. Settled, EDWYN ANDREWS.

It was further proved that the appellant had a lamp over the door of his shop at Shrewsbury, on three sides of which the words "Thos. Andrews, M.D.," were painted.

A book purporting to be the Medical Register for 1871, marked on the outside "By authority," was produced by the registrar of the County Court, which he said had been issued to the court by authority for their guidance, and upon searching it the name of the appellant was not found there.

On the part of the appellant the above facts were not denied, except as to the words "unlawfully, wilfully, and falsely," and in support of the contention that the appellant did not "unlawfully, wilfully, and falsely," take and use the title of M.D., etc. (as charged in the information), a diploma of the American University of Philadelphia in the United States, dated 20th February, 1871, was put in. It was in Latin, and the following translation was handed in to the justices by the appellant.

"To all to whom this letter may reach.

"The President, Fellows, and Professors of the American University of Philadelphia, founded by the laws of the Republic of Pennsylvania, give salutation. Inasmuch as in all universities, properly and legitimately constructed, either here or elsewhere in the world, it was a praiseworthy and ancient usage that men who have not less diligently than faithfully paid attention to literature, or to ingenuous arts, or to any liberal studies whatever, meanwhile conducting themselves uprightly and honourably, should be adorned with some distinguished honour, and raised to merited dignity; and since by the laws of our Republic we possess the fullest power of distinguishing and decorating with academical titles, and of advancing to degrees in sacred theology, in arts, and medicine, gentlemen well deserving of them, we therefore, furnished with this authority, and not unmindful of the ancient usage, have adjudged, and at a meeting of the Council have decreed, the eminent gentleman devoted to the highest pursuits, Thomas Andrews, about whose proficiency in medical science and honourable character we have sufficiently inquired and scrutinised, to be worthy and fitting to be honoured as a learned man in the highest degree of dignity; wherefore, with one accord, we have both elected and made him Doctor of Medicine, and have given and assigned to him all rights and privileges which belong to that degree. Now, all and singular these proceedings we in good faith notify unto you by the present letter fortified with our seal and the signature of the President of the University, this 20th day of the month of February, in the year of our Lord 1871."

A seal, purporting to be the seal of the said university, was appended to this document, as were also several signatures, purporting to be the signatures of professors or officers thereof. A witness also proved that he held a similar diploma from the said university, and that he had been in America, and he testified to the authenticity and genuineness of the seal and the signatures appended to the appellant's diploma. He also said, on cross-examination, that a diploma could be obtained by an examination before examiners in England commissioned by the University of Philadelphia for that purpose. It was not alleged that the appellant had ever been in America, nor was any proof given that he had undergone any examination in order to obtain the diploma.

Upon these facts the justices came to the conclusion that the appellant had committed the offence charged in the information, and they duly convicted him thereof as aforesaid, and the question for this court is whether, upon the above facts, the justices were justified in coming to that conclusion, and so convicting the said appellant, or whether the fact of the appellant having obtained the above-mentioned diploma exonerated him from the charge made against him?

The following sections of the Medical Act (21 and 22 Vict., c. 90), which provides for the registration of duly qualified practitioners as therein specified, were referred to in the argument, and especially section 40, upon which the information is founded.

Section 31, empowers every person registered under the Act to practise medicine, or surgery, or medicine and surgery, as the case may be, according to his qualifications, in any part of the Queen's dominions, and to recover his reasonable charges with costs of suit, in any court of law; and by section 32, no person, after the 1st January, 1859, shall be entitled to recover any charge in any court of law for medical or surgical advice, etc., or medicine prescribed and supplied, unless upon proof that he is registered under this Act.

Section 36 provides that, after 1st January, 1859, no person, unless registered under the Act, shall hold any appointment as physician, surgeon, or other medical officer, either in the military or naval service, or in emigrant, or other vessels, or in any hospital, etc., not supported wholly by voluntary contributions, or in any lunatic asylum, etc., etc.

Section 40 enacts that any person who shall wilfully and falsely pretend to be, or take or use the name or title of, a physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine, surgeon, general practitioner or apothecary, or any name, title, addition or description, implying that he is registered under this Act, or that he is recognised by law as a physician or surgeon, or licentiate in medicine and surgery, or a practitioner in medicine, or an apothecary, shall, upon a summary conviction for any such offence, pay a sum not exceeding £20.

Huddleston, Q.C. (with him was Bullen), for the respondent, supported the conviction, and—following the course adopted in *Ellis* v. *Kelly* (3 L. T. Rep. N. S. 331 ; 30 L. J. 74, Ex., and 35, M. C.; 6 H. and N. 212) and *Jones* v. *Taylor* (28 L. J. 20, M. C.)—was called on by the court to begin. He contended that the conviction was right, and that the justices, having found all the facts and come to a decision upon them, the court would not interfere with the conclusion at which they had arrived.

R. Vaughan Williams, for the appellant, *contra*, urged that the diploma of the University of Philadelphia, which was an institution of high standing, and fully empowered to grant degrees, was a sufficient warrant for the appellant's use of the title of "M.D.," and saved him from coming within the operation of section 40 of the Medical Act. [PIGOTT, B.—The American University may be all that you say it is, but unfortunately this student has never been there.] It appears that the University is constantly in the habit of appointing examiners in other countries, and *non constat* that that was not done here. The fact of the Act of Parliament granting certain privileges to some persons, and imposing certain restrictions on others, by no means makes it unlawful to practise or to assume the title of "M.D." The Act only imposes certain liabilities or restrictions, as, for instance, by section 36, no unregistered person can hold certain medical offices there specified. If it be contended that the mere fact of practising as a "Doctor," without being registered, is an offence, the answer is in that section. The offence must be something more; a man must practise as a doctor with the object of obtaining the privilege conferred by the Act on registered individuals, or of avoiding or getting rid of the disabilities imposed upon non-registered persons. The mere fact of using the letters "M.D." after his name is no evidence of the offence, or of doing anything coming within the two last-mentioned heads The case of *Ellis* v. *Kelly* (*ubi sup.*) is an authority that the merely appending "M.D." to one's name is no offence under the Act. In the present case it was done under a supposed right by virtue of the foreign diploma, and *Ellis* v. *Kelly* as well as *Pedgrifft* v. *Chevalier* (20 L. J. 225, M. C.; 8 C. B., N. S. 246), show that that is no offence. The evidence in the present case is very similar to that in *Ellis* v. *Kelly*, and the remarks of the court there, and particularly those of Bramwell, B., that it is the doing the thing "wilfully and falsely" that constitutes the offence under the Act, which doing it under a supposed, even if it be a mistaken, right cannot be held to be, are very applicable here. The appellant here had a foreign diploma. [MARTIN, B.—It is no diploma at all, it is a mere pretence. BRAMWELL, B —The matter does not appear to me now as it appears to have appeared to me then.] It is submitted that there is no evidence here of the appellant having done anything more than incorrectly or mistakenly used the title of "M D." In this case it is an American degree, in *Ellis* v. *Kelly* it was a German one. *Pedgriff* v. *Chevallier* (*ubi sup.*), shows that the mere fact of a man's name not being in the medical register is not sufficient to warrant a conviction, for which purpose there must be evidence of wilful falsity, of which there is here an entire absence. To hold the appellant guilty of the offence would seriously affect hundreds of Scotch practitioners who are not registered under the Act.

MARTIN, B.—I believe we are all of opinion that the justices were perfectly right and thoroughly well warranted in the conclusion at which they arrived upon the facts of the case, and that, therefore, this conviction must be affirmed. It is plain to my mind that this is a question of fact. There was ample evidence that this appellant *wilfully* (for he did it on purpose) and *falsely* (because he pretended thereby to be on an equal footing with any regularly bred and registered physician or M.D. in England) took, assumed, and used the title of "M.D.," under a diploma obtained by him from an American university, without any course of previous study or any examination, but simply on the payment of a sum of money, and which diploma, therefore, he must have known to be in fact utterly worthless and valueless as an indication of the possessor's merit, learning, and skill as a physician, or as giving him any of the privileges of a registered medical man. I am glad to hear from a learned gentleman now in court that the American Legislature have recently prohibited the granting of these degrees to persons on the payment of a sum of money only, and without a previous course of study and preliminary examination. The conviction must be affirmed.

BRAMWELL, B.—I entirely agree with all that has been said by my brother Martin.

PIGOTT, B.—I also concur in thinking that this conviction must be affirmed.

Judgment for the respondent, affirming the conviction, with costs.

Attorneys for the appellant, Needham, Power, and Needham, 1, New Inn, Strand, W.C., agents for H. Morris, Shrewsbury.

Attorney for the respondent, E. F. Cooke, 3, Serjeant's Inn, Chancery Lane, W.C., agent for Chandler, Shrewsbury.

ON THE DURATION OF INFECTION.

AT the annual meeting of the Lancashire and Cheshire Branch, held in Manchester on June 26th, 1872, Dr. Ransome read a paper on the duration of infection. Some discussion followed; and it was resolved that the following committee should be appointed to inquire into the whole question: Thomas Mellor, Esq., President of the Branch (chairman); Drs. Ransome, Crompton, Hardie, Leech, Morgan, Noble, Simpson, Whitehead, Eason Wilkinson, and G. M. Harrison, Esq., with Dr. Haddon as Honorary Secretary.

The committee have framed the accompanying circulars, in the hope of collecting information from the profession on the subject of infection generally; and they would feel obliged if the members of the Association would kindly assist them by forwarding any facts they may possess, or cases they may meet with in the course of their practice. Schedules for recording cases can be had on application to the Hon. Secretary.

Case of Infection.—A, Relating to Infected Person: 1, Disease; 2, Age; 3, Sex; 4, Social position; 5, Supposed source of infection; 6, Length of time from supposed infection to the outbreak of the disorder; 7, Other possible sources of infection.

B. Relating to the case from which the infection is supposed to have arisen: 1, The time before the outbreak of the disease, or after it, at which the disease was communicated; 2, whether desquamation had been completed; 3, whether disinfection had been practised—in what manner and to what extent?

BRITISH MEDICAL ASSOCIATION: LANCASHIRE AND CHESHIRE BRANCH.—COMMITTEE ON THE DURATION OF INFECTION.

SIR,—The following committee has been appointed for the purpose of collecting information with regard to the duration of infection.

May I ask that you will kindly assist us in obtaining definite and authentic evidence on the subject: first, by answering the following questions; and second, by noting on the accompanying sheets any cases which may throw light on the question.

I am, yours truly, JOHN HADDON, M.D.,
Hon. Secretary.

Monkshall, Eccles, Manchester, July 26th, 1872.

The following diseases have been selected for investigation: Smallpox, measles, scarlet-fever, diphtheria, typhus, typhoid, hooping-cough, and mumps.

The Committee would be glad to receive information under the following heads: 1. Facts suggestive of the period of incubation in any of these diseases. 2. Evidence of contagion from any case before its full development; *e.g.*, in the case of the exanthemata before the appearance of the rash. 3. Cases showing how long any one, or more, of these diseases remain personally communicable, apart from clothing or other fomites. 4. Information as to the protective power of any process of disinfection of rooms or clothing.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Opening of the Winter Courses.—Archebiogenesis.

THE winter courses of the Faculty have just recommenced. They have been subject to so many changes lately in the *personnel* of its professors, that your readers may not be sorry to have a list; the more so, as it will afford a synoptical view of the official course of instruction in this school, which is not quite so degenerate as my friend, your French correspondent, in his patriotic zeal for reforms, is led to believe and to state. His letters have attracted a good deal of attention here; and, while most persons admit that they have a large proportion of justice and truth, they are thought to be a little exaggerated in their tone of self-depreciation, and by some they are greatly resented.

Not to digress, the winter courses include *Medical Physics* (general physics, electricity, and light), by M. Gavarret—a course which, I presume, your correspondent Mr. Christopher Heath would recommend all students even for the higher degrees of the London University to eschew as rubbish, but which, in this school of "alleged degeneracy", is considered to be absolutely essential even to students who aspire only to ordinary positions. These are given on Wednesday and Friday; and *Biological Physics* (the physical phenomena of vision), by the same lecturer, on three days a week: Surgical Pathology, by M. Cruveilhier, for M. Dolbeau, who has been worried into illness by the attacks on him for not saving a Communist prisoner who sought to escape from the hospital in disguise and by changing his name; Anatomy, by M. Sappey; Pathology and General Therapeutics, by M. Chauffard; Medical Chemistry, by M. Wurtz, our venerable Dean—General Chemistry twice a week, and Biological Chemistry (chemical phenomena of respiration and nutrition) three times a week; Medical Pathology, by M. Axenfeld; Diseases of Genito-urinary Organs, Operations, and Surgical Apparatus, by M. Tillaux; Histology, by M. Robin; History of Diseases, by M. Ollivier. The chair of History of Medicine is unfortunately vacant by the recent death of the learned and unfortunate Daremberg; during the winter, the duties of the professorship will be performed by M. Ollivier. The Medical Clinique will be conducted by M. Bouchard and M. G. Sée at the Charité, by M. Béhier at the Hôtel-Dieu, M. Lasègue at the Pitié; the Surgical Clinic, by M. Richet, M. Gosselin and M. Verneuil, an inexhaustible mine of learning, and an admirable teacher; Accouchements, by MM. Broca and Depaul; and Diseases of Children, by M. Roger. In this series you will miss courses on ophthalmic and aural diseases, of which we have no official winter courses and no highly qualified professors since Liebreich left us for your more favoured shores, where political differences do not embitter the world of science. We have never had a French aural surgeon of any greater repute than Bonnafont or Triquet, who count for nothing in the world of science, at home or abroad.

The opening is unmarked by any ceremony. We are spared the dozen or two of harangues which fill the English medical journals annually on such occasions. We have not even any sort of public gathering; that is because our students will not behave themselves, and are politically troublesome.

Advantage has been taken of the vacation to make additions and improvements in the buildings of the Faculty. At the École Pratique, a laboratory of biological chemistry has been added to the recently constructed microscopical laboratory. It is intended for senior students desiring to undertake researches in physiological and pathological chemistry, in preparing for their theses for the doctorate. The chemical laboratory of the Faculty has also been enlarged. The vacancy in the chair of Pathological Anatomy of Operations, formerly occupied by M. Denonvilliers, has been officially declared. MM. Félix Guyon and Léon Lefort are the principal candidates; for the chair of History of Medicine, vacant by the death of the lamented Daremberg, MM. Bouchut and Lorain. For M. Vulpian's chair of Pathology, his twin brother Charcot is the favourite candidate. Charcot and Vulpian were for a long time the Castor and Pollux of experimental physiology and pathology. Their work was done and published jointly. One was so accustomed to hear their names coupled, that, if one was announced in a room, the other was looked for. It was said that, when it was announced at the hospital that M. Charcot had become a father, every one asked, "Et Vulpian?" Charcot will probably succeed Vulpian on this occasion, as two men cannot sit on one chair. Vulpian has gracefully occupied for only a short time, and yields to his colleague.

MM. Pasteur and Frémy are fighting at the Academy of Sciences over Archebiogenesis, very much like Tyndall and Bastian, or Huxley and Beale. Pasteur could not contain himself at the last meeting, and incessantly interrupted Frémy at every sentence. Boiling over with irritation, he jumped constantly to his feet; and the two were often declaiming at once. Frémy insisted that he should like to repeat his experiments in company with Pasteur; but the Academy was fearful of the experiment of shutting two such excitable *savans* in a laboratory together to compose their differences. Although each makes small account of the other, the Academy thinks highly of both; and it is probable that a commission will be appointed to examine their experiments. It is very unlikely, however, that it will be able to decide anything. If Dr. Bastian would send over a report of his experiments just now, it would be very à *propos*. Frémy is rather overweighted, and wants assistance.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

THE November meeting of the members of this district will be held at Mellison's Hotel, West Street, Brighton, on Tuesday, November 19th, at 3 o'clock; Dr. WITHERS MOORE in the Chair.

A contribution is promised by Dr. Milner Barry of Tunbridge Wells, entitled "A Note on the Treatment of Purpura Hæmorrhagica."

Members are requested to attend prepared to express their views on the Public Health Act.

On this occasion, the Directors of the new Marine Aquarium offer free admission to the members from 3.30 P.M. to 5.30. The building will be illuminated, and the tanks lighted up, for the first time in public, by gas-light; and the manager, Mr. Lord, has kindly promised to conduct the members and direct attention to the characteristics of the more remarkable occupants of the tanks.

All members of the South-Eastern Branch are entitled to attend this meeting, and to introduce professional friends.

Dinner will be provided at Mellison's Hotel, at 5.45 precisely. Charge 5s., exclusive of wine.

By invitation of the Chairman, luncheon will be provided at the Hotel, from 1.30 to 3.

THOMAS TROLLOPE, M.D., *Honorary Secretary.*

35, Marina, St. Leonard's-on-Sea, November 1872.

SHROPSHIRE SCIENTIFIC BRANCH.

THE annual meeting will be held in the Natural History and Antiquarian Museum, Shrewsbury, on Wednesday, Nov. 20th, at 1.30 P.M.; Dr. H. NELSON EDWARDS, President of the Branch, in the Chair.

Papers will be read, and interesting specimens and objects exhibited.

Gentlemen intending to read papers will kindly communicate with the Honorary Secretary.

The Dinner will take place at the George Hotel at 4 o'clock, for 4.30 exact time. Members can introduce friends.

SAMUEL WOOD, F.R.C.S., *Honorary Secretary.*

Shrewsbury, October 30th, 1872.

CORRESPONDENCE.

THE VOLUNTEER MEDICAL REGULATIONS.

SIR,—The view which you expressed in a leading article this week on the duty of the profession, if Mr. Cardwell persist in forcing offensive regulations on Volunteer surgeons, is unquestionably the right one. We must decline to have anything to do with the Volunteer movement in our professional capacity. It is evident, I think, that Mr. Cardwell is waiting until the indignant feeling shown by the Volunteer surgeons regarding the "twopence per week", for compulsory attendance on members of the staff, subsides, when he probably fancies that the doctors will pocket their "coppers" and say no more about the matter.

It would be well, sir, I think, to impress upon Mr. Cardwell that this is not and cannot be the view of our profession. I await with interest the solution of Mr. Cardwell's reticence on the subject. It would be well to know if any Volunteer Surgeons have been officially offered remuneration for attendance on any member of the staff.

I am, etc., A VOLUNTEER MEDICAL OFFICER.

November 2nd, 1872.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

THE Vestry of St. Luke's, Middlesex, at its meeting on Tuesday, appointed the medical officer of health analyst, at a salary of £150 *per annum*. We understand that Dr. Pavy, in undertaking these duties, will employ the aid of a skilled assistant, whose services will also be devoted to the prosecution of the physiological and pathological researches carried on in his laboratory at Guy's Hospital.

WORKHOUSE DIETARY.

DR. W. DOMETT STONE has addressed to the *Times* a very sensible protest against the proposed exclusion of potatoes from workhouse dietaries at Marylebone and the substitution of peas, beans, and rice. He very justly dwells on the great value of potatoes as an antiscorbutic dietary, and recommends "that instead of expunging the potato—the most valuable of all succulent vegetables—from the dietary scale, a smaller quantity be given and the deficiency made up by onions, greens, carrots, turnips, tomatoes, watercress, sorrel, dandelion, oranges and lemons, or a small quantity of lime-juice, all of which may be reckoned among the valuable antiscorbutic vegetables." The impression had previously existed that a medical officer of the Poor-law Board was charged to superintend dietaries. Were these economical discoveries of Mr. Douglas submitted to his judgment? We observe that many other boards of guardians had prepared to follow the Marylebone example.

THE PUBLIC HEALTH ACTS AND ADULTERATION OF FOOD.

IN consequence of the statements which have appeared in the journals regarding the arrangements proposed to be made by the Local Government Board for carrying into effect the provisions of the Public Health Act, the Executive Council of the South-Eastern Branch of the British Medical Association (which council represents about 320 medical practitioners, resident chiefly in Surrey, Sussex, and Kent), held a meeting at Redhill, Surrey, November 7, 1872, to consider the Act and the new Adulteration of Food Act. It was unanimously resolved :

1. That it would be most unwise, and an impediment to the real progress of sanitary work, that the supervision of the sanitary wants of this country should be committed to men having no special knowledge of the sanitary or medical questions which they would be called upon to inquire into ; and that the proposed appointment of non-medical men to be Inspectors under the Act would be a retrograde step, and certain to impede the objects for which the Public Health Act was obtained.

2. That, although it is requisite that the proposed Medical Officers of Health should have the active co-operation and assistance of every medical man holding an appointment under a Local Government Board (and which latter medical men should be paid for the extra services thus rendered) it is nevertheless highly desirable that the areas supervised by those Medical Officers of Health should not be of limited extent, but should generally be arranged with reference to the drainage or water-shed of the district, and independently of the parochial or parliamentary boundaries.

3. That in the appointment of analysts under the Adulteration of Food Act, preference should be given to men having special qualifications for such duties, and who would also be entirely independent of personal interest in the trade of their several districts. The ordinary dispensing chemists and druggists of this country are, therefore, not qualified for such posts.

4. That these resolutions be printed, and a copy sent to the Committee of Council of the British Medical Association, to the honorary secretaries of each of its Branches throughout the kingdom, and to the editor of its JOURNAL ; likewise to the Members of Parliament representing the three counties included in this Branch of the Association.

5. That Dr. Alfred Carpenter (Croydon), President of this Branch ; Mr. G. F. Hodgson (Brighton), honorary secretary of ditto ; Dr. C. Holman (Reigate) ; Mr. Albert Napper (Cranleigh, near Guilford) ; and Mr. T. Heckstall Smith (St. Mary Cray, Kent) ; be deputed to obtain an interview with the President of the Local Government Board ; and when an appointment has been made, to invite the other members of this Executive Council to accompany them, and join in impressing upon the attention of the President the importance of the matters herein dwelt upon.

MR. C. WILSON (Newtown Mills).—We should be opposed to appointing a medical officer for so small a district. The neighbouring unions should unite to appoint a medical officer over a much larger area.

MEDICAL NEWS.

PROVINCIAL MEDICAL SCHOOLS.

THE following table represents the numbers of students attending the classes of the provincial medical schools during the present session. As compared with last session, the present one shows an increase at all the schools except that of Bristol, where the number registered last year was thirty-six.

	Total registered.
Birmingham, Queen's College	59
Bristol Medical School	33
Cambridge University School	30
Leeds School of Medicine	40
Liverpool Royal Infirmary School	81
Manchester Royal School of Medicine	124
Newcastle College of Medicine	55
Sheffield Medical School	17

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were duly admitted Fellows of the College, on the 31st day of October, 1872.

Cayley, William, M.D.Lond., Welbeck Street
Madden, William Herries, M.D.Edin., Torquay
Murray, William, M.D.Durham, Newcastle-upon-Tyne
Tetley, James, M.D.Edin., Torquay

The following gentlemen were duly admitted Members of the College, on the 31st day of October, 1872.

Bruce, John Mitchell, M.B.Lond., Gray's Inn Place
Sparks, Edward Isaac, M.B.Oxford, Crewkerne, Somersetshire

UNIVERSITY OF LONDON.—Second M.B. Examination, 1872. Pass List.

First Division.

Ashby, Alfred, Guy's Hospital
Barfoot, George Harry, University College
Birt, George, Birmingham General Hospital, and University College
Branfoot, Arthur Mudge, Guy's Hospital
Cane, Leonard, University College
Dalton, Benjamin Neale, Guy's Hospital
Eardley-Wilmot, Robert, King's College
Godlee, Rickman John, University College
Greenfield, William Smith, University College
Harris, Michael, Guy's Hospital
Harris, Robert, Guy's Hospital
Jones, Thomas, Guy's Hospital
McCann, Thomas Anthony Aloysius, University College
Nankivell, Charles Atkinson, University College
Ottley, Walter, University College
Perkins, Charles Edward Steele, Guy's Hospital
Philpot, Joseph Henry, King's College
Russell, Ebenezer Geer, Guy's, and Royal Victoria Hospital, Netley
Saunders, Henry William, St. Thomas's Hospital
Warner, Francis, King's College

Second Division.

Hoar, Charles Edward, King's College
Owen, Edmund Blackett, St. Mary's Hospital
Taylor, Herbert, St. Bartholomew's Hospital
Williams, William, Guy's Hospital
Yate, Edward, St. Bartholomew's Hospital

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 7th, 1872.

Brady, John Charles, Lady Somerset Road, N.W.
Cowfield, Thomas, Chigwell, Essex
Duke, David, Kennington Park Road
Lyth, John Burdsall, Sheffield
Townend, Joseph Henry, Hackney Road

The following gentleman also on the same day passed his primary professional examination.

Waller, William Bevan, St. Thomas's Hospital

As Assistants in compounding and dispensing medicines.

Plimmer, William Thomas, Uttoxeter
Robertson, Frederick Freer Leslie, Camberwell Road

MEDICAL VACANCIES.

THE following vacancies are announced :—

ALNWICK INFIRMARY—House-Surgeon : £105 per annum, furnished apartments, attendance, coals, and gas.
BRADFORD, Yorkshire—Medical Officer of Health : £500 per annum.
BRISTOL GENERAL HOSPITAL—Assistant House-Surgeon : £50 per annum, board, lodging, and washing.
CAMBERWELL, Surrey—Dispenser at new Infirmary, Havil Street : £90 per annum, residence, coal, and gas.

CHARING CROSS HOSPITAL MEDICAL SCHOOL—Demonstrator of Anatomy: £150 per annum.
CHELSEA—Medical Officer for the South East District: £80 per annum, and extra fees.
CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Assistant-Physician.
CONVICT PRISON, Spike Island—Medical Attendant: £300 per annum, rations, fuel, light, and unfurnished quarters.
COUNTY DOWN INFIRMARY, Downpatrick—Assistant-Surgeon and Registrar.
CRAIGNISH, Argyleshire—Parochial Medical Officer.
DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION—Medical Officer: £200 per annum and residence.
FRIENDLY SOCIETIES MEDICAL INSTITUTE, Northampton—Medical Officer: £180 per annum, with residence.
GENERAL INFIRMARY, Northampton—House-Surgeon: £125 per annum, furnished apartments, board, attendance, and washing.
HALIFAX INFIRMARY—Dispenser: £60 per annum.
H.M.'s NAVAL HOSPITALS—Dispensers.
HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square—Two Consulting-Physicians.
HOWDEN UNION, Yorkshire—Medical Officer and Public Vaccinator for the Newport District: £32:10 per annum, and extra fees.
ISLINGTON—Medical Officer for the Canonbury District: £75 per annum.—Medical Officer of Health.
KILDALTON, Islay—Parochial Medical Officer: £70 per annum, and medicine for the paupers.
KING'S LYNN UNION, Norfolk—Medical Officer for the South District: £60 per annum.
LEICESTER PROVIDENT DISPENSARY—Medical Officer.
LIVERPOOL—Third Medical Inspector of Emigrants at Liverpool: £300 per ann.
LONDON FEVER HOSPITAL—Resident Medical Officer: £200 per annum, residence, coal, gas, and attendance.
MEATH INFIRMARY, Navan—Apothecary, Secretary, and Registrar: £52:13:8 per annum, furnished apartments, coal, and gas.
NEATH UNION, Glamorganshire—Medical Officer of Health for the Rural Sanitary District of the Union.
OWENS COLLEGE, Manchester—Assistant Lecturer in Chemistry and Junior Demonstrator in Chemical Laboratory: minimum income, £250 per annum.
ROYAL COLLEGE OF SURGEONS, England—Member of the Court of Examiners.
ROYAL COLLEGE OF SURGEONS, Ireland—Professor of the Theory and Practice of Physic.
ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN—Resident Medical Officer: Assistant to the extra Physicians.
ST. THOMAS'S HOSPITAL—Medical Registrar.—Surgical Registrar.
SOUTH STONEHAM UNION—Medical Officer for District No. 4: £50 per ann.
SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds—Three Physicians.
TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser: £100 per annum, furnished apartments, coal, gas, and attendance.
TIVERTON UNION, Devon—Medical Officer for the Cadbury and Cadeleigh District: £20 per annum.—Medical Officer for the Washfield District: £15 per annum.—Medical Officer for the Workhouse: £30 per annum.
WESTMINSTER GENERAL DISPENSARY, Gerrard Street, Soho—Surgeon.

AT the last meeting of the trustees of the New South Charitable Infirmary and County Hospital, Cork, the following resolution was passed: "That the best thanks of the trustees of the South Infirmary and County Hospital be given to Dr. Budds, who, for the last six years and a half, has held the office of house-surgeon, and who, during that period, has given the greatest satisfaction in the discharge of his onerous duties, and with whom they now part with regret."

COMMUNICATIONS, LETTERS, ETC., have been received from:—
Dr. George Johnson, London; Mr. J. W. Hulke, London; Dr. J. Warburton Begbie, Edinburgh; Dr. Duffin, London; Dr. A. Edis, London; Dr. Angus MacDonald, Edinburgh; Mr. Warrington Haward, London; Mr. S. Wood, Shrewsbury; Dr. Hollis, London; Dr. J. W. Moore, Dublin; Mr. Lawson Tait, Birmingham; Dr. Hyslop, Church Stretton: Mr. Board, Bristol; Mr. R. Heard, Ramsey; Mr. Raby, St. Germains; Mr. Preston, East Grinstead; An Associate; Mr. A. T. Norton, London; Mr. Luke Armstrong, Newcastle-upon-Tyne; Dr. H. H. Phillips, Reading; Mr. H. W. Jackson, Surrey Asylum; The Secretary of the Clinical Society; M.D.Edinburgh: Dr. Dickinson, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. Wanklyn, London; The Secretary of the Pathological Society; Mr. John Wood, London; Mr. Wheelhouse, Leeds; A Member; Mr. R. Harrison, Liverpool; Mr. Kershaw, Littleborough; Mr. T. L. Gentles, Derby; Dr. H. S. Leverton, Truro; Dr. T. Gibson, Bedford; Mr. Bellamy, London; Dr. H. Tibbits, London; Dr. Ogston, Aberdeen; Our Dublin Correspondent; Dr. Cheadle, London; Mr. Callender, London; M.D.; Our Liverpool Correspondent; Mr. Dyke, Merthyr Tydfil; The Secretary of the Hunterian Society; Mr. Soutter, London; Mr. T. H. Bartleet, Birmingham; The Secretary of the Royal College of Physicians; Mr. T. Vincent Jackson, Wolverhampton; Mr. H. Cripps Lawrence, London; Mr. Worth, Nottingham; The Secretary of the Harveian Society; Mr. Molony, Waterhead; Mr. S. Messenger Bradley, Manchester; Mr. G. Lawson, London; Mr. Richard Davy, London; Our Aberdeen Correspondent; Mr. Harry Leach, Greenwich; Mr. G. C. Coles, London; Mr. Garstin, London; Mr. Land, Exmouth; The Director-General of the Medical Department of the Navy; Dr. Bradbury, Cambridge; Dr. Morgan, Dublin; Dr. Maclagan, Dundee; Dr. S. Haynes, Malvern Link; Mr. Hodgson, Brighton; The Registrar of the University of London; Mr. Hunter, Lynn; Dr. Partridge, Stroud; Mr. Haynes Walton, London; Dr. Trollope, St. Leonard's; Mr. E. Harley, Saffron Walden; Mr. Groves, London; etc.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY .... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Bond, "A Case of Poisoning by Sulphuric Acid"; Mr. Bryant, "Dislocation of the Humerus"; Dr. Routh, "On Overwork and Premature Mental Decay and its Treatment."

TUESDAY.—Pathological Society of London, 8 P.M. The following specimens will be exhibited. Mr. Bellamy: The Parts, six years after Excision of the Astragalus. Dr. Crisp: Gordius in the Lungs of Sheep. Dr. Moxon: Abscess of the Liver bursting through the Hepatic Vein into the Cava and Right Heart. Dr. Moxon: Acute Interstitial Pneumonia. Dr. Tilbury Fox: A Case and Specimen of Scleroderma. Mr. De Morgan: Perforation of the Diaphragm and Intestine by a Fractured Rib. Mr. Fairlie Clarke: Specimen of Epulis. Mr. Spencer Watson: Five Recurrent Fibroid Tumours. Mr. Cooper Forster: Fracture of the Base of the Skull, from a patient who lived three months after the accident. Dr. C. T. Williams: Mediastinal Tumours and Dilatation of the Bronchi. Dr. George Johnson: Paralysis of the Vocal Cords associated with Aneurism of the Aorta. Mr. Nunn: Cast of the Inferior Extremity, showing Curvature of the Femur. Mr. Arnott: Epithelioma of the Labium Pudendi in a girl aged 20. Dr. R. King: Extreme Aortic Stenosis.

THURSDAY.—Harveian Society of London, 8 P.M. Dr. W. H. Broadbent, "On Meningitis in Children."—Hunterian Society, 8 P.M. Mr. Rivington, "On Cases of Ruptured Bladder."

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Schliep, "On the Stomach-pump in the Treatment of Chronic Gastric Catarrh and Dilatation"; Mr. T. Nunn, "On Two Cases of Cancer of the Breast, illustrating the Chronic and Acute Forms of the Disease"; Mr. Hulke, "On a Case of Œsophageal Spasm in a Child"; Dr. C. Theodore Williams, "On Cases of the Pyrexia of Phthisis treated by Cool Baths."—Quekett Microscopical Club (University College, Gower Street), 8 P.M. Mr. B. D. Jackson, F.L.S., F.R.M.S., "On the Fall of the Leaf."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Corre spondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. MORGAN'S paper and woodcut have been delayed in transmission, and shall appear next week.

DR. BRADBURY'S paper is in type.

MR. S. WOOD (Shrewsbury) will find a notice of the subject to which he refers in the JOURNAL for October 19th.

THE evidence at the inquest on Rachel Hewitt, Hunslet, was instructive, as affording another example of the danger of delay in attending the summons to a lying-in woman. The surgeon, however, appears to have been suffering from illness and exhaustion.

M.D.EDIN. can obtain all particulars respecting the Swiney Lectureship on Geology by applying to J. Winter Jones, Esq., Principal Librarian, British Museum. Its connexion with the Middlesex Hospital School was only due to the fact that Dr. Cobbold, who last held the appointment, was a lecturer at the school.

MR. WORTH.—It is not possible to prolong the correspondence indefinitely. With Mr. Worth's two long communications, and Mr. James Lane's very able exposure of his errors and fallacies of statement, the subject may for the present be considered exhausted.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

PREGNANCY AT AN ADVANCED AGE.—In the last number of the JOURNAL is a paragraph with the above heading. The following is a copy of a newspaper paragraph cut out some years ago. "The *Cincinnati Inquirer* says: Dr. W. M'Carthy was in attendance on a lady aged 69 years, on Thursday night last, who gave birth to a fine boy. The father of the child is 74 years old. Mother and child are doing well. This a remarkable phenomenon, and has created much discussion among the physicians of the city."—S. H.

SIR,—"Inquirens" can effect the removal of a patient from one private asylum to another by getting the signer (if he be dead or incapable, then his representative) of the order on which the patient was admitted to write to the Commissioners in Lunacy (19, Whitehall Place, London, S.W.), with the name of the patient, and the asylum where he is, and where it is proposed to remove him to, for their "sanction". Upon the receipt of this from them, the patient, if not unfit to travel, can be removed, within fourteen days, to the asylum named, without new certificates, and, therefore, without any other expenses than those of removal. The superintendent of the asylum whence the patient goes sends his certified copy of the order and certificates with him to the superintendent of the asylum to which the patient goes. I am, etc.,

Nov. 12, 1872. S. L. H.

MR. BRIGSTOCKE (Calne).—The Notes on a Cholera Epidemic shall appear next week.

HYPODERMIC USE OF STRYCHNIA IN ORGANIC AND FUNCTIONAL INFIRMITY OF SIGHT.

SIR,—In reply to the query of your correspondent, signing himself "Surgeon", in the number of Oct. 12, respecting the article in *Chambers' Journal* on the Hypodermic Injection of Strychnia for the cure or relief of "amaurosis", I beg to say that I expect the article in question derives its origin and importance from its being an extract from a monogram by Professor Nagles of Tübingen, in which he speaks most highly of this mode of treatment. I have under my care at the present time a gentleman who consulted the Professor during his visit to the Ophthalmological Congress; and, by his advice, I have been using the remedy for about five weeks twice daily, commencing with the sixtieth of a grain, until I have reached the twenty-eighth of a grain. I should add, however, that the patient had been taking strychnia in combination with iron over a long period of time. I have not noticed any manifestation of the effects of the drug on any occasion when injected. The case is one of organic amaurosis of long standing. The patient declares himself much improved, and finds his way about better. At all events, although I doubt the extent of improvement, I do think it has done something towards rendering the disease stationary. I am, etc.,

Oct. 19, 1872. W. C. GARMAN.

SIR,—The following case may serve as a small contribution to the discussion of the above subject. About a month ago, I had a patient who had been complaining for some time of great weakness of sight, with large black motes constantly floating before the eyes. I injected hypodermically the one-hundred-and-twentieth of a grain of strychnia, using the ordinary liquor strychniæ of the *Pharmacopœia*, with considerable benefit. A few days later, I repeated the injection, using one-hundredth of a grain, which developed mildly the physiological effects of strychnia; and since then the motes have entirely disappeared and the eyesight is much stronger. I made no ophthalmoscopic observations.

I am, etc., W. R. DUGUID, M.A., M.B.

Buckie, N.B., Nov. 5th, 1872.

SIR,—May I be permitted to append to the very comprehensive and obliging report of Mr. Howard Marsh on "The Means employed in the Medical Schools of Great Britain for the Preservation of Subjects for Dissection", which I have but recently seen, the remark, that I have found that, for obvious reasons, the injection of my antiseptic, in relation to the completeness of its results, is best accomplished by the femoral artery; the quantity varying, according to the bulk of the remains, from three or four pints to six; the colouring matter being injected, also by the femoral artery, the following day. By this method, and in all prevailing temperatures, I have always found the cuticle, when perfect, to remain intact. I am, etc., C. H. GARSTIN.

JERSEY.—Grand fancy dress balls are, no doubt, very agreeable entertainments, but physicians are perhaps a little out of place in exercising profuse annual liberality to their townsmen in such a form; and, however much the local press may approve, it is not surprising that such annual entertainments are the subject of some ill-natured remark.

PRICE OF ETHER.—Ether of tolerable quality may be prepared even from "methylated spirit", and ought not to cost so much as one shilling per pound. "Sweet spirit", as it is called, would be as cheap as methylated spirit, if the legislature did not impose a duty upon it. We ought to demand that sweet alcohol for medicinal use should pass duty-free.

THE *Aberdeen Daily Free Press* says that a Dundee pie-glutton has accomplished the deplorably disgusting feat of eating sixteen pies in seventeen minutes. We are interested to know the pathological sequence.

STERILITY.

SIR,—In your last week's JOURNAL, under the heading of Column for the Curious, I noticed a very interesting case of sterility. I can bear testimony to a similar case, well authenticated, which for many years previous to pregnancy had been under several eminent medical men, one of whom was my late lamented friend Dr. Brinton. He believed her to be suffering from ovarian irritation, and recommended the bromo-iodine water of Woodhall Spa. She had been married fifteen years, and never conceived; she was about thirty-three years of age, in easy circumstances. She was placed under the Spa treatment. After three months she became pregnant; in about six weeks she miscarried; two months subsequently she again became pregnant, and aborted in about five months; she again conceived, and gave birth to a healthy daughter, who is now four or five years old. The mother has scarcely had a day's illness since; and there has been no increase of family. I am, etc.,

ROBERT CUFFE, M.R.C.S.Eng.

St. George's Square, N.W., November 4, 1872.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

PRECEDENCE IN HOSPITAL STAFFS.

ALPHA.—Where three physicians are elected on the same day at an infirmary, precedence is decided by the date of the required medical diploma, if they were all of the same grade in the college. If one of the number be a fellow, and thus of senior rank in the college, he would take also the senior medical rank in the hospital. The same rule applies as to surgical diplomas in the rank of surgeon at a new institution.

MR. LAWSON TAIT'S letter has been handed to the General Manager.

CONTAGIOUS DISEASES ACTS.

SIR,—Mr. Worth's letter on this subject in your number of the 2nd inst. is one of the most sensible I have seen from any opponent of these Acts, for he contents himself with stating his own opinion, without, as most of the opponents habitually do, misrepresenting the opinions of others, and objecting to the Acts for what they do not contain, such as licensing women to pursue a shameful trade, whom they do not licence, and certifying that they are "fit to use", whereas it is provided that no certificate shall be given to any prostitute at all. If all opponents of the Acts were as candid and reasonable as Mr. Worth is, they would soon come to an agreement with many of the supporters of these useful laws, the most important of whose objects would be attained if Mr. Worth's propositions were adopted; while much of what they even further desire might be accomplished by means to which he would probably offer little objection.

If a sufficient number of lock hospitals were maintained to provide for the curative treatment of all diseased women who are willing to resort to them, they could no longer urge the miserable excuse they now have that they must run the risk of spreading the disease or starve; and any who afterwards did spread disease might justly be severely punished, as all who wilfully endanger others ought to be, whether those others be consenting parties to the risk or not. One who assists another to commit suicide is guilty of murder; one who knowingly does what may endanger the health of another commits a very serious offence, which, if not legally criminal, ought to be made so, and the offender, whether male or female, may justly be made liable to punishment. It is probably true that such offence would be but rarely proved; but the liability to punishment for it must be a check upon its commission, and it might be more frequently proved than is expected.

It was found that the mere establishment of lock hospitals in the garrison towns worked very imperfectly, because on the arrival of a ship's crew or a new regiment many of the women not yet recovered left hospitals and spread disease amongst the new comers; while a great many who were diseased were never brought under treatment at all. The first evil would not occur in ordinary towns, while it is at least possible that the women might be gradually induced to resort to the hospitals; at any rate compulsion need not be resorted to until it is proved by experience to be needed, as I, for one, expect it will be.

There still remains the difficulty of providing and maintaining the requisite number of hospitals of this class. To support them by voluntary contributions, even if it were possible, would hardly be desirable, as a large part of such contributions would be withdrawn from the support of existing charities. I presume it will not be proposed to impose a license-tax on prostitutes or brothels, so as to make those who want such hospitals pay for them; but if not they must be maintained at the general expense as the supporters of the Acts design, and which is the only practicable plan. It will, of course, be objected that it is unjust to tax the virtuous to guard the vicious from the danger of vicious indulgence, and if none but the vicious suffered it might be so, but that is far from the case, and it might just as wisely be contended (as indeed it is by many) that it is unjust to tax the industrious to shelter the idle and improvident paupers from destitution, but as it is cheaper as well as safer to feed paupers than to allow them to live by theft and mendicancy, so is it better and cheaper to maintain lock hospitals than to force prostitutes to continue to spread disease, as they must and will if no refuge be opened for them.

The general establishment of a sufficient number of hospitals for the treatment of sufferers from the vice of others as well as of their own is a step in which both supporters and opponents of the Acts can agree; when that great task is accomplished, and after we have seen how far that has diminished the evil, we can decide what further step should be taken, but it must be decided by sound evidence and argument, and not by angry declamation by those who will not take the trouble of reading Acts which they do not hesitate to condemn.

I am, etc., P. H. HOLLAND.

TOBACCO AMAUROSIS.—A Detroit gentleman, 105 years old, has recently been troubled with a failing in his eyesight, and his doctor thinks it is the result of smoking to excess for the last ninety years or so.

PHOSPHORUS IN NEURALGIA.

SIR,—I regret that I did not discover, in time to prevent the error from appearing in the pages of your JOURNAL, that phosphorus is not soluble, as I stated, and as I was informed by the homœopathic chemist to whom I applied, in the proportion of ten per cent., but only of one per cent., either in alcohol or ether. Such is, however, the case, and it follows that the dose which my patient took under homœopathic guidance was one-fiftieth of a grain, and not one-fifth. Messrs. Ransome, chemists, in this city, inform me that ether is a slightly better solvent than alcohol, and I am at present using a preparation of phosphorised ether, made by them, which contains one per cent. of phosphorus. I find that this is quite strong enough for use, to be tolerable or tolerated; two drops in a wineglassful of water possessing a strong flavour of lucifer matches and warm flat-irons, which clings to the mouth for a considerable time. I am, etc., S. M. BRADLEY.

Manchester, Nov. 4th, 1872.

*** For fuller information on the subject, Squire's *Companion to the Pharmacopœia* or Bentley and Redwood's edition of Pereira may be consulted. A gelatine-coated pill is a more eligible form of administering phosphorus than phosphorated ether. Phosphorated ether is a preparation of the French Codex, and phosphorated oil of the Prussian. Ed. *B. M. J.*

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Nov. 9th; The Manchester Guardian, Nov. 13th; The Ulster General Advertiser, Nov. 9th; The Bath Express, Nov. 9th; The Scotsman, Nov. 11th; The Pembrokeshire Advertiser; The Lincolnshire Chronicle; The Norwich Argus; The Orkney Herald; The Yorkshire Post, Nov. 11th; etc.

CLINICAL LECTURES

DELIVERED IN

THE OUT-PATIENT DEPARTMENT OF THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

By W. B. CHEADLE, M.D., F.R.C.P.,
Assistant-Physician to the Hospital; Senior Assistant-Physician to St. Mary's Hospital; etc.

II.—Hydrothorax after Scarlatina.

Case.—*Dropsy after Scarlatina.—Hydrothorax.—Treatment by Digitalis.—Copious Diuresis.—Collapse of the Chest-Wall.—Complete Recovery.—Remarks.*—Frederick C., a large healthy looking child, two years old, first came here three months ago. His appearance at that time presented a great contrast to his present condition, for his lips were bloodless, his face pale and bloated, and his whole body swollen: he was suffering, in fact, from general anasarca. The history given by the mother was, that the child had had scarlatina three months previously, and when recovering from this was again laid up with what the doctor in attendance called congestion of the lungs. The boy had never been well since, and had lately become more pale and puffy in the face. The urine was examined and found to be albuminous. There was stated to be some dyspnœa, but not of any distressing kind, and the chest was not examined. The patient was ordered to take five minims of the tincture of perchloride of iron, with a drachm and a half of infusion of digitalis in caraway water three times a day. This was continued without intermission for fourteen days, at the end of which time the mother brought the child again, and related the following curious story. She did so spontaneously, and without any leading questions being put by me. She stated that the child was in the habit of passing urine in the bed, and that three nights previously the quantity had been so great that it soaked through the blankets and mattress and dripped on to the floor. Such an occurrence had never happened before, and she thought the quantity so extraordinary that I ought to be informed of it. There was another strange thing she had observed with regard to the child to which she wished to call my attention: when she stripped the child for the purpose of washing it on the morning following the night alluded to, she was struck by a curious alteration in the shape of the chest. The left side seemed to have bulged out and become unnaturally prominent in front. The change must have taken place since the previous day, since she was in the habit of giving the child a bath every morning, and also of rubbing oil into its chest, with the object of relieving the difficulty of breathing. The alteration could not, therefore, possibly have escaped her notice. She was much disturbed at the discovery of this deformity, and showed it to her husband on his return home. No other change was observed in the child's condition, except that it seemed more comfortable and slept better.

The boy's chest is now perfectly symmetrical, as far as the eye can judge, although careful measurement still shows a slight inequality between the two sides; but when he was stripped before me then, there was a remarkable difference between the two halves of the thorax in front; the left was rounded and prominent, the right flattened and retreating, especially from the second rib downwards. Very little further examination was required to show that the left side of the thorax was in its natural condition, and not "grown out", as the mother supposed. The chest was deep, and this appearance was the result of the contrast produced by the falling in of the right side. That the deformity was produced by contraction of the right side, and not by distension of the left, was further proved by the fact that all over the left side the respiratory sounds were clear and good, expansion free, and resonance perfect; while, on the right side, breathing was very deficient at the lower part of the lung, both in front and posteriorly: under the clavicle, and near the spine of the scapula, it was bronchial. At the base behind there was dulness on percussion over the lower third; and vocal vibration, which was perceptible enough on the left side, could not be felt there. The heart's apex was beating half an inch to the right of the left nipple, having been drawn over to this extent, with the mediastinum to help to fill the space previously occupied by fluid, and not yet reoccupied by the imperfectly expanded right lung. On careful measurement, the left half of the thorax was found to be ten and three-quarter inches round, the right ten inches only. This, you will remember, is the reverse of what obtains in the normal condition, the right half of the chest being usually a little larger than the left. The face was much less puffy, and the urine showed only a trace of albumen. When examined again on August 15th, the child was suffering from catarrh; coarse rhonchi were heard all over the chest. There was still deficiency of breathing and resonance at the base of the right lung, but it was less marked than before. The deformity remained without obvious change; the right side of the thorax was still flattened. On measuring the chest, however, there was now found to be a difference of half an inch only between the two sides. The urine contained no albumen; there was no sign of œdema, and the anæmia had almost disappeared. A mixture containing ammonia and senega was ordered, in place of the iron and digitalis. As the catarrh abated, cod-liver oil and steel wine were given. On again examining the chest, on September 29th, a decided change was at once perceptible. The right side had expanded, so that the difference between it and the left was not very striking at first sight, although seen distinctly enough on looking for it. Good breathing could be heard quite to the base of the lung, although this and the resonance on percussion were not so full as on the left side. The measurements gave the latter 10⅝ inches, the right 10¼ inches; the difference was reduced to three-eighths of an inch. The patient went into the country at this time and regularly improved, so that, when he presented himself again at the end of October, as far as the eye could judge the symmetry of the chest was completely restored. No visible deformity whatever remained; accurate measurement showed a difference of about one-eighth of an inch in favour of the left side. The respiratory sounds and resonance on percussion were good everywhere, and no difference in these respects could be detected between the two sides.

The account so circumstantially given by the mother, and the physical signs actually observed, reveal very distinctly the series of events which occurred in this case. The child had scarlatina, followed by dropsy, with serous effusion into the right pleural cavity. The effused fluid was reabsorbed, and collapse of the chest-wall followed. The compressed lung gradually recovered its elasticity and permeability, swelled out again to its former bulk, the bulged-in chest-wall expanded, and the right side of the thorax became symmetrical with the left. About these facts there can be no doubt whatever. The child had anasarca and albuminous urine when first seen; and although, when the chest was first examined a fortnight later, and subsequently to the diuresis, there was no large amount of fluid in the right pleural cavity, the presence of a certain quantity there, the collapse of the lung and the chest-wall, and the subsequent complete expansion, prove that the effusion had at one time been considerable. Nor can there, I think, be much question that the principal portion of the fluid was absorbed in a very short space of time. It is possible that a certain quantity might have been taken up gradually, and the resulting space filled by partial re-expansion of the collapsed lung, and some increased expansion of the opposite lung, without falling in of the chest-wall, or with collapse so slight as to escape observation. That the chest-wall should resist the external atmospheric pressure, and retain its form for any length of time after the fluid disappeared, and then suddenly give way, seems impossible, when the flexible character of the ribs in so young a child is considered. If the fluid had disappeared gradually, the ribs would have given way gradually also. That no such gradual sinking in of the right side took place, is satisfactorily established by the mother's evidence. The change must have attracted her notice, in her daily inspection of the child, long before it had reached the extent at which it had arrived when the discovery was made. There can be little doubt, I think, therefore, that the falling in of the chest-wall occurred between one morning and the succeeding one—*i.e.*, within twenty-four hours—and that this was a consequence of the fluid being rapidly absorbed at the same time.

So much seems certain; and there is no reason to doubt the mother's statement, that these events were accompanied by an extraordinary diuresis. Her spontaneous report of it, ignorant as she of course was of any possible connection between the chest-deformity and the flow of urine, is an undesigned coincidence of the highest value as a point of evidence. Now, the coincidence of these two events—the disappearance of fluid from the pleural cavity, and the elimination of an unusual quantity of fluid by the kidneys—might be an accidental coincidence, and nothing more. Yet the two processes could hardly go on together without having an influence one upon the other. If fluid were absorbed as the primary action, its presence in the blood-current in excess would probably excite diuresis, just as we know the entry of fluid into the

blood, when imbibed by the mouth, excites the flow of urine. And, on the other hand, as free circulation through the kidney was restored, and the renal tubes resumed their natural activity, a certain diuresis would ensue. In proportion to the increase in the amount of fluid drawn off from the blood would be the tendency of the vessels generally to take up more, and those of the pleura would be in a condition to respond to the demand, and drink up again the liquid which they had previously poured out.

The dropsy in this case was, no doubt, simply mechanical, the result of an exosmose from the retardation of the blood-current and increased pressure in the blood-vessels, caused by the obstruction to the circulation through the kidneys and the systemic capillaries, and by the stoppage of the ordinary drain from the kidneys. When the obstruction was removed, the pressure would be relieved, the velocity of the blood-current restored, and endosmose would set back into the vessels again.

And here I may remind you that effusions into the pleura occurring in the course of scarlatinal dropsy are of two kinds; viz., those depending upon a mechanical cause—the obstruction to the circulation through the kidney and systemic capillaries—and those resulting from inflammation of the lining membrane. Now there is a striking difference between the two with regard to their amenability to treatment. Simple hydrothorax, dropsy of the pleura, is much more readily removed than effusion resulting from pleurisy: and the reason is intelligible enough. The cause in both cases is indeed temporary, but the condition of the parts after this has passed away is widely different. In simple dropsy of the pleura, which I take to have been the pathological state in the case we are considering, the absorbent properties of the pleural vessels are not injured—at any rate at first; there is no exudation of plastic lymph; the pleura is unthickened, is not coated over, and its vessels are not shut out from contact with the external fluid by a tough coating of false membrane. These changes, so unfavourable to reabsorption, occur in greater or less degree in pleuritis: and then, again, in this, especially when it follows scarlatina, there is the tendency to pus-formation; and pus, you know, will not be reabsorbed, but must be let out by the operation of tapping the chest. But in hydrothorax, the fluid remains serous, and the vessels as fit for their office as ever, prepared to take up the serum as readily as they permitted it to pass out before. Whether, however, the diuresis led to the absorption, or the absorption to the diuresis, or whether (what is more probable) both were to a great extent the normal result of the restoration of free circulation through the kidney and systemic capillaries generally, there is one point which remains unexplained, and that is the extreme suddenness and rapidity with which absorption took place. In the natural course of recovery the changes would be gradual; the kidney-tubes would become free, and resume their functions gradually, not suddenly; the increase of urine would be correspondingly gradual; the absorption of fluid from the pleural cavity, and the falling in of the chest-wall, as the fluid lessened, would be gradual also. We see these slowly progressive changes continually, although collapse of the chest-wall is rare, except as a result of paracentesis. It does, however, occasionally occur as a consequence of simple reabsoption in children, when the ribs are very yielding. It seems, therefore, that there must have been some other power at work in this instance, in addition to the ordinary influence of the restored functions of the kidneys and the accompanying relief to the circulation, which would only come into action slowly, to excite this sudden, rapid imbibition of fluid by the pleural vessels, and the equally rapid evacuation of it through the kidneys. I think that this additional power was exerted by the diuretic action of the digitalis—that it roused into greater activity a process already going on, and hastened its completion. Experiments upon healthy individuals show that the drug does actually increase the flow of urine; and instances are recorded in which diuresis did not immediately follow the administration of the drug, but set in suddenly after it had been taken for some time, as was the case in the present instance. Although, therefore, these cases tend, no doubt, to spontaneous cure, the remedy, if it really were instrumental, as I believe it was, in hastening the removal of the fluid from the pleura, rendered a very signal service. It is of great importance to relieve the lung from the pressure of the effused fluid as soon as possible, before it is permanently injured, for then it expands again more fully and readily, and its return to its former healthy state is more perfect and complete.

I have dwelt upon this one case and its teaching because the facts are very curious and striking, and serve so well for the purpose of illustration. But I believe that the action of digitalis in scarlatinal dropsy in children is almost invariably beneficial, given, as it is usually here, in combination with perchloride of iron. It is followed by steady increase in the quantity of urine, with a corresponding subsidence of effusion. Children bear it remarkably well, and you may give from a drachm to a drachm and a half of the infusion to a child of from two to three years old for a considerable time with perfect safety; and I have frequently given much larger doses without the supervention of any serious symptoms. I mention the infusion specially, because in my experience it is a far more reliable preparation than the tincture—at any rate, as far as the diuretic action of the drug is concerned. I do not know why there should be this difference, but I believe that it exists, and I have long since abandoned the latter for this specific purpose. You will find, however, that many practitioners, especially those who compound their own prescriptions, as invariably give the tincture. I believe that this preference is founded, however, rather upon convenience than upon an accurate observation of results.

The question of the action of digitalis in renal dropsy is the more interesting and important, because it is almost the only diuretic we can venture to use in such cases; and other means of evacuating the fluid are to be used cautiously, in extreme cases only. The stimulant diuretics, such as turpentine, or cantharides, or squill, which excite hyperæmia of the kidneys, and the two former of which, when given largely, cause such congestion of these organs that the urine becomes bloody and albuminous, are obviously unfit when morbid congestion of the kidneys is the prime source of the mischief we wish to remove. Salines may be of use in aiding the solution and removal of fibrinous plugs in the tubes, but are irritant also, and of very uncertain diuretic action; while most of the vegetable diuretics, such as scoparium or taraxacum, for instance, if not wholly inert, owe any virtue which they may possess to some stimulating property: both are, therefore, equally undesirable in acute renal dropsy. Neither is it advisable to purge or sweat our patients severely if it can by any possibility be avoided. They are weak and anæmic enough already, and the process is exhausting, and one which young children especially bear very badly. It is better to pass the water we want to get rid of through the kidneys if we can; and we may thus, perhaps, as my colleague Dr. Dickinson suggests, help to flush out the *débris* of epithelium which chokes the renal tubes.

Now, digitalis appears to serve this purpose thoroughly well; it causes no irritation of the kidney; the urine increases; the albumen decreases under its use, as you may see in the many cases of scarlatinal dropsy usually to be found at this hospital, and treated in this way. How the digitalis does its work, it is not so easy to explain. The difficulty is generally disposed of by the vague statement that it does so not by any direct action on the kidney, but by its general influence on the circulation. Possibly this may be true; but at first sight it is not clear how the effect on the circulation would promote diuresis.

It has now been pretty well established that the effect of digitalis upon the heart is to increase the tonicity of its contractions, and that fatal doses produce death by increasing this effect to a condition of tetanic spasm, so that the ventricles become persistently contracted, the cavity of the heart closed, and circulation altogether stopped. Dr. Dickinson has shown that this drug has also the power of exciting contraction of the uterus; and we might be inclined to assume that it had this effect upon unstriped muscular fibre generally, and upon that of the arterial coats amongst the rest; and thus small doses, by increasing the tone of the vascular coats, would aid circulation through the kidneys, and thus promote diuresis. Against this assumption, however, are the facts, that Dr. Dickinson's observations showed that digitalis had no power in arresting hæmorrhages from parts outside the uterine cavity, as should have been the case if it caused contraction of the arteries; and later experiments by Dr. Nunneley gave negative results. If, however, the recent observations of MM. Legros and Onimus should be confirmed, and the passage of blood through the arterioles be aided by the peristaltic or vermicular contractions of the muscular coat, the failure of digitalis to arrest hæmorrhages would be consistent with an universal stimulating effect upon unstriped muscular fibre generally. Such stimulation of the muscular fibres of the arterioles would increase the peristaltic action, and therefore rather increase than diminish hæmorrhage, until the propulsive power of the heart became affected. The same action would favour diuresis by causing more rapid and easy circulation through the vessels of the kidney. But be this as it may, you will find that digitalis, used in that cautious and watchful manner in which it becomes us to handle so powerful a weapon, with the addition, in the later stages, of iron to remedy the anæmia always present in this disease, will usually prove the most satisfactory and effective remedy in scarlatinal dropsy. To this treatment by drugs must be added a nutritious diet and stringent precautions against cold. You will seldom require to have recourse to further measures, unless such urgent symptoms of effusion or uræmic poisoning should unhappily set in as to call for more active steps, when you may be compelled to attempt the removal of the poisonous material from the blood, or of the fluid from the serous cavities, by purges and the vapour bath.

ALCOHOL AS A CAUSE OF RENAL DISEASE.

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In my work on *Albuminuria*, I ventured to bring forward some facts which seemed to show almost conclusively that alcohol is not so prolific a source of renal disease as has been thought. The degree, indeed, to which disease of this nature has been attributed to drink is so extravagant as to carry its own refutation. It was said by a distinguished northern physician—and the saying has been often approvingly quoted—that in Edinburgh three-fourths, or even four-fifths, of the cases of granular degeneration could be traced to intemperance. And Dr. Roberts, who follows on the same side, though less numerical, is still, as I think, extravagant in saying, "The abuse of spirituous liquors ranks high—probably higher than any other single circumstance—as a determining cause of Bright's disease."

The tracing of disease to its cause is not always easy. It does not follow that, if a man who drinks whiskey become diseased, therefore the whiskey has caused the disease. A wide-spread habit must continually coincide with a wide-spread disease, unless the habit and the disease be incompatible. The *post hoc*, *propter hoc* delusion, or, in Hippocratic phrase, *the fallacy of experience*, is never more dangerous than in such a case as this. The habit has justly an ill name, and is apt to be wrongfully blamed. Because much drinking injures health, we are prone to attribute to it any disorder to which it has been antecedent. Hence, it is necessary, with more than ordinary strictness, to balance and compare. We must measure the drunken against the sober, all circumstances but drink being the same. To find the effect of alcohol upon the kidneys, we must look not only at the frequency of renal disease among British drunkards, but also have regard to the amount of the disorder which in this climate is inevitable, or due to causes other than drink.

Thus cautious, and trusting chiefly to *post mortem* evidence, as excluding clinical oversight and diagnostic error, I proceeded to examine the question. I found that persons who had died with delirium tremens had scarcely more renal disease than others, similar in sex, age, and station, but not known to have been intemperate, who were accidentally killed. Referring to the experience of Dr. Peters, of New York, and Dr. Ogston, of Aberdeen, both of whom had especially investigated the morbid anatomy of drunkards, I found that they had observed in these persons an amount of renal disease which, though looking considerable when taken by itself, was not very much greater than is usually found in as many *post mortem* examinations of the temperate. With these direct observations, I next appealed to the Registrar-General's reports, and showed that in general terms there was no relation between drunkenness (as measured by deaths from delirium tremens and alcoholism) and renal disease. Many died of renal disease in places where few died of drink; and conversely, it often happened that where many died of drink, few died of renal disease. Thence, and from other evidence, which need not be restated, I formed the following conclusions.

"—— The use of alcoholic drinks is comparatively inoperative as causing disease of the kidney.

"Such fluids, when taken in great excess, may set up a state of renal catarrh; though, compared with other causes of tubal inflammation, this one is of rare operation, and almost insignificant in its numerical results.

"Certain liquors, by causing gout, may bring about granular degeneration, but this sequence is less common than when the gouty diathesis is connected with the absorption of lead.

"Granular degeneration may result from the extension to the kidney of a fibroid change, such as ardent spirit produces in organs more immediately exposed to its action—though this event is comparatively unfrequent, and the organic alteration, when it occurs, is generally less decided in the kidney than in the liver.

"But each of the issues which have been described is of rare occurrence. Alcohol attacks other structures in preference to the kidneys. As causes of renal disease, there are other agents which are greatly more mischievous; and there is a great atmospheric power which overshadows all the other circumstances which tend to produce renal inflammation or granular change."

Dr. William Roberts, of Manchester, than whom there is no one whose opinions on such a subject are more deserving of consideration, made these views the subject of attack in the BRITISH MEDICAL JOURNAL last November. He will have none of them. As for the kidneys, they shall not be excused; excuses shall not avail; not even in a small measure shall the old estimate of their susceptibility be lessened. The statements which I have made are so fallacious, or the reasoning so unsound, that, as Dr. Roberts says, "they are inadequate to disturb the old opinion respecting the effect of alcohol on the kidneys; and, in fact, the question remains just where it was before he" (*i. e.*, myself) "wrote his article." Thus I have spent my labour in vain; it not only falls short, but goes for nothing—a discouraging result, if result it may be called—one which, though not unknown as regards criticism, is uncommon as the issue of the collection of facts, always supposing it to have been done in good faith. However, the respect which I entertain for Dr. Roberts is such that I would not hastily conclude him to be in error. When his remarks appeared, I was engaged upon a revision of the whole subject, in view to a forthcoming edition of my work, and I have postponed discussion until inquiries then pending were completed. I am now in a condition to resume the topic with the help of his strictures, and with a sense that, if I have gone wrong, there is no one more capable than himself of putting me right. I will first notice Dr. Roberts' criticisms.

Condition of Kidneys.	Delirium Tremens: 52 Cases. Average Age, 38.	Accident: 52 Cases. Average Age, 41.
Natural	... 28	32
Congested	... 14	5
Slight or Uncertain Change in Cortex	... 3	1
Large, Smooth, Mottled ...	... 3	1
Granular Surfaces ...	... 3	6
Cysts, without other change...	... 1	7

Comparing, in the table which is here reproduced, the state of the kidneys as found after death with delirium tremens and from uncomplicated accident, a slight excess only of renal disease appeared on the inebriate side. Upon this, Dr. Roberts announces himself struck, not by "the slightness of the alterations in the delirium tremens cases, but by the enormous proportion of serious organic disease in the accident cases"; and he adds: "If the delirium tremens cases be taken by themselves, they present a sufficiently strong indication of the evil effects of alcohol upon the kidneys." What, to me, is more striking than anything else, is that Dr. Roberts should use such arguments. To take the delirium tremens cases by themselves is precisely what I decline to do. Comparison is the gist of the argument. Take the drunken cases alone, assign all their diseases to drink, and the indication of the evil effects of alcohol may well be called sufficiently strong. And thus, making no allowance for other morbid influences, we cannot fail, with Dr. Roberts, to be struck at the amount of renal disease among presumably temperate English adults. An insufficient allowance, indeed, for the amount of disease of this kind, which in this climate is inevitable, appears to lie at the bottom of Dr. Roberts's estimate.

In the series of fifty-two presumably healthy men accidentally killed, occurred one instance of the large, smooth, mottled kidney, and six in which the kidneys had granular surfaces—a proportion of disease more astonishing to Dr. Roberts than to me. He asks "Is it to be believed that one in every seven or eight presumably healthy persons of the average age of forty-one is the subject of the granular kidney or of the large, smooth, mottled kidney? This point alone would seem sufficient to fatally vitiate these observations." But is he not unconsciously testing pathological observations by clinical experience, forgetful that many or even most of the changes would make no sign during life? Many a smooth countenance goes with a very rough kidney. A perfectly healthy kidney, save in a child, is almost as rare as a clear conscience.

Since the table in question was compiled, in 1865, twenty-five adult males, accidentally killed, have been examined in St. George's Hospital. Their average age was 40. The kidneys are thus described: natural, 13; congested, 3; having slight or uncertain changes in cortex, 4; large, smooth, mottled, 0; with granular surfaces, 5; cysts without other change, 0; a proportion of disease fully as great as in the list which is the subject of comment. Granulation, it will be noticed, was found in a fifth; and I believe it is not too much to suppose that of average Englishmen, aged 40, at least one in seven carries a kidney, the state of which he would regard with much dissatisfaction, could *clairvoyance* show it him and pathology explain.

Looking more widely, I ascertained that among 2,350 *post mortem* examinations at St. George's, covering a period of ten years, including both sexes and all ages without exception of any kind, comprising, therefore, many children, the kidneys were granular in 250; large, smooth, and mottled or highly congested in 107; thus about one-seventh being the subject of serious disease.

From all the evidence, therefore, I cannot but regard Dr. Roberts's surprise at the amount of disease on the non-alcoholic side of the comparison, as based on misconception, and insist on the justice of the comparison on which I have founded this part of the argument.

The same estimate, which I think I have shown to be insufficient, of the amount of renal disease inevitable in this country, has led Dr. Roberts to look with what I venture to call an exaggerated regard at the frequency of this disease in the bodies of drunkards, as related by Dr. Ogston, of Aberdeen, and Dr. Peters, of New York. Upon this point I need say no more, save to allude to a remark of Dr. Roberts which I scarcely understand. He says that, in considering the changes recorded by these authors, as found in the bodies of drunkards, "I seem to have been unconsciously biassed by my individual views of the types of renal disease." It is true that I condensed and arranged the descriptions of disease for the sake of necessary comparison, but I did not put them into scholastic divisions; and, if I had, the facts would have remained. It would be only shifting from one pocket to another, a process neither impoverishing nor the reverse.

I now pass to the last of Dr. Roberts's criticisms. I showed that, according to the reports of the Registrar-General, kidney-disease and alcoholism bear no constant relation; disease of this organ being often rare in drunken, and common in sober districts. Upon this, Dr. Roberts says: "My surprise was great to find that the conclusion of Dr. Dickinson was substantially correct; and that the death-rate from Bright's disease was as high in the more sober districts as in the more intemperate districts, and frequently much higher." I am well content to be so far confirmed by the testimony of an adversary. But Dr. Roberts then proceeds to show what, in my turn, at first astonished me: that the reports do not display any correspondence between drunkenness and liver-disease. Drink, as he says, undoubtedly is a frequent cause of cirrhosis; but the reports do not show it. By parity of argument, may not drink with equal frequency cause kidney-disease, though the reports do not show it?

As to the Registrar-General's reports, the average diagnostic ability which dictates the certificates of death upon which they are founded, does not warrant them as absolute truth. Sometimes an approximation may be reached by the counterbalancing of misstatements; and now and then a very clear and evident fact may be visible, when one with a less definite outline is lost in obscurity. Albuminuria, as a sign of disease, is less liable to be mistaken than most others, whence the returns relating to the kidney may have a flavour of truth. But with other organs there is more guessing, and with none more than with the liver. The liver is the refuge for destitute diseases; to it are referred all disorders unclaimed by other organs, or which the information of the practitioner does not enable him to billet elsewhere. Diseases are assigned to the liver the most often by the most ignorant. Pneumonia, pleurisy, peritonitis, typhoid fever, tubercular meningitis, most general disorders, and many disorders localised in other organs, are not unfrequently attributed to this much maligned viscus, and treated through the portal system. Not long ago, a woman was dug up with a mortal dose of arsenic in her stomach. According to the certificate, she had died of purging *and disease of the liver*.

Practically, therefore, I should not expect the returns of liver-disease to exhibit much correspondence with fact; and, on reflection, I cease to be astonished that Dr. Roberts has found them wanting in this respect. The kidney-returns may be worth something more, though but little, as compared with pathological observations or even with the clinical experience of a credited observer.

To these remarks I will venture to add, in brief, the results of a further inquiry, in so far as it has to do with the kidney. The particulars were brought before a recent meeting of the Royal Medical and Chirurgical Society, and the courtesy of the editor enables me to refer to them in the current number of the JOURNAL (page 592). The morbid effects of alcohol were deduced from a comparison of the *post mortem* appearances of traders in liquor, potmen, publicans, draymen, etc., with those of persons not presumably drunken or conversant with gratuitous drink. In the alcoholic class the peculiarities were so marked and consistent through the organs, as to warrant the general accuracy of the demarcation. The *post mortem* appearances in 149 alcoholic and 149 non-alcoholic traders were compared. The state of the kidney in each individual in both series is stated in the table. Another table is appended, showing how often symptoms were observed pointing to the kidney.

Analysis of the state of the Kidney, as found after Death, in 149 *persons following Alcoholic Trades, and in the same number of persons circumstanced otherwise.*

	Alcoholic.	Non-Alcoholic.
Natural	49	48
Congested	18	18
Enlarged and congested	0	5
Coarse	3	3
Large and coarse	4	1
Fatty	2	1
Large and fatty	3	3
Slight or uncertain change in cortex	2	4
Large, smooth, mottled	5	9
Small, smooth, mottled (cortex shrunk)	1	2
Lardaceous	3	6
Slightly granular	10	11
Highly granular	18	15
Granular + tubercles	1	0
Granular + cretaceous mass	0	1
Granular + pyelitis	1	0
Granular + stone in kidney	1	0
Cysts without other change	1	2
Cysts + depressions	3	1
Pyelitis	0	2
Scattered abscesses, with pyelitis	1	6
Pyæmic abscess	1	1
Abscess, unexplained	1	0
Tubercles	8	4
Tubercles + cysts	0	1
One converted into cretaceous mass	0	1
Cancer	1	1
Fibrinous blocks	0	2
Stone, without other change	2	1
	149	149

Analysis of the Symptoms referred to Albuminuria among the Alcoholic and 149 *Non-Alcoholic Cases comprised in the preceding Table.**

	Alcoholic.	Non-Alcoholic.
Prominent symptoms of renal disease	20	26
Renal œdema	14	18
Internal renal dropsy	4	6
Albuminuria discovered	23	29
Cerebral uræmia	5	3
Death directly due to renal disease	10	14

It will be at once seen that the kidney in the two classes shows no great disparity—a disparity far less than is exhibited by other organs. The total of kidney-disease is not increased by the alcoholic trades. The uniform changes of cortex which tend to albuminuria were slightly, and but slightly, more frequent under liquor, occurring in 86 persons of the alcoholic to 82 of the opposite series. The most marked increase under alcohol was with kidneys described as enlarged and congested, or large and coarse, conditions often undeclared during life. Granulation was also increased, but not to the same extent as cirrhosis, its hepatic analogue. Associated with, but not entirely dependent upon, this increase, there was also under alcohol a marked preponderance of cerebral apoplexy and hypertrophy of the heart, results of vascular deterioration.

Under the same influence of alcoholic trade, the "large, smooth, mottled kidney" (a description which may refer either to advanced tubal nephritis or to lardaceous infiltration) was diminished, as also was the lardaceous change of a distinctly recognisable sort. Thus the more rapid and obvious forms of renal disorder were in abeyance. Such increase as occurred was insidious and latent—rather exposed after death than traceable during life. Dropsy, external or internal, discovered albuminuria, and death directly attributable to the kidneys, were less frequent with liquor than without. Cerebral uræmia, the natural ending of granular degeneration, preponderated on the other side.

* In this table are only included the symptoms assigned to Bright's disease or albuminuria. Those of stone, tubercle, cancer, tumours, pyelitis, and abscesses, are omitted.

In deducing the effects of alcohol from this comparison, it is necessary to allow for the somewhat lessened exposure to weather, and also to accidental violence, involved in the alcoholic pursuits—exemptions which, so far as they go, would diminish the liability to tubal nephritis and to lardaceous change. This may help to explain the comparative rarity of these disorders with the alcoholic class. The increase in fibroid and chronic tubal changes must be referred to the liquor alone; but this increase is not great.

Taking all the facts together, I do not see how it can be doubted that the effects of alcohol in causing renal disease is less than used to be asserted: that to paraphrase Dr. Roberts, if he will allow me to do so, this agent does not rank higher, but lower, than other circumstances—to wit, external temperature and the absorption of lead—as a determining cause of Bright's disease. Although we can now and then trace the existence or aggravation of renal symptoms to intemperance, we do so with far less frequency than with disorders which have other sites. Pathological and clinical evidence combine to show that the evil influence tells more upon the nervous system, the liver, the blood-vessels, and probably in the production of tuberculosis, than upon the kidneys. The facts adduced are consistent with those formerly advanced, and with the quoted conclusions which have been the object of attack.

THE ADMINISTRATION OF ETHER, AND ITS SUPERIORITY TO CHLOROFORM AS AN ANÆSTHETIC AGENT.

By J. MORGAN, M.D., F.R.C.S.I.,
Surgeon to Mercer's Hospital, etc., Dublin.

As the question of the superiority of ether over chloroform is daily attracting attention, any contribution towards our more efficiently applying this anæsthetic, and proving by facts its advantages, must be interesting. In the last two issues of the JOURNAL I have seen some remarks on the subject, and some more particularly in the last number, which are apposite, as they bear on the inconveniences which are met with in the method which has been most generally used, of administering the ether to a patient by pouring it over a sponge or towel. Although, no doubt, etherisation can be successfully induced by this method, every one who tries it will, I am sure, agree with Dr. J. W. Haward in his observations on the inconveniences caused by the administration of ether in the rough and ready method referred to, and then by force applying it to the patient. Mr. Clover, also, in his observations intimates that a mixture of air, as with chloroform, is desirable. This may be doubted. Dr. Squibb and Dr. Lente of New York, in common with others, believe that the more freely ether is administered the better will be the result. In this opinion I concur, and have found by experience that it undoubtedly acts best when not diluted with air.

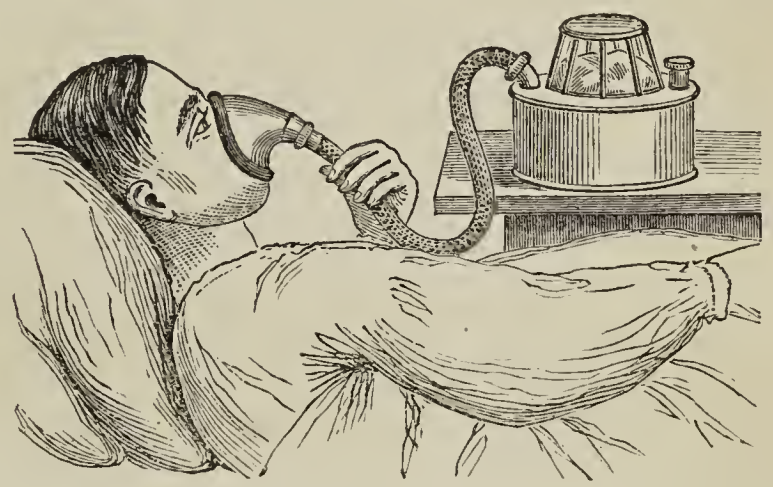
In the pages of the *Medical Press and Circular*, I have written a series of papers, explaining the advantage of the method of using ether which I had arranged, and with which I had operated for a considerable time before, and which, I must add, I find to be perfection as an anæsthetic apparatus. It consists of an inhaler, furnished with a flexible diaphragm, which corresponds with the inspirations and expirations of the patient when being applied. The ether vapour is diffused over the interior by a framework covered with thin flannel, and is conducted to the mouth by a flexible tube and well-fitting mouthpiece. The ether is poured in, and its vapour is breathed over and over by the patient, as the flexible diaphragm allows sufficient mobility, and the effect is made known by the production of stupor and insensibility in a few minutes, varying from three to five or seven. By confining the ethereal vapour in this way, the odour or stupifying effect is not extended to the bystanders as it is in the rougher method of pouring the ether on a sponge or towel, and with even the assistance of a cone of pasteboard. The surgeon has usually to change his dress to get rid of the odour. There is also no necessity for violently overwhelming the patient; on the contrary, the patient may with a certain amount of confidence apply the mouthpiece himself at the commencement—a proceeding which renders the administration much more agreeable.

There is no chafing or irritation of the skin of the face or neck, as happens from the application of ether by the sponge or towel. There is no waste of ether as with the inhaler: two, three, or four ounces will suffice, where ten or fifteen ounces would be used by the sponge. The etherisation can, with a little caution, be used by the inhaler with candle or artificial light, where the more wasteful and diffused application by the sponge would be inadmissible, from the danger of ignition. By the more direct application of the ether-vapour by the inhaler, there is less excitement than when the sponge or any other method which allows air to be more or less freely used with the vapour. The excitement and tediousness as well of etherisation being, I find, proportioned to the amount of air which is admitted with the ether-vapour, or, in other words, to the perfection of its administration: in fact, there is hardly any excitement stage; in the majority of cases, none at all. Sickness of stomach follows much the same rule; but if the stomach be empty at the time of etherisation, there is no sickness usually. In excitable females or nervous persons it does occasionally happen—certainly not more so, if as much, as in chloroformisation under like circumstances.

A remarkable advantage of ether over chloroform is that of its allowing a speedy reaction. After etherisation, a patient is in a few minutes perfectly restored; and, if the operation of it be not too severe, he will even walk from the operation-table.

We have in ether an agent which is proved by statistics to be eight times more secure than chloroform, and to be the safest of all anæsthetics in use. It has held its own for a quarter of a century in America, and confidence in its powers is unbounded. Certain inconveniences are to be remedied, such as—its diffusion among the bystanders; the local irritation caused by contact with the fluid; the waste of fluid; the excitement of delay; the danger of its use with artificial light. These are avoided by the use of the inhaler. There is a precaution worth bearing in mind, that the patient's head should be always well raised, specially in elderly and apoplectic individuals. Congestion of the face is to be watched in such cases, and discretion used in pushing the influence of ether or of any other anæsthetic.

I have used ether in hundreds of cases, and I have seen no ill effects. The day I etherised six patients in periods varying from three to five minutes, the anæsthesia was in all cases perfect and most satisfactory; the patients sometimes becoming insensible while applying the mouthpiece themselves, while the inhaler gets rid of all the inconveniences that have been found in the rougher and more wasteful method of applying by the sponge or towel.



The appended woodcut illustrates the mode of administration and the position which suits best.

ON ANÆSTHETICS.

By THOMAS JONES, M.D.,
Assistant-Physician to Victoria Hospital for Sick Children; formerly (for eleven years) Resident Medical Officer and Administrator of Anæsthetics to St. George's Hospital.

FULLY impressed with the truth of the main points ably insisted upon in the leading articles in this JOURNAL of the 2nd and 16th instant, on the question of ether and chloroform as anæsthetics, I am induced to state, as briefly as I can, the views which I have formed after having had somewhat extensive practical experience on the subject. And as another reason for troubling the readers of this JOURNAL with these remarks, I might mention my anxiety to keep up the interest of the profession in the superior claims of ether as an anæsthetic (so thoroughly do I believe in this fact myself) until all surgeons, and all engaged in the administration of anæsthetics, are induced to try it, and persevere in its use until they become proficient in its administration. I am quite sure that, if thus fairly tried, ether will soon replace chloroform in this country as the anæsthetic in general use.

1. In both public and private practice, I have administered chloroform to more than six thousand cases. I have used in its administration Snow's and Ellis's inhalers, Clover's bags, Skinner's apparatus,

and simply a towel or a piece of lint. Whichever instrument be used, and however much care be taken, I have come to the conclusion that, out of a large number of cases, alarming symptoms are sure to occur in a few; and, if these symptoms be not observed in time, and attended to, fatal results will follow; and in a still smaller number of cases death will inevitably take place.

From the study of carefully recorded deaths from chloroform, I think they may be classified into avoidable and unavoidable. The unavoidable deaths are those which happily occur very rarely, in which, owing to some inexplicable cause (generally attributed to idiosyncrasy), the agent kills almost instantaneously, from its paralysing influence on the heart through the cardiac ganglia. I do not think that any amount of care in measuring the chloroform with the air, and in its administration, can avert such deaths. If sufficient amount of chloroform be given to produce narcotism, there is sufficient in the system to cause death in these cases. A case of this kind, I am sorry to say, but happily the only one, occurred in my practice some years ago; and, as it well illustrates this class of cases, I will briefly give a few particulars of it from notes taken at the time.

CASE I.—Henry C., aged 30, a healthy-looking and muscular man, with ruddy complexion, from the country, was admitted into St. George's Hospital, on September 16th, 1863, suffering from necrosis of the lower end of the tibia of fifteen months' standing. On the 24th, he was brought into the operating-theatre, and chloroform was commenced (Snow's inhaler being used) at 1.17 P.M. His pulse was full, regular, and strong. He showed no apprehension of the chloroform. He breathed it unusually well; the respirations were regular and his pulse continued remarkably good; the latter was continually watched, not only by myself, but also by another gentleman. The chloroform was administered in a very diluted state for the first four minutes, the expiratory valve being kept open. Very slight muscular rigidity, which now appeared, rapidly passed off; the eyelids were still sensible to touch, and the pulse and breathing continued good. At 1.22 (five minutes from the commencement of the inhalation), the operation of trephining the tibia was commenced. He did not flinch when the first cut was made. The chloroform was continued, off and on, until 1.23 (six minutes from the commencement), when, without any change whatever in his general appearance, the pulse, which was, up to this time, full, regular, and about 80 in the minute, instantaneously stopped, as if he had been struck by lightning. The breathing, however, continued unchanged for several seconds; then it became slower and more superficial, and soon ceased. Before it stopped, however, cold affusion was applied to the face and chest, and ammonia to his nostrils. Immediately afterwards, galvanism was resorted to—one pole applied over the cardiac region, and the other on the neck—and, in a short time, needles were passed into the substance of the heart, and electricity passed through them. The tongue was also pulled forwards, and Silvester's method for artificial respiration tried and persevered in for more than an hour, but not the least evidence of returning animation was observed from the moment when his pulse ceased to beat; in fact, I was convinced that he was then dead, and that no effort to restore him would prove of any avail.

On *post mortem* examination, the right ventricle was found uncontracted; the left partially contracted. The blood was universally fluid. The valves were healthy. When the various parts of the heart were examined under the microscope, the fibres of the left ventricle were seen to be perfectly distinct. Both sets of markings were clearly seen, and there was not a trace of fatty change. In the right ventricle, the fibres were still distinct, but there was a slight amount of diffused granular fat; it was pretty evenly spread. None was collected in the substance of the fibres, and probably it was not more than is perfectly consistent with health. The appearance of the cardiac muscle to the eye was quite natural. The lungs were natural, except a small extravasation of blood just under the pleura over the lower lobe of the left. The lower part of the right was congested, but did not sink.

Here, then, is a case of a young man with a perfectly healthy heart (or one so slightly diseased that one could not positively affirm that any degeneration existed at all) dying instantaneously without showing any warning of danger whatever, and after very short and tranquil inhalation of chloroform. But this case may be objected to as an illustration of one of unavoidable death, on the ground that the quantity of chloroform and air was not accurately ascertained by measurement previously to inhalation. Judging from the fact that the valve for the admission of air in the inhaler was kept open for four minutes, and after then only slowly and partially closed, and from the time it took to narcotise him, together with the manner in which he came under the influence of the anæsthetic, I feel convinced that he did not get more than the prescribed amount (5 per cent.) determined by Snow as being within the limit of safety. When chloroform is given from a bag in the proportion of 3 to 4 per cent. by measurement (a plan first adopted by Snow, who discontinued its use as being too troublesome), I have found it to affect people in many different ways. From the effects which I have observed under these circumstances, I have been long of the opinion that chloroform, like some other medicines, produces effects on certain persons quite out of proportion to the dose administered. I think that, if Snow had experimented on a sufficient number of animals and creatures of different species, he would have found one in which chloroform-vapour would prove fatal with less than the quantity determined by him as being within the limit of safety.

Avoidable deaths are those which are caused by suspension of the function of respiration, and those which are caused by the gradually paralysing influence of the vapour on the heart. In both these modes of death, timely warning, I think, is given in all cases by dangerous symptoms supervening; and, if these only observed and attended to *immediately*, fatal results may be averted. Fortunately, the most common evil effects of chloroform are those which arise from interference with the breathing, owing to partial or complete suspension of function of the ganglia concerned in respiration, causing sometimes immediate cessation of the movements of the thorax, falling back of the tongue, laryngeal obstruction, and possibly other conditions. The symptoms that arise in such cases are so obvious—such as stertor, ineffectual efforts to breathe, or complete cessation of respiration, causing lividity—that, with common care, it is difficult to imagine how they can be overlooked until too late to apply the remedies, which, if used early, are attended with certain success: I mean suspension of the inhalation, forcibly pulling forward the tongue, artificial respiration, cold to the face and chest, galvanism, etc. Of course, in these cases, it would be of no use to wait till the pulse becomes affected before interfering.

Avoidable deaths from chloroform also take place from its acting on the heart primarily. Unlike the cases alluded to, in which the chloroform *suddenly* suspends the function of the cardiac ganglia, these are cases in which the dangerous effect of the agent is *gradual*, and are, therefore, cases in which timely warning is given in the condition of the pulse. I do not mean the various alterations in the pulse during the first stage or before the influence of the mind is removed, but subsequently to this. If I find, after consciousness is abolished, that the pulse becomes irregular and intermittent, or decidedly fails in power, and that these conditions increase instead of improving as chloroform is carefully proceeded with, I always discontinue its use. I have seen such cases in which I felt sure that, if it were persisted in, dangerous results would follow. The same rule applies to cases with heart-disease. If an irregular, intermittent, or otherwise abnormal pulse, become worse as narcotism is induced, I also always stop the anæsthetic.

I never, however, object to administer chloroform on account of heart-disease, but carefully watch the influence which the agent exerts on that organ. I have given chloroform to patients suffering from the worst forms of heart-disease, and kept them under it for an hour, with the best results; in fact, it is generally admitted that cases fitted for operation are also suited for chloroform. The following is a very striking case in illustration of this class of cases, which happened in my own practice. Although the heart was extensively diseased, I have seen similar effects in cases where the heart was perfectly healthy.

CASE II.—Richard T., aged 64, very corpulent, and with a congested state of vessels generally, admitted for stricture of the urethra and stone in the bladder, was placed on the operating table on September 24th, 1863 (the next case placed on the table following the one that died just related). His pulse was weak and irregular, and the heart was found on auscultation to be very weak. The chloroform was administered in the usual manner, but, as he became narcotised, the pulse became irregular in its irregularity and much weaker, and afterwards his breathing began to be embarrassed. I allowed him to recover a little, and, as soon as these symptoms passed off, I resumed the administration slowly; but as soon as he began to become unconscious, the same phenomena were observed. Thereupon I left off the anæsthetic and told the surgeon to proceed with his operation; which was forcibly dilating the stricture by Holt's dilator. The attempt to rupture the stricture failed, in consequence of the point of the instrument becoming entangled in a false passage. The patient was sent to bed. Another unsuccessful attempt was made in four days, this time without chloroform, of course. Eight days after the partial administration of chloroform, the patient died very suddenly. He had just been to the water-closet, and on walking back to his bed lay down upon it, and made some exclamation, which attracted the attention of the nurse. She summoned the house-surgeon, who was in the ward at the time; but, on examining, he found him already dead.

On *post mortem* examination, the pericardium was found to contain

about an ounce of fluid. The heart weighed fourteen ounces and a half. There was no excess of superficial fat, but the muscular tissue had a yellow colour and a flabby consistence. Under the microscope, the fibres were very fatty; a string of fat-globules or of fat-crystals often occupied the centre of a fibre. The left ventricle was quite uncontracted. The valves were healthy. The blood was everywhere fluid. The lungs were healthy.

Mr. Holmes exhibited the hearts of the above two cases before the Pathological Society. In the abstract of the cases published in the *Transactions*, I find that in the case of Henry C., he says that the "breathing and pulse ceased simultaneously." This is certainly an error: the patient continued to breath for some time after the pulse had stopped.

In relating the case of Richard J., Mr. Holmes says that "the patient took chloroform well, and was kept under its influence for the necessary time—about seven minutes." This also is an error. The facts are as stated above. No doubt seven minutes were spent in the attempt to administer the chloroform, but, owing to the failure of the pulse, it had to be left off, and a second attempt was made with the same result. But the patient never was completely anæsthetised.

In this case, the heart was certainly very much diseased; but, as I have said before, I have seen cases with healthy hearts in which the pulse presented precisely the same characters. I attach comparatively but little importance to the state of the pulse before inhalation. What I am careful in watching is the effect produced by the chloroform, and especially at that stage of anæsthesia where unconsciousness comes on. A pulse that is weak before chloroform is commenced may improve under its effects, especially when the influence of the mind is removed. But I am quite sure that in some cases the converse is equally true; namely, that a pulse which is good at the commence ment of inhalation, becomes weak, irregular, or intermittent, as narcotism is produced. If, instead of improving, the pulse become worse as consciousness is abolished, I think it shows that the chloroform acts dangerously on the cardiac ganglia. In all such cases, chloroform should be discontinued. I fear many deaths which might have been avoided occur from this cause, through not attending to the timely warning which the pulse gives. It is impossible to estimate the amount of mischief effected by the directions given on this point by Mr. Lister, in his article on Anæsthetics in Holmes's *System of Surgery*, when one considers the deservedly high reputation of the author, and the importance of the work in which the article appeared. The burden of Mr. Lister's remarks seems to be on the importance of devoting the whole attention to the breathing to the exclusion of every other duty. Now, I admit, as all who are at all familiar with the subject must admit, that obstruction to the breathing is the most common of the dangerous effects of chloroform. But any embarrassment to the respiration, and the evil consequence that may result therefrom, are so obvious to the most casual observer, as Dr. Snow long ago pointed out, that I cannot imagine why Mr. Lister should labour so much to prove a point which every one already admits.

With reference to the pulse, Mr. Lister states (*System of Surgery*, p. 495, second edition) that "the safety of the patient will be most promoted by disregarding it altogether". Now, it is very remarkable that during the last ten years, from the time when the article containing this paragraph was written, there seem to have been many more deaths from chloroform than in the previous decade. How much of this might be due to the doctrines inculcated by Mr. Lister, is of course impossible to determine. It is, however, a significant fact, that two deaths (both of which were published in this JOURNAL) occurred from chloroform during the last year at the Edinburgh Infirmary, where, it is said, no deaths had happened before. And we find that, since the article referred to was written, Mr. Lister himself has met with two or three cases which almost proved fatal. These cases seem to have made some impression upon his mind, and to have somewhat shaken the views he enunciated in the original article; for we find that he admits, in the last edition, that "with these examples before us, of deviations from the usual order in which the various functions are affected by chloroform, no one can say it is impossible that here and there an individual may be found so constituted that, without any undue proportion of the narcotic vapour to the air inhaled, the cardiac ganglia may fail before the respiration is interfered with". This is just what I have endeavoured to insist upon; but also I maintain that this failure of the cardiac ganglia may show itself gradually as well as suddenly, and that the pulse, therefore, becomes a most important signal of approaching danger. It is to be hoped that, in the next issue of his article, Mr. Lister will be induced, after increased experience of chloroform, also to admit the importance of carefully watching the pulse as well as the respiration. I confess experience has taught me that chloroform, even when most carefully administered, is more dangerous than is generally supposed. If I were, unfortunately, compelled to take an anæsthetic, nothing would induce me to take chloroform.

[*To be continued.*]

ON DILATATION OF THE CERVIX UTERI BY BOUGIE.

By J. H. AVELING, M.D.,
Physician to the Chelsea Hospital for Women.

I HAVE read with great interest the papers by Dr. Matthews Duncan which have appeared in the last two numbers of the JOURNAL; for, having partly gone over the same ground some years since,* I was anxious to see how far his observations and conclusions agreed with mine. With regard to the relative values of tangle- and sponge-tents, we are, in the main, agreed; but against the practical conclusion at which he arrives I must raise my feeble protest. The authority of Dr. Duncan is deservedly so very great, that I tremble to think of the mischief which must be caused should medical men generally adopt his method of forcible dilatation.

The bougie, he thinks, is the best instrument for dilating the cervix uteri in gynæcological practice. I beg respectfully to differ from him for the following reasons.

1. The uterus is not a body rigidly fixed, but one which, under very slight mechanical influences, tumbles about hither and thither; and this extreme mobility renders it utterly impossible for an operator to be certain that he is applying the wedge-force of the bougie in a proper direction.

2. The dilating action of a metal wedge grazing along the mucous lining of the canal is objectionable and unnecessary, as it may be avoided by using tents and other dilating instruments.

3. The uterus may be in a spongy and flaccid condition, capable of being bent upon itself by the pressure of the point of a bougie acting on either side. In such a case, the extreme liability of the bougie penetrating the side upon which it impinges is obvious.

4. The cavity of the uterus varies in length, so as to make it difficult to determine whether the point of the bougie have arrived at the internal cervix or the fundus uteri. If it, by mistake, be "urged through" the latter, serious consequences might follow.

5. In narrow strictures a thin bougie must be used, and the more resisting the stricture and the thinner the bougie, the greater is the risk of the uterine walls being penetrated.

Dr. Duncan uses the sound in such a heroic manner, that it can only be his very great skill which prevents him from doing much mischief. He says: "I have observed that, in using great force to pass a common uterine probe, the instrument is bent." I have always learnt and taught that no force should be used in passing the uterine sound, and I cannot help thinking that the pressure of "four pounds" (the amount required to bend a sound) is far greater than should ever be employed. The bougie he also urges forward with equal confidence and force. In passing it through the internal os, he says, "the difficulty may be extreme." I am satisfied that I have frequently applied a forward pushing force at the point of a probe equal to 4 lbs., or even more, and with the wedge or conical pointed bougie a force probably exceeding 200 lbs., on the square inch of surface of part undergoing distension." "When a great force is applied, the sudden or jerk-like advance of the bougie through the internal os, and the smearing of the instrument with blood, show that the part has not been gradually expanded, but lacerated—an accident which, I think, it is desirable to avoid."

Dr. Duncan tests the value of the different modes of dilating the cervix uteri by three considerations: (1) The amount of force exercised; (2) the amount of expansion produced; and (3) the amount of time required for producing the expansion. In considering the force exercised, its direction, as well as its amount, must be taken into account. It is true, as Dr. Duncan says, that the force of the bougie is "limited only by the strength of the instrument," but its expanding force, even when exerted in a correct course, is not so direct as that of tents and other dilating instruments. Then the amount of expansion produced by bougies is much less than can be effected by tents and dilators; and the amount of time required to produce the dilatation by Dr. Duncan's method is scarcely less than that required by other plans; for, by a number of "sittings," or by using a "large instrument very long and perseveringly, he only produces a dilatation of about a quarter of

* "On the Relative Value of the Various Substances which have been used in Dilating the Neck of the Womb; with a Plan for Deodorising Sponge-Tents."—*Obstetrical Transactions*, London, December 4th, 1867.

an inch." The question of rapid dilatation is one of great importance, and Dr. Duncan has done good service in drawing attention to it. Tents, of whatever substance they may be made, often produce disagreeable, and sometimes fatal, symptoms. Should, however, rapid dilatation be eventually preferred to the slower process, the instrument used must be one capable of being passed through a stricture without force, and afterwards, by some mechanical contrivance, made to expand so as to act in a direct manner upon the constricted tube. It must be done by art, and not by force.

ON THE SALUBRITY OF DIFFERENT PLACES ON THE NORTH-WEST COAST.

By THOMAS GIBSON, M.D., Bedford.

HAVING paid a good deal of attention to various watering places, more with an idea of their being conducive to health than subservient to pleasure, I have come to the conclusion that various sheltered situations in out-of-the-way corners on the north-west of Lancashire and Cumberland are overlooked on account of their remoteness from large towns or gatherings of the pleasure-seeking community. I write especially to point out some of those which are least conspicuous for the amount of rainfall; and in which, situated as they are upon sandbanks, the absorption of the water is so rapid, and the evaporation so small, that they are peculiarly adapted to those complaints which are benefited by a dry bracing atmosphere.

Southport and Silloth, according to my observation, are amongst those which come under this head, the latter place much more so, having been brought into notice more recently. Although somewhat out of the regular route of places visited, it is nevertheless one, in my opinion, deserving of note. The place is situated about twenty-two miles north-west of Carlisle, on the Solway. In front of the town, which has about a thousand inhabitants, are the Scottish hills of Galloway and Dumfriesshire. "I attribute the extraordinary salubrity", says the Rev. Francis Redford, "to its freedom from fogs, there being on an average not more than two foggy days in the year"; and to the constant presence of that mysterious agent called ozone.

I have paid two visits to this place myself; one about five years ago, and another for three weeks last August; and from my observation on the spot I was led to believe that the extraordinary elasticity of the atmosphere, so to speak, had a good deal to do with the healthfulness of the climate, the air being bracing and congenial, and the ever shifting winds tending to prevent that stifling sensation which one is apt to experience in more sheltered situations in the heat of summer. The Scotch hills in front are not nearer than seven or eight miles across the Solway, and Skiddaw and Helvellyn, which form the south-east background, are more than fifteen miles distant, at a rough guess; while, from the pier, from which boats ply daily to Liverpool, Dublin, and Douglas, may be seen the Isle of Man itself in the far south-west. It is very remarkable that, although heavy winds are not often experienced in the summer, yet there is almost always a pleasant breeze. No time can be fixed on when wind is likely to prevail, on account of the current of the Gulf Stream rushing in between the hills, as it were; and the length of the Channel, with the ebb and flow of the tide, making it, although an arm of the sea, something like a tidal river, may in some measure account for this uncertainty of the prevailing winds, although for the most part and for a longer duration they are south-westerly; *i.e.*, from the main ocean inland.

The mean annual temperature is about two degrees lower than in Cornwall and Devonshire; while it is less than a degree lower than at Torquay.

The peculiarity of this kind of climate leads me to think that it is of great benefit—in fact, practical results adduce it—in all affections where the general tone of the body is lax and low, and especially in delicate females it is of infinite advantage. Amongst other cases, I met with a gentleman while staying there, who had been under medical treatment both in Edinburgh and London for a long time without any benefit, he being a sufferer from general lassitude and want of appetite. He was a Scotch gentleman, but had been resident in London for the last thirty-five years. His physician, after giving him all the tonics he could devise for two or three years, sent him, as a last resource, to try his native air. After staying in Edinburgh for five months, and getting no better, he was casually made acquainted with this place, and he determined to break his journey and visit it. I saw him after five days' sojourn there, and he informed me that his sensations were such that it was like being in a new world. His appetite and relish for food were such as he had not experienced for some years, and he confidently hoped that he was beginning a new era in his existence. The climate has seemed to do good in the numbness of the joints which is often complained of by delicate females; and the dryness of the soil renders exercise possible immediately after rain, for the rapid absorption of the water is proverbial.

There is another little place called Grange-over-Sands, not far from Lancaster, which is sometimes called the Torquay of the North. Its principal distinction is that it is remarkably sheltered from the north and east winds; it lies not far from Windermere, the queen of English lakes, and in front of it, stretching for miles in a westerly direction, is the broad expanse of Morecambe Bay.

Having been for a length of time an observer of those localities that are sometimes neglected in consequence of not being fashionable resorts, I have only to add that those places to which I have alluded more particularly will be found as beneficial as most others. For the overwrought man of business, or those whose means will not allow them to move to the generally recognised health-resorts, I would almost guarantee that invalids, of the class to which such a climate is adapted, will find that health and economy in living may be obtained much more readily, because more time can be allowed for a chance, where less expense is involved, of a radical cure in most cases.

In bringing these places under notice, my main object is to elucidate facts. Meteorology is a kindred science to medicine. Climate has a good deal to do with the constitutions of individuals; but where ozone abounds and fogs do not prevail, where marshes are drained and sandhills are in lieu of cesspools, we do not, as a rule, hear much of ague, consumption, or pestilential fever.

Mean Annual Temperature of the Air at the undermentioned Places.

	DEG.	SEC.
Silloth, latitude 54 deg. 51 m. 51 s.	49	1
That part of England between lat. 51 deg. and 52 deg. ...	49	2
Cornwall and Devonshire	51	0
The Isle of Wight, including Ventnor...	51	3
Torquay	50	7
Hastings	48	0
Worthing...	49	0
The Isle of Man...	48	1
Scarborough	46	5
Tynemouth	45	6

The influence of the Gulf Stream is apparent in the foregoing statement. To this alone can the high mean temperature of Silloth be ascribed, which, it will be observed, is higher than that of Worthing, on the south coast of England, and nearly the same as places situated between latitude 51 deg. and 52 deg. The prevailing wind at Silloth is south-west, which being in contact with the Gulf Stream in its course causes this comparatively mild climate.

The temperature is little below that of Torquay, but without its enervating and depressing influence, owing to the greater dryness of the atmosphere at Silloth. The average number of days in the year upon which rain falls is at Silloth 150; in Cornwall and Devonshire, 186; Torquay, 173; Tynemouth, 179; Isle of Wight, 142.

The mean daily range of temperature—or range from the lowest to the highest readings of the thermometer—is only 13.2 deg. The invalid who suffers from extreme cold will value this. Ozone is scarcely absent one day in the year. The place nearest approaching the quantity of ozone found at Silloth is at Osborne House in the Isle of Wight. The ozone scale at present in use by meteorological observers extends only from 0 to 10 deg. A scale extended to 20 deg. has been sanctioned by the Meteorological Society and the Registrar-General for this station only, and the full extent is frequently obtained.

For these particulars I am indebted to the Rev. Francis Redford, M.A., F.R.S.E., rector of Silloth, who for the last eighteen years has been a painstaking observer, and who has given the annexed table of the rainfall for seventeen years, the mean being 32.71 inches during the whole of that period.

Rainfall at Silloth.

	INS.		INS.
1855	22.060	1864	33.367
1856	25.989	1865	28.736
1857	27.486	1866	36.760
1858	32.319	1867	26.477
1859	39.802	1868	37.679
1860	37.810	1869	32.237
1861	42.471	1870	26.387
1862	44.178	1871	30.640
1863	43.845		

Mean of seventeen years, 32.717 ins.

POISONING FROM THE FUMES OF CARBOLIC ACID: RECOVERY.

By R. E. UNTHANK, M.R.C.S.Eng., Appleton Wiske.

On Saturday, October 26th, about 1 P.M., I was called to attend Mr. P., a farmer in this district. On my arrival at his residence, I found him in violent convulsions with trismus, and blood passing from the mouth in consequence of the teeth having wounded the tongue. He was quite comatose; the face and neck were livid; the breathing stertorous; the extremities and surface of the body were cold; the pulse was scarcely perceptible. I had him put into a warm bath immediately. In forty minutes the convulsions ceased, sensibility partly returned, the face and neck had assumed their natural hue, the breathing became quieter, the extremities and body were warm, and the pulse much stronger. He was then removed to bed, wrapped in blankets; a bottle of warm water was put to the feet, cold applications to the head, and a strong mustard stupe to the nape of the neck. I saw the patient again at 7 P.M.; he was then perfectly conscious; the convulsions had not returned; the breathing was calm; the body and extremities had increased in temperature; the pulse was 88; the tongue moist and clean, but sore. He had passed about half a pint of urine, which was more acid than normal urine; but I could not detect in it the odour of carbolic acid. He complained of giddiness, but no pain, in the head; he had pain in the face and neck, with the taste of carbolic acid in the mouth and throat, and a great deal of gastric irritation. I gave him an aperient, and afterwards a mixture composed of nitrate of bismuth, dilute hydrocyanic acid (*P.L.*), acacia mixture and water, a gargle for the mouth of chlorate of potash and tincture of myrrh, and a liniment of equal parts of belladonna and soap liniment, to be applied to the neck and face. At my next visit, on the 27th, at 10 A.M., I found him much better. The mixture, gargle, and embrocation, were continued; and he was allowed a light diet of boiled chicken, sago, and milk. He improved daily, and was quite convalescent on the 30th. Had the warm bath not acted so beneficially in restoring my patient, I should at once have resorted to venesection. Mr. P. told me that on the day he became ill he was engaged in his usual occupation amongst the cattle, and had been exposed for three hours to the fumes of strong carbolic acid; and that as he was going to the house to dinner he was seized with giddiness, stupor, and convulsions. In the case of poisoning by carbolic acid, quoted in the JOURNAL October 26th, from Dr. Mosler, the symptoms were similar to those under which my patient laboured.

THERAPEUTIC MEMORANDA.

BLEEDING IN THE TREATMENT OF SCURVY.

On reading Dr. Cheadle's most interesting clinical lecture on Scurvy and Purpura, I see he doubts the use of bleeding. I may be rash in holding an opposite opinion, but I cannot help thinking there are cases with purpuric symptoms in which the loss of blood does good. Two cases have occurred to me in which neither diet nor medicines did any good, but in both recovery followed most alarming hæmorrhage; in the one case from the nose, and in the second from the nose, bowels, and kidneys. In both, great exhaustion followed, and then a rapid recovery. One case was that of a bricklayer, who said he had fresh vegetables about three times a week; and the other was a boy, who lived fairly well, but whose home was damp and badly drained. These facts make me think that loss of blood may do good.

G. H. SAVAGE, M.D.Lond, Assistant-Physician to the Bethlehem Hospital.

OBSTETRIC MEMORANDA.

MULTIPLE BIRTH.

On May 30th, 1870, I delivered Mrs. M. of triplets. They are all alive, two years and a half old, and have gone through the whooping-cough. Mrs. M. conceived early in September 1869, fancied she miss carried in October, and was delivered on May 30th, 1870. The first and second were boys at full term, and they shared one battledore placenta; the third, a girl of apparently only eight months, had separate membranes and after-birth. I think my patient probably conceived of twins in September, menstruated profusely (not miscarried), and conceived again in October.

PERCY BOULTON, M.D., Physician to the Samaritan Hospital.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

THE MIDDLESEX HOSPITAL.

CASE OF POISONING BY ACONITE; DEATH; NECROPSY.

(Under the care of Dr. HENRY THOMPSON.)

The following case of poisoning by aconite is of much interest. The symptoms presented by the patient verify the observations by Pereira, Headland, Fleming, and others. Although experiments on lower animals tend to prove that in them death ensues from asphyxia, in the present case the fatal issue was apparently from syncope; but this has been shown by Dr. Fleming to be not an unusual mode of death in man; indeed, he is of opinion that syncope is the common mode of death. During the entire illness of the patient, however, the statement made by some observers that contraction of the pupil is more or less a constant phenomenon of aconite poisoning, did not in any way receive corroboration. The pupils throughout were more or less dilated, as Dr. Headland has pointed out to be the rule in these cases, while, immediately before death, the symptom became very marked; a condition, however, dependent probably on the mode of death. The tumultuous action of the heart, and the great mental anxiety and restlessness of the patient, were very prominent symptoms. The maniacal condition of the patient was unusual.

A chemist's porter, aged 21, was brought into the Middlesex Hospital at 5.30 P.M. He had swallowed, half an hour previously, one ounce of Fleming's tincture of aconite, which was being made in the shop at the time. The poison produced immediate vomiting, and two minutes afterwards he was given half a drachm of sulphate of zinc with warm water, followed by a second dose of zinc five minutes later with good effect. Strong coffee was then administered, and he was sent to the hospital. When admitted he was in a state of extreme collapse; his countenance was anxious, and the skin cold. His pupils were of moderate size. He seemed almost unable to articulate, he was retching violently, his pulse was very rapid and almost uncountable, the heart's action was exceedingly tumultuous, and the two sounds scarcely separable. His stomach was immediately washed out by means of the stomach-pump with water and some aromatic spirit of ammonia, and alcoholic stimulants were given him. He was then sent to bed.* At 6 P.M. he was quite conscious; he was very restless and constantly turning in bed, his expression was anxious, and he was apparently suffering pain and great mental anxiety. His face was dusky, and his body was generally cold and clammy. He had apparently great difficulty in swallowing, the fluid running out by his mouth as soon as taken, and he appeared to be unable to articulate. He kept spitting large quantities of frothy saliva. The heart was acting most tumultuously, and in a churning manner, the systole and diastole remaining inseparable to the ear. The pulse was of fair size, uncountable, very weak and unequal. The pupils were of moderate size. Half an hour after this he was able to answer questions; he was throwing himself about violently, and attempted to bite the attendants. The pupils were becoming larger. He passed a motion in bed. He shortly after this became delirious; his pulse left at the wrist, but he became more and more violent and restless, and at 8.30, after struggling considerably, his appearance suddenly changed, his pupils dilated, and his heart ceased to beat, followed by two or three imperfect respirations. He died apparently in syncope. About sixteen ounces of urine were drawn off from the bladder after death, sp. gr. 1023, normal in colour, very acid, and precipitating phsophates but no albumen on the application of heat.

The necropsy was made by Dr. Cayley, seventeen hours after death. The body was well nourished; rigor mortis was very marked; the thorax had universal fibrous adhesions on the left side; the right pleura was normal. The dependent portion of the lungs was much engorged and somewhat œdematous. There was no fluid in the pericardium. All the cavities of the heart contained black fluid blood, and on the right side were some loose black clots. The left ventricle was under the influence of rigor mortis. The small intestines were of a pale rosy colour. The liver was congested; the stomach was empty, the

* The water with which the stomach was washed out, produced scarcely any perceptible impression of tingling on the tongue.

mucous membrane was everywhere intensely reddened, and, towards the cardiac end, studded with small ecchymoses. The mucous surface was covered with a layer of viscid yellow mucus. The gall-bladders contained half an ounce of thin bile. The spleen was rather large, moderately firm, and much congested. The kidneys were intensely congested, but otherwise normal. The dura mater was abnormally adherent to the skull; there was about half an ounce of clear serous fluid in the ventricles and at the base. The sinuses of the dura mater and the veins on the surface of the cerebrum were filled with dark fluid blood. The veins also in the floor of the fourth ventricle were also much congested. The cerebral substance was not abnormal, and did not appear hyperæmic.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

CASE OF COLLOID CANCER OF PERITONEUM AND RIGHT OVARY: ASCITES: DEATH: NECROPSY.

(Under the care of Dr. BRADBURY.)

ADA F., aged 20, single, living at Debden, in Essex, was admitted on August 28, 1872.

Previous History.—She stated that both her parents were living and healthy. She had also two brothers and one sister in good health. The patient had been in service for four years and a half, and had enjoyed good health up to about five months ago.

She first noticed on getting up one morning in last May that her dress was very tight. There had been no previous swelling except a small tumour in the right iliac region, which could be felt, but was not visible. The tumour was tender on pressure, but did not trouble her much; and when the general swelling of the abdomen took place, the lump disappeared. The swelling of the abdomen did not begin more on one side than on the other, and took place very rapidly. After being ill for three weeks at home, the patient was admitted into the hospital at Saffron Walden. After being there two months, paracentesis abdominis was performed, on account of the distress caused to the patient by the distension of the abdomen. She remained in the hospital about a month after the operation. Since then, the abdomen had gradually been enlarging in size again; and, on admission, the patient stated that the swelling of the abdomen was quite as great as before the tapping. There had been no swelling of the legs, but the patient had felt a numbness extending from the thigh down to the leg. Menstruation was regular till three months ago, but the patient used to suffer much from pain in the back at each period. Since then, she had only menstruated once, about a fortnight before the tapping. There had always been a tendency to diarrhœa since the illness commenced.

State on Admission.—The patient was a very delicate looking young woman, with long eyelashes. The abdomen was very much distended, and of a globular shape, not being broad in the flanks as in ascites depending upon cirrhosis. The umbilicus was obliterated, and the superficial abdominal veins were evident. There was dulness on percussion over the whole abdomen, the dulness being most marked in the middle line. There was a distinct and very superficial thrill on palpation. When the patient was turned on one side, the opposite flank was resonant on percussion. Owing to the large quantity of fluid in the abdomen, no tumour could be felt. The heart's sounds were clear, and the breathing normal. There was no œdema of the feet nor puffiness of the face. The specific gravity of the urine was 1010; it was acid, and contained no albumen, but an excess of lithates.

A mixture was prescribed, containing ten minims of tincture of digitalis, fifteen grains of acetate of potash, twenty minims of spirits of nitrous ether, and an ounce and a half of water; to be given three times a day. She was placed on full diet.

August 30.—The patient was seized with severe pain in the abdomen this evening, and she complained also of a "catch" in her breathing, both of which were relieved by warm opiate fomentations.

Sept. 2.—Pain in the abdomen was again very severe last night, and the patient now complained of aching pain in the loins also. Instead of the above mixture she was now ordered one drachm of syrup of the iodide of iron, to be taken in water three times daily. One ounce of brandy was also prescribed, as the patient's pulse was very feeble.

Sept. 4.—The abdomen was painted with tincture of iodine.

Sept. 6.—Paracentesis abdominis was performed by Mr. Carver, and eighteen pints and a half of straw-coloured fluid, of specific gravity 1015, were drawn off. The fluid was albuminous, and contained red and white blood-corpuscles. After the fluid had been withdrawn, a hard uneven mass could be felt, extending below the umbilicus and into each flank. The tumour had on pressure a peculiar crepitant feel, and was painful on manipulation. The patient was somewhat faint after the operation; she also vomited some toast which she took at ten, about five hours after the tapping. She was ordered to have five grains of Dover's powder at bedtime. The quantity of brandy was increased to two ounces.

Sept. 7.—The patient had slept, and passed a comfortable night. She vomited again during the day. Temperature normal.

Sept. 8.—She had vomited nearly all she had taken, and was very weak. The mixture was omitted.

Sept. 9.—The sickness was less troublesome, as the patient had been taking only beef-tea and milk, with soda-water and ice. At night a stabbing pain came on in the left axillary region, which lasted about two hours. A dubious friction-sound was audible.

Sept. 10.—The friction-sound in the left side was distinctly audible; but the patient did not complain of pain, not even on taking a deep breath. She ate a little partridge at dinner.

Sept. 11.—The abdomen was again filling, and very painful. She was ordered to take at night a draught containing twenty minims of chlorodyne in an ounce of water, and to have fish for dinner.

Sept. 13.—On placing the hand upon the abdomen there was a feeling as if the bowels were full of fæces, and could be distinctly felt through the abdominal walls. A simple injection was ordered. Towards evening the patient complained of severe pain in the upper part of the abdomen and in the loins.

Sept. 14.—She felt easier. There were very distinct friction-sounds in the left axillary region.

Sept. 20.—The abdomen had been rapidly refilling, the tumour becoming less distinct. She complained of much aching and stiffness, and of a "catch" in her breath on the left side. She was allowed a little jelly and some pudding.

Sept. 22.—The abdomen was more distended. The patient complained of constant pain on the right side of the abdomen and thorax. She was ordered to have twenty minims of liquor morphiæ hydrochloratis with half an ounce of water every six hours, and a mutton-chop occasionally.

Sept. 23.—She was very weak, and sat propped up in bed. The morphia had relieved the pain. The patient was very much emaciated.

Sept. 24.—She died quietly at 2.30 P.M.

NECROPSY, eighteen hours after death. The peritoneal cavity contained about two gallons of straw-coloured fluid. The whole of the parietal portion of the peritoneum was affected with colloid cancer, which, above the pubes, was about three-quarters of an inch in thickness. The small omentum was found much narrower in extent than normal, and to the left of the hepatic vessels was completely occupied by colloid cancer, which reached from the lesser curvature of the stomach upwards to the liver. The portion forming the free margin of the foramen of Winslow, and enclosing the hepatic vessels, etc., was very slightly implicated in the disease. Over the anterior aspect of the stomach, from the pyloric to the cardiac extremities, and from the lesser to the greater curvatures, the peritoneum was slightly implicated, exhibiting only variously sized nodules, which were more numerous towards the greater curvature. The whole of the peritoneum constituting the great omentum was one mass of alveolar cancer, which extended laterally to the upper portion of the right kidney, concealing all but a very small portion of the upper part of the duodenum on this side, and on the left side reaching as far as the spleen, to the peritoneal covering of which organ it was adherent, especially near the hilus. The omental pouch was free from the disease as low down as the upper border of the transverse colon; but the colloid mass to the left of the hepatic vessels could be felt extending downwards into the pouch behind the stomach nearly as low as the great curvature. The part of the peritoneum covering the posterior aspect of the transverse colon, and forming the meso-colon, was comparatively unaffected along the mesial line, exhibiting only a few nodules. That portion of the peritoneum constituting the ascending meso-colon was quite free from the disease near the vertebral column, but, as it approached the cæcum and ascending colon, it became lost in a mass of the disease. The descending meso-colon was more movable than the ascending, but presented large masses of colloid cancer across the upper portion. The sigmoid meso-colon was free at its upper portion, but very much implicated as it reached the meso-rectum. The meso-rectum and the portion of peritoneum constituting the utero-rectal pouch were one mass of disease. The lateral ligaments of the uterus were implicated on the posterior aspect; but the anterior aspect of the uterus and of the lateral ligaments were free from the disease. The covering of the left ovary on the posterior aspect was diseased, and the whole of the right ovary was one mass of cancer, and very friable. The parietal portion of the peritoneum, extending from the rectum along the lateral aspects of the true pelvis, presented well marked prominent nodular masses of cancer. The mesenteric fold corresponding to the jejunum presented also large nodules, especially

near the bowel ; lower down, towards the ileum, these nodules were not so large, but more numerous, and more prominent on the posterior aspect than on the anterior. On approaching the cæcal end of the ileum the mesentery became more and more implicated, the nodules being aggregated into one mass. Over the peritoneal covering of the whole of the small intestine were scattered small nodules, which were more numerous along the inferior margin. The peritoneal ligaments of the liver were very much thickened by the disease, being, in fact, one mass of cancer. The peritoneum covering the liver was very much implicated over the left lobe, and towards the anterior portion of the upper aspect of the right lobe. The portion covering the lower aspect of both lobes was not so much implicated, presenting only scattered nodules. The part covering the gall-bladder contained two large masses, one on either side of the bladder. The portion of peritoneum covering the diaphragm presented the same appearance as that constituting the hepatic ligaments. The central tendon of the diaphragm was thinned, but not implicated in the disease. The tissues of the liver, pancreas, spleen, kidneys, and the mucous membrane of the stomach, were not affected by the cancer. The appendix vermiformis was shortened and very much thickened. The left pleura was half full of fluid, and its surface roughened. The left lung was much diminished in size, and carnified from pressure by the fluid. There were a few adhesions. On the right side there were also adhesions, and the lung was somewhat contracted. The heart and pericardium were healthy.

REVIEWS AND NOTICES.

MODERN SURGERY.*

THE chief difficulty of the modern student of surgery must lie in the abundance of the text-books which are at his disposal. Not to speak of a great work which we had occasion some time ago to mention, founded on a special pathological inspiration, and destined to fill an undiscoverable gap discernible only by the eye of recondite science; and leaving out of account even the great Scotch works of Miller, Pirrie, and Spence, and the American translation of Billroth's most able summary of Surgical Pathology and Therapeutics ; leaving out of account, too, the great *System of Surgery* edited by Holmes, which stands at the head of British surgical literature, we have before us a considerable pile of surgical hand-books or systems which have just issued from the English and American press. It is difficult to perform the critic's task in respect to them, or to give any well grounded preference to one rather than to the other. They differ in kind and in mode of treatment so much, that they cannot be rigidly compared.

The student of surgery, whose mind inclines to a knowledge of the past as well as of the present, and who would willingly see the panorama of the country over which his predecessors had travelled before reaching their present very lofty little pinnacle of knowledge, may find with pleasure in Cooper's *Surgical Dictionary* (recast by a company of competent labourers under the direction of a surgeon of the highest experience and capacity) a series of articles which deal tenderly and reverently with ancient worthies, which remind us how much of our fund of information and rules of practice is drawn from the labours of men whose names are rarely on the lips of the present generation, and whose memory the younger race are but rarely taught to honour. The history of surgery is rich in great memories, and pregnant with lessons of patience, research, perseverance under disappointment, success worked out through failures, failures following upon vaunted success ; lessons which teach how progress has been made, and of what bricks the modern structure which we call the science and art of surgery is built. This can be learned from Cooper's *Surgical Dictionary*, and from no other text-book of surgery in our language ; for modern British surgeons are no longer distinguished by their learning or by their research, or by the spirit of catholic cultivation which teaches men to abhor a Philistine dogmatism, and to shrink from the hard clear lines and merely shining superficies of modern polish.

The lack of collateral research, the want of sympathy with the human and antiquarian element in knowledge, and the absence of all literary grace or philosophic thought, is noticeable in all the works before us, but especially perhaps in Gross's huge volumes. It would be difficult to find, for instance, more unsatisfactory reading than his chapters on Inflammation. Obscure, diffuse, ungraceful, and unenlightened by any central idea, they rather catalogue than expound the doctrines of successive teachers, and end with the puerile conclusions that the cautious observer must be satisfied if "he can occasionally pick up a pebble at the bottom of the great sea of knowledge" (an improvement on Newton) ; that "the theories of one man are of no more importance than those of another ;" and finally, that "it is fortunate for us in this matter-of-fact age that we are not obliged, as was the case in former times, in order to establish our claims as philosophers, to speculate about the final causes of things."

It may be doubted whether any one could in any age assign a satisfactory final cause for such writing as this, or would find it possible to attach a rational meaning to it. There are parts of Dr. Gross's book which have always deserved some of the reputation which the whole book has undeservedly achieved. These are, especially, the sections relating to minor surgery ; and in the present edition they are still quite worthy of praise ; but the whole book is not one which can be read with profit or even with patience, and the exposition of principles is perhaps more verbose and obscure than any which has ever been attempted. This opinion would seem to be contradicted by the appearance of these huge tomes in their fifth edition. That may possibly be explained by the fact that this has hitherto been the one great native surgical text-book of the American continent ; that American critics have been well pleased, and rightly so, to welome an industrious, honest, and encyclopædic native author at a date when such authorship was rare on that continent ; while English critics have found it less troublesome to take for granted the merits of tomes so portly and coming from our distant brothers, than to scan them critically. Moreover, to liberate our mind on this subject, there has never been a period when the ordinary reviewing in medical papers has fallen so low as it has of late years. The reviews which appear in the average run of medical papers in this country have been gradually deteriorating in the hands of hack-writers until they have reached a level of absolute nullity ; useful as booksellers' puffs ; useful as additional advertisements to which authors have been taught to think themselves entitled unless their books were of conspicuous badness ; but utterly without value as standards of comparison, without instruction to the authors, without reliability for readers. The greatest sinner in this matter is the oldest. No book appears from the press, however flimsy, however padded, however crude, however wide of the truth in its theories, or however careless and feeble in its observation of facts, that does not receive its proportion of quotable lines, which can be tacked on to an advertisement ; and a rich harvest of advertisements rewards the shallow praise. It is only in this way that one can explain the extravagant laudations which one sees weekly attached to books which have no claim to serious consideration, and which serve only as genteel advertisements that the authors desire to be consulted on this or that class of cases.

It would, we believe, be a righteous and useful protest against the feeble laudations poured out by the yard now-a-days upon all medical productions, if some stern journalists should decide to admit no reviews for twelve months to come, which were not confined to pointing out the faults of the books published. Mr. Bryant will excuse us if, with this impression strongly fixed in our mind, we express the opinion that he has not hit the bull's-eye in his manual of surgery. The prevailing faults of the book are a want of grasp of principles and a defective sense of proportion. The book seems to have grown together by aggregation, like the shell of a caddis-worm, rather than to have been formed by organic secretion from a central intelligence. Minor defects, everywhere observable, are an incapacity to write English, and a preference for uncouth and trivial phrases. An author who finds it necessary, for example, to write a preface, usually bestows some pains on the composition of the preliminary statement of his case. It would be difficult to find a statement more inelegantly expressed than that which stands in the front of this manual ; and a complete series of faults in diction and composition might be compiled from the two pages of which it consists. In the first paragraph it is stated : "I gave the offer my serious consideration, well weighing its difficulties and responsibilities" —meaning the difficulties and responsibilities which it imposed, and which, therefore, were those of the author, not of the offer. In the second paragraph Mr. Bryant writes : "I accepted the offer, and present, etc."—coupling with an inelegant ellipsis and by a copulative conjunction two different tenses ; in the third he speaks of the "performance" of "a standard," meaning the performance of "a task ;" in the fifth he says, "I have used my own material in preference to others"—meaning to that of others. The sixth paragraph is a complete muddle of ellipses ; the seventh speaks of "the specialities of eye, ear, and dental surgery ;" in the eighth he writes of "some

* The Principles and Practice of Surgery. By Frank Hastings Hamilton. New York : William Wood. 1872.
The Science and Art of Surgery. By John E. Erichsen. Sixth Edition. London : Longmans. 1872.
Cooper's Surgical Dictionary. New Edition. By Samuel A. Lane. Vol. i, 1861 ; vol. ii, 1872. London : Longmans.
The Practice of Surgery : a Manual. By Thomas Bryant. London : Churchills. 1872.
A System of Surgery. By Samuel D. Gross, M.D. Fifth Edition. Philadelphia : H. C. Lea. 1872.

to whom I now tend my thanks," and in the next sentence "gives it" to Mr. Turner and Dr. Moxon for the valuable chapter with drawings upon miscroscopical anatomy. He then proceeds to describe the book as Mr. Poland's brother. "With a singularly generous nature he took as lively an interest in its progress as that of a brother." It might well be supposed that a gentleman who so completely failed to penetrate the mysteries of his native language as to be unable to string together a dozen consecutive sentences in grammatical, not to say logical and graceful order, was not particularly well qualified to undertake to expound, clearly and concisely, a great and difficult subject to youthful minds; and it cannot be said that in this respect the publishers have been happy in their choice. There has, indeed, been a time in the history of our profession, when an incapacity to read and write one's native tongue would have been held to disqualify for the position of a public teacher; but we have changed all that a good deal. If medical publishers were restricted now-a-days in the selection of their authors to those who both had something to say and knew how to say it, the activity and extent of their business would be greatly limited; and that would no doubt be a misfortune greatly deplored by our posterity, for whom all of us feel bound to write more or less voluminously. The publishers may therefore plead an excuse capable of a good deal of pungent illustration, if they have not felt bound by loyalty to Crispinus to include impossible grammatical conditions within the "certain limits" beyond which, when they "invited Mr. Bryant to write a work on the practice of surgery," they "liberally left its execution entirely in his hands." The difficulties may have been greater than might have been anticipated; but we can but hope that "even in these matter-of-fact times" the time may come when it shall not be thought disgraceful to surgeons to possess the elements of scholarship, and when we shall be once more able to rise from the reading of medical books with the sense of pleasure and refreshment which more ancient authors afford, and which, as the examples of Watson and Paget prove, are at least not incompatible with fine intelligence and profound research.

We have lingered on the threshold, because Mr. Bryant has written thereon unintentionally, but in very large letters, *Cave canem.* On entering the house, our worst fears are not realised. The diction is throughout excruciating; but the substance of the chapters, bald, disjointed, and flavourless as they are, is a fair reflection of London hospital practice; and that, we imagine, is what will be most desired. The effort to be concise is unequal, and there is a lamentable want of capacity to seize the central principles of treatment and to group the deductions of rule around them, with an inability to weigh the value of observations; these defects are rather enhanced than concealed in critical portions by the author's singular incapacity for English composition. Thus an ill balanced summary of the pathology of tetanus is concluded in these words: "Clarke believes the lesions depend on the *conjoint* operation of injury of the peripheral nerves, accompanied as *it* is by hyperæmia *and* a morbid state of the blood-vessels of the cord with *its* resulting exudations and disintegrations." The student who can disentangle the meaning of that sentence might give some useful lessons to his master. As an example of want of knowledge and of balance, we observe that, in the discussion of the treatment of aneurism—a good test-subject forEnglish surgeons—as many lines are given to Moore's iron-wire experiment as to the whole subject of the treatment by galvano-puncture. Nothing could well be more misleading than the sort of reference made to it.

We have not space left to go through the book and comment further on it; but we would not have it supposed that the manual is destitute of merits to balance its faults. It is, on the contrary, remarkable for some excellent qualities. Mr. Bryant is thoroughly well accustomed to all the manipulations of surgery, and he explains them with the force and energy of a man speaking of what he knows, and satisfied that he knows it well. There is a constant reference to cases throughout the book, with a fulness of practical knowledge which bespeaks the surgeon steeped in practice at a large hospital from his youth upwards. The manual, moreover, is profusely and skilfully illustrated with drawings, which are original and well selected from the rich stores of Guy's Hospital museum and of Mr. Bryant's practice. We fear, therefore, that with all its faults of rampant Philistinism and defective culture, Mr. Bryant's book will be likely, by reason of its merits as well as of the influences which are engaged in pushing its circulation, to obtain a considerable success. It is certainly the most original, trustworthy, and complete manual of the kind. But the English language is still deficient in two manuals much needed. We have no good manual of surgery; and none which deserves the name fit for the students of midwifery. Mr. Bryant's manual is obviously not one which British surgeons can be content to see accepted as a representative work either abroad or in future time. Hereafter, and elsewhere, it will certainly be considered discreditable that such a manual should be the outcome of the surgical genius and experience of a great school, of the culture of this age, and of the enterprise of onr leading medical publishers.

[*To be continued.*]

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A NEW FORM OF ALKALINE CHALYBEATE SALINES.

Mr. M. P. Davies of Tenby has brought under our notice some alkaline and chalybeate salines, which he introduces as portable substitutes for the alkaline and chalybeate spas. The alkaline salt is composed of Cheltenham and magnesian salines in an effervescing tasteless form; and, being unique in its properties of *becoming alkaline during effervescence*, not from any excess of alkali in the first place, but by double decomposition, it will re-effervesce on the addition of a citric or tartaric acid. Its medicinal properties are antacid, alterative, and aperient, according to the dose. The chalybeate is the same with the addition of iron, which becomes decomposed into a bicarbonate during effervescence. It is evident, therefore, that these convenient and agreeable forms of medicine are deserving of the attention of the medical profession, to which they are submitted.

SPONGE-TENTS.

Some sponge-tents have been forwarded to us for inspection, made on a new principle, by Salt and Son, Birmingham, for Mr. Lawson Tait. They are alleged to possess the following advantages over those in general use. They can be sold at six shillings per dozen, and they dilate more rapidly than the tallow-covered tents. They are coated with cocoa-butter, and therefore do not become displaced before they begin to expand. They are easily introduced; and, unlike the uncoated tents of Dr. Marion Sims, do not become spoiled if not dexterously inserted. They are carbolised, and are made of the actual shape of the cervix—oval. Cakes of the solid compressed sponge may be had, from which the surgeon may cut a tent of any size, from those fit to use in the urethra to such as are used for the uterus or rectum.

REPORT
OF THE
MEANS EMPLOYED IN MEDICAL SCHOOLS OF GREAT BRITAIN FOR THE PRESERVATION OF SUBJECTS FOR DISSECTION.*

LEEDS SCHOOL OF MEDICINE.

Mr. C. J. Wright writes:—Your admirable report must have been read by many with very great interest. We have no experience here, as yet, as to the preservation of bodies through the summer months until the winter session, all those (not required for immediate dissection) which came in during the past few months having been opened and examined at the hospital before their reception, and thus rendered unfit for complete injection. But Mr. Greenwood, our resident curator, has on several occasions made use of the carbolised glycerine (according to Mr. Howse's method) in the case of fœtuses and small parts, and that with complete success. My object in writing, however, is to suggest the advisability of the publication of a report similar to the one above referred to upon the best modes of preserving *pathological* preparations, more particularly, perhaps, with a view to the retention of their colour—a point, I apprehend, of much importance in such tissues as hepatised lungs or Bright's kidneys. It would be very interesting to inquire also, for instance, how many have carried out the plan suggested by Dr. B. W. Richardson; viz., that of suspending growths or tissues in the vapours of chloroform, ammonia, ether, etc.; and with what success they have met. My own experience of this mode of preservation is as yet limited, but it has so far been attended with considerable success.

* Continued from page 412 of number for October 12th.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 23RD, 1872.

ETHER AS AN ANÆSTHETIC.

A GOOD deal of progress has been made during the last fortnight towards the generally affirmative response by the profession to our appeal that a full and fair trial should be given to ether as a safer anæsthetic than chloroform, and one of which the disadvantages were rather imaginary than real. The impression produced by the statements and suggestions to which it has been our duty to give prominence has been very widely extended. Three weeks ago the administration of ether was a rare exception; we have reason to believe that it is already becoming the rule. The profession will work earnestly and anxiously for the record of results. Thus far only the most favourable verdicts reach us; we hope, however, that those who administer ether will, without exception, favour us during the ensuing week with a brief note of their results; and that in all cases records will be kept, so that the whole profession may rapidly be put in possession of a mass of contemporaneous experience. The paper by Dr. Jones, which we publish this week, is one of great value, and records the large and careful experience of a competent observer. Mr. Vincent Jackson, Surgeon to the South Staffordshire Hospital at Wolverhampton, gave ether last week for a capital operation, and has forwarded to us the following interesting observations.

Mr. Jackson remarks that the chief feature of interest in the morning's proceedings was using ether as an anæsthetic in one case, and chloroform in the other. He had been informed by a gentleman present that twenty years ago, in the South Staffordshire Hospital, ether was used to produce unconsciousness for surgical purposes, but it was soon given up, chloroform supplanting it. A large quantity of ether (of the *Pharmacopœia* strength)—in all, one ounce and a half—was first poured upon the inner side of a cone, made of Markwick's spongio-piline, the diameter of its upper aperture being not quite two inches. The lower opening was then placed over the patient's nose and mouth, its accurate fit preventing the slightest access of atmospheric air. The patient, a young man, breathed steadily and evenly. Soon he made efforts to remove the inhaler; his hands were consequently held down by two assistants. At the end of four minutes, he coughed in succession several times, raising his head on each occasion; but there was no utterance, no physical excitement. At seven minutes and a half, insensibility was complete and profound, the breathing being calm, regular, and without stertor, and the appearance of the countenance natural. The operation was commenced, and in eight minutes finished. Once or twice during these last eight minutes the inhaler was removed; and, in an astonishingly short time, compared with chloroform, the surgeons were instructed by a wink and a wriggle, how evanescent in its effects was the anæsthetic which they were employing. The inhaler contained a large quantity of ether when it was laid aside. The pulse throughout indicated little or no alteration, remaining steady and soft; it did not appear to fall; whether it quickened, Mr. Jackson could not say. No sickness nor unpleasant symptom followed etherisation, and by the evening all odour had left the breath. To the second patient, chloroform was given; three drachms were used, and the operation was commenced two minutes and a half after the first inhalation. It has been objected that ether is too costly for general employment. How this is, Mr. Jackson cannot say; but if the same quantity can be purchased for a shilling or eighteen pence as of chloroform for several shillings, surely the former cannot be more expensive in the long run than the latter; and if ether is safer, price has nothing to do with the question.

THE MORBID EFFECTS OF ALCOHOL.

THIS subject is one of so great interest that we willingly devote a large part of our space this week to its consideration. We have had pleasure in postponing, at Dr. Dickinson's request, the publication of the abstract of his paper read at a recent meeting of the Royal Medical and Chirurgical Society, until he could prepare a further paper on the subject, which we also publish this week.

In the paper read at the Royal Medical and Chirurgical Society, an abstract of which, with the discussion thereon, will be found in another portion of our impression, Dr. Dickinson attempts to ascertain the influence of alcoholism upon various tissues and organs. With this object in view, he has tabulated the appearances found in the dead bodies of one hundred and forty-nine traders in liquor, the records extending over a period of thirty years. With these he compares the *post mortem* appearances in an equal number of persons who had not been traders in liquor, and who were "not known to have been drunken". "The assumption that people who get liquor for nothing, drink more than those who have to pay for it, is," the author says, "justified by the common tendency of mankind, as well as by the notorious inebriety and liability to delirium tremens of potmen, waiters, cellarmen, draymen, brewers, barmen, and publicans." We do not for a moment question the notorious inebriety of traders in liquor; but we demur to the assumption that the morbid appearances found in the dead bodies of all hospital patients who have not been engaged in the liquor traffic are certainly not the result of alcoholism. The author of the paper, dividing the subjects of his observation into traders in alcohol and non-traders in that commodity, assumes that, while those who manufacture, sell, and distribute liquors, drink to excess, the buyers of strong drink are abstemious and temperate; that, while inebriety prevails behind the bar of the pothouse and the gin-shop, sobriety is the rule in front of that boundary between the temperate and the intemperate. The assumption that, excepting known drunkards, temperance may be taken for granted amongst the entire population, would be sufficiently fallacious; but applied to the inmates of a general hospital, a large proportion of whom are notoriously brought thither by sickness the more or less direct result of intemperance, it is a palpable absurdity, and pathological conclusions based upon such data must be misleading and mischievous. Every hospital physician is aware that alcoholic excess is a fruitful source of disease amongst men of the most diverse occupations; and, if we would exclude the influence of this widely spread agency, we must be able to affirm, not merely that the subjects of our observation "were not known to have been drunken", but that they were known with absolute certainty not to have been drunken. Nay, more, if we would exactly determine the influence of alcohol in the causation of disease, a comparison should be made between those who habitually consume alcohol, whether in excess or in moderation, and those who are total abstainers from alcoholic liquors.

Dr. Dickinson's dead-house statistics have led him to the conclusion that "the kidneys have been credited with a morbid susceptibility to

alcohol much in excess of what is warranted by facts". He finds evidence of kidney-disease with about equal frequency in his two series of cases—in the bodies of those who have been traders in liquors, and in those who have been otherwise occupied. It should be distinctly understood that an ordinary *post mortem* record as to the appearance of the kidney affords no indication of the actual amount of disease. A kidney which, on a superficial examination, might pass for healthy, may reveal to a skilled microscopic observer extensive and advanced degeneration. Accurate results are as unattainable by collecting together numerous inexact observations, as a prosperous insurance office by the amalgamation of several bankrupt companies. The result of such proceedings is to make confusion worse confounded.

The best field for observing the morbid effects of alcohol is neither the *post mortem* theatre nor the hospital ward, but the daily round of private practice, where, the reticence of the patient being supplemented by the candour of his friends, habits of intemperance can rarely be concealed from the medical attendant. If the author of this paper is anxious to determine the influence of alcohol as a cause of renal degeneration, we venture to suggest a method of investigation more trustworthy than that which he has adopted. Let him test the urine of five hundred men from thirty to fifty years of age, believing themselves to be in good health, and actively engaged in the liquor trade, or in the scarcely less perilous occupation of indoor servants in West End houses. Then let him take, for comparison, another series of five hundred men of the same ages and in about the same stratum of society—shopmen, porters, and others—who for five years at least have been total abstainers from alcohol. It might not, perhaps, be easy to find in this city, abounding as it does in gin-palaces, so large a number of Rechabites, and the inquiry would involve a considerable amount of trouble; but the results would be decisive; and we have no hesitation in declaring that they would show such a large preponderance of albuminuria amongst the tipplers as would lead to the irresistible conclusion that alcohol in excess is a most powerful agent in the production of kidney-disease. The generally accepted doctrine, that alcoholism is a fruitful source of renal disease, has been the result of extensive and careful clinical observation, and not, as Dr. Anstie is reported to have suggested, a deduction from erroneous theory.

It appears to us that Dr. Dickinson must have undertaken the inquiry, the results of which we are now discussing, with a foregone conclusion. His theory is, that the "organs are damaged by alcohol much as they stand in the line of absorption". "Next to the stomach, the liver suffers by way of cirrhosis and fatty impregnation; next, the stress falls upon the lung. A large share in the pathology of intemperance is also taken by the arterial system. Lastly, the kidneys, more remotely exposed, have a smaller participation in the common danger of alcoholism." This theory has, at any rate, the advantage of mechanical simplicity; but it is certainly not in accordance with the facts set forth by its author. Obviously, if the theory be true, the stomach should be the organ most constantly and seriously injured by contact with imbibed alcohol; but apparently this is not shown in the dead-house, for we are told that, "passing over the stomach, the changes in which are not always evident to rough morbid anatomy", the liver was found to be most frequently and extensively diseased. In accordance with this theory of proximity to the place of absorption, the portal vein and its branches should suffer more than the liver itself; and, again, the hepatic veins, the inferior cava, and the pulmonary artery, ought to manifest more constant and advanced changes than the lungs and the aorta; and this, again, should be more frequently and seriously injured than the minute arteries. Yet the reverse of all this appears to have been found.

The asserted comparative immunity of the kidneys is explained by their remoteness along the line of absorption. An attempt to explain physiological facts upon purely mechanical principles scarcely calls for serious criticism. We would, however, suggest for Dr. Dickinson's consideration, whether the kidneys are not nearer to the point where alcohol enters the circulation than most of those portions of the vascular system which, according to him, are more extensively diseased—namely, the minute systemic arteries. The pathologist who ignores physiological considerations, who pays no heed to the fact that the kidney is one of the main outlets for useless and noxious products, and who assumes that its liability to disease is influenced, not by its excretory function, but by its remoteness from the stomach, is not likely to throw much light upon renal pathology, or upon the relation between disease of the kidney and other pathological changes.

Another communication from Dr. Dickinson, on "Alcohol as a Cause of Renal Disease", which appears in our columns to-day, is a reply to a paper by Dr. Roberts, who may probably have something more to say on the subject. We have space only for a very few additional remarks.

The returns of the Registrar-General cannot be relied upon as an accurate index of the mortality from renal disease. If the habit of testing the urine for albumen were as general in private as it is in hospital practice, disease of the kidney would rarely escape detection. This, however, is far from being the case; and, consequently, unsuspected renal disease is the cause of many deaths which are registered under the head of apoplexy, paralysis, coma, convulsions, fever, pleurisy, pericarditis, pneumonia, etc. We agree with Dr. Roberts that the Registrar-General's reports cannot be safely relied on to determine the more delicate etiological problems.

With reference to the comparison of the state of the kidneys in fifty-two cases of delirium tremens with that found in an equal number of men killed by accident, we would suggest two precautionary considerations. First, it cannot safely be assumed that men who suffer violent deaths are of temperate habits; on the contrary, it is certain that many fatal accidents are the direct result of intemperance. Then, with regard to delirium tremens, it is notorious that attacks of that disease are in a large proportion of cases the result, not of habitual, but of paroxysmal intemperance. For instance, we saw lately a man who was under treatment for a second attack of delirium tremens, the first having occurred seven years before. In the interval between the first attack and a period of about ten days before the second outbreak, this man had been a total abstainer from alcohol. If this second attack had been fatal, we certainly should not have found *post mortem* evidence of chronic alcoholism. The attempt to solve etiological problems by *post mortem* data, without a precise knowledge of the previous history of the subjects inspected, upon a mere presumption of what their habits may have been, can result only in confusion, disappointment, and failure.

THE EXCESSIVE CHOLERA MORTALITY IN INDIA.

THAT England has escaped an attack of cholera during the last two years, may justly be attributed to the sanitary and precautionary measures adopted to arrest its course, and to remove the means by which it is most readily disseminated. The loss of life amongst the European troops in India during the present year has been very great: 828 cases and 529 deaths were reported up to the beginning of this month. If this lamentable mortality be unavoidable in future, it will materially influence voluntary enlistment of recruits for the army, of which nearly one-half is located in India. The subject urgently requires the attention of Government. The prophylactic and medical treatment of cholera are points of great difficulty; but, though much remains to be elucidated, considerable progress has of late years been made in this direction. The necessity for the removal of such sanitary defects as induce or aggravate cholera and other zymotic diseases is fully established, and transmission of the poison of cholera through the drinking-water is generally allowed as one of the special means of its communication. Prompt removal from the infected locality is allowed by all Indian medical authorities to be one of the best means of saving life when the epidemic appears amongst the troops; and the removal of a

regiment from a cantonment to a camp on the occurrence of two or more cases in a week has been ordered by the supreme Government. Has this order been neglected during the present year? From the great mortality that has occurred, it would appear that the regiments have not been moved in this early stage, if the reports in the newspapers be correct, that in some instances the attack disappeared when the troops were moved into tents. Should this be true, the responsibility of the delay must rest with the military and medical authorities on the spot. The instances in which more than three deaths occurred previously to the removal of the troops call for especial explanation. Inexperience may lead some of the medical officers to fail to recognise the earlier stages of the disease; but after collapse and death, the man who does not recognise cholera is not fitted for the responsible duties of a medical officer in India. The great reluctance to moving into camp during the hot winds and rainy season is quite natural, and exists more strongly in those who not only have the trouble and inconvenience of moving themselves, but have also to direct the arrangements for others, probably aggravated by the existence of a panic, and possibly imbued with the theory that cholera is air-borne, and equally prevalent outside cantonments as in the barracks.

The medical treatment of the disease is a subject of great difficulty; but even here great advance has been made. It must be borne in mind that in this disease, more than in any other, the loss of half an hour may imply the loss of a life.

The difficulties of the treatment in the more advanced stages are great, and the opinions of the profession on the value of individual remedies are divergent. The Army Sanitary Commission states that "in fully developed cholera verging towards, or already in, collapse, medicines were simply of no use". Recovery often follows collapse; but Indian medical experience proves that this recovery is rendered hopeless when *strong medicines*, such as large quantities of brandy or opium, are used. Such remedies are dangerous; yet, by carefully alleviating the symptoms by mild remedies—of which one of the best is simple cold water—by mild nourishment, and kind nursing in a strictly recumbent position, many cases will recover which would under different treatment prove fatal. Have these indications been attended to in the present epidemic? or to what other causes can the excessive mortality be attributed? The subject calls for serious investigation by Government.

FORTHCOMING REPORT ON ELECTRO-THERAPEUTICS.

Dr. Herbert Tibbits, Medical Superintendent of the National Hospital for the Paralysed and Epileptic, has been elected medical officer for electrical treatment to the Hospital for Sick Children in Great Ormond Street. This appointment is one among many indications of the increasing importance justly attached to the discriminating application of electrical means to the treatment of disease. There is no more fruitful field for honest, intelligent, and carefully directed work. Electro-therapeutics have been discredited by the vagueness and want of accuracy with which they were first studied, and the large promises of usefulness held out which were ill fulfilled. It is probable that the result of careful study will be at once to restrict the scope and to define the conditions of the usefulness of this agency. By giving precision to the modes and occasions for using it, such investigations will add enormously to the benefits which it can confer. What is now needed is exact information as to the best kinds of instrument for clinical purposes now extant, and a review of the precise indications thus far obtained for the application of electricity as a remedial agent in disease. We take this opportunity of announcing that we have for some time had in preparation, by a physician who has long devoted himself to the subject, a critical review of electrical instruments, and a summary of directions for their use in disease, such as may afford to practitioners a clear view of the present state of knowledge, and facilities for availing themselves of the present resources of electro-therapeutics. We shall commence the publication of a series of Reports on Electro-Therapeutics in the first volume of the ensuing year.

After nineteen years of devoted service, Dr. Sharpey is about to give place as Secretary of the Royal Society to Professor Huxley.

Notice is given of an examination for sixteen appointments in Her Majesty's Indian Medical Service, to be held in February.

A Convalescent Home, which has been erected by the Pease family at a cost of upwards of £12,000, has been opened at Saltburn-by-the-Sea.

The Director-General of the Medical Department of the Navy has given notice that an examination of candidates for appointments as assistant-surgeons will be held in London in February next.

We believe that Sir William Jenner will be nominated by the Council of the Pathological Society as President for the ensuing year; and Mr. Prescott Hewett will be nominated as the next President of the Clinical Society.

Deputy-Inspector General of Hospitals and Fleets, Dr. W. T. Domville, has been nominated by Mr. Goschen to be Honorary Surgeon to Her Majesty the Queen in the vacancy caused by the death of the late Dr. Bernard.

The days of charms and amulets are not yet passed. Dr. V. Holsteck announces (*Bordeaux Médicale*) that he is invariably able to suspend the secretion of milk in the breast by suspending in front of the sternum a tube of goose-quill, sealed at both ends, but filled with metallic mercury. The secretion of milk is arrested in twenty-four hours; two hours afterwards the breasts resume their normal state.

M. Gréhaut lately communicated to the Society of Biology a number of experiments illustrating the large amount of oxygen which arterial blood can absorb. The arterial blood of the carotid of a dog, containing 16 per cent. of oxygen, finally absorbed 27 per cent. These experiments were calculated, he thought, to encourage the therapeutic use of oxygen.

LONDON INSTITUTION.

Dr. Rutherford is delivering a course of lectures on the "Nutrition of the Body," at the London Institution, every Tuesday afternoon at four o'clock.

HOSPITAL REGISTRARSHIPS.

The medical registrarship at the Middlesex Hospital, which recently became vacant in consequence of the resignation of Dr. Robert King, has been filled up by the appointment of Mr. S. Coupland. Both medical and surgical registrarships at St. Thomas's Hospital will be vacant on January 1, and will be shortly filled up in anticipation.

EDINBURGH UNIVERSITY CLUB OF LONDON.

The Quarterly Dinner of this Club was held at St. James's Hall, Regent Street, on Thursday, the 14th instant, at seven o'clock. Dr. Alexander Halley, honorary treasurer, occupied the chair. The council met previous to the dinner, and the following new members were elected: Mr. Arthur Perigal, M.B., of Edinburgh, and Dr. Edward J. Barry, of Leicester. Dr. J. W. Walker, of Greenwich, and Dr. Hett, of London, were nominated for membership. It was announced that H.R.H. the Duke of Edinburgh, LL.D., had been elected one of the twelve honorary members of the club, and that His Royal Highness had signified his pleasure to accept the position. Amongst the members present were Dr. Withers Moore, of Brighton; Dr. Fayrer, C.S.I., of Calcutta; Dr. G. Harley, F.R.S.; Staff Surgeon-Major Mackinnon, C.B., of Netley; Rev. Dr. Cosmo Gordon; Rev. W. Douglas Veitch; etc.

HOSPITAL SUNDAY.

AT the annual meeting in connection with this institution in Liverpool, the Mayor, Mr. J. Pearson, in the chair, Mr. Crossfield, the treasurer, read the balance-sheet for the last year, which showed that £6,923 3s. 11d. was collected at the various churches and chapels in the town on the 14th of January, the day fixed for the Hospital Sunday collections. In addition to this, £720 3s. had been collected by means of the Hospital Saturday boxes. Various donations had been received amounting to £421 15s. 6d., and also special donations to particular charities to the amount of £25, which, together with a balance of £140 7s. 1d. from the previous year, amounted to £8,230 9s. 6d. Of this sum, £7,800 had been transferred to the various hospitals, infirmaries, and dispensaries, in the town; and after defraying advertising, printing, and other incidental expenses there still remained a balance in the hands of the treasurer of £74 13s. 6d.—In Birmingham, the periodical collection for local charities, which is this year devoted to the funds of the Birmingham Queen's Hospital, has reached a total of £5,000, which is the largest sum yet realised for this charity, but not quite so large as the amount of the first annual collection in 1859, which was devoted to the General Hospital. In the fourteen years since the institution of Hospital Sunday, the sum realised in this way for local charitable purposes has been nearly £56,000, of which rather more than £20,000 has gone to the Queen's Hospital.

THE EPIDEMICS OF 1871-72.

THE first meeting of the Epidemiological Society this season was held on the 13th instant, when the President, Inspector-General Lawson, after some preliminary remarks, gave an outline of the epidemics in various parts of the world during the past twelve months. The great diffusion of small-pox in 1871-72 was noticed, there having been epidemics at various points in Africa and Europe from south of the Equator to the Arctic Ocean; in Asia, from Southern India to Siberia; in America, from Chili to Canada. The hæmorrhagic form had been met with extensively through Europe, in Siberia, and in the western hemisphere from Trinidad to Canada. It was suggested, as a subject for inquiry, whether this might be connected with the influences which, of late years, had led to cerebro-spinal fever. It was shown that the epidemic which recently passed over this country and north of Europe and Canada was met with in Southern India in 1868, in Northern India in 1869, in the South of France in 1870, and in London at the end of that year. The course of measles and scarlatina in this country was traced, and the remarkable frequency of diphtheria in Scotland noticed. In Edinburgh, the ratio of mortality from this disease alone, for 1871, amounted to 7.6 in 10,000 living. Its presence in other countries was also referred to. The epidemic of whooping-cough, at the end of 1871 and in the early part of 1872, in this country was next considered; and it was mentioned that it had been experienced at Shanghae and Formosa in 1871, at the Cape Mauritius and in the West Indies and Nova Scotia early this year. Fever, with a few local exceptions, had been low since the middle of 1871 in Great Britain and Ireland. The typhus became less frequent; the enteric more common; and, within the last few months, relapsing fever had nearly disappeared. Cerebro-spinal fever had attracted considerable attention in New York and Canada since January. Yellow fever had appeared, though nowhere in very great activity, from Monte Video, along the Brazilian coast, in the West India Islands and Spanish main. A febrile disorder, described as typhus or plague, had been very extensively diffused in Persia since 1871; and dengue had shown itself at Mecca, in many parts of India, in Burmah, and even in China. Cholera resumed its activity in India at the end of last and early this year; and there have been outbreaks on the east coast in Western Hindostan and in the country south of the Himalayas, from the delta of the Ganges to near Peshawur; and in the districts of Nepaul and Cashmere. In the middle of April (1872), it broke out in Turkestan, and by July was in Samarcand and Bokhara on the one hand, and on the other passed along the Amon Daria to the Sea of Aral and the north-east of the Caspian. In Russia, cholera prevailed from the Black Sea to Finland, with varying intensity in different localities; it crossed the frontier into the neighbouring districts at various points in the course of the summer, and still remains in Poland, though decreasing greatly in Russia. It has lately appeared at Buda, and single cases or small groups have shown themselves at various points more to the west, indicating a disposition to occupy fresh ground; but it is not likely to display much activity until the return of warmer weather.

PASS AND PLUCK LISTS.

IN recommending that the Council of the College of Surgeons of England should publish pass and pluck lists from the various medical schools, illustrating the proportions who were successfully prepared for examination in each medical school, we were partly influenced by a desire to promote a feeling of emulation among the students as well as the teachers of the respective schools, so that each might feel incumbent on himself to maintain the honour of his school; and that the general feeling of each school should be so stimulated that the idle student should be made, by the pressure exerted by a general *esprit de corps*, to feel that, in wasting his time and neglecting his studies, he is injuring others besides himself, and is incurring a proportionately increased amount of disrepute. We are glad to find that these anticipations are not disappointed. In the *Guy's Hospital Gazette* of last week, we read: "We trust that those gentlemen who have lately entered will realise the duty that they owe to the school. Now that the numbers of students that each school passes or has sent back from the College of Surgeons' examinations are published and commented upon by the various medical journals, it becomes the duty of every man to work not only for his own good, but also for the honour of the institution to which he has attached himself."

A PLEA FOR GAROTTING.

A GUY'S Hospital student writes to the *Gazette* now issued in the hospital a letter, which describes a practice open to abuse, in language which is far from being well chosen, and which is liable to very serious misconception. Speaking of a man in a fit who kept saying "pa-pa-pa-pa", he continues thus:

"It is this class of cases which are benefited by being garotted.

"One night, going round the wards, I found a girl in an hysterical fit; she fought and struggled vigorously with her nurses. Hating all rows, I grasped her throat and held it firmly till the astonished girl gasped out 'you are choking me.' I then relaxed my hold, and promised her a repetition of the performance. She was thoroughly cowed after having two more fits, and being twice nearly choked; her alarm was so great that, though every night previously for months past she had had fits, she desisted, and a month afterwards her mother told me with joy of her complete recovery. A few days later, Mr. Stocker, whose experience is immense, told me how beneficial this plan was, and said 'you may remain for hours fighting with a screaming girl, but carefully choke them and they immediately subside—*it is unpleasant for them: it frightens them.*'

"I am sure the reasons assigned are correct—*fright, fear of being choked, disagreeableness.* Since then I have tried others, cold water, threats, strong ammonia, galvanism; but all have failed at times, but 'choking' has never failed.

"Neither compression of the carotids, nor of the jugulars, has had the smallest share in bringing about a successful issue. The fear of death, and the intense discomfort, are the two factors which produce such good results.

"In fainting fits, I believe in the unpractical treatment of holding up patients by their feet.

"The Russian controls his unruly steed by a rope round the neck; by this means the most unmanageable (hysterical?) mares are immediately calmed, and, like their human sisters, are more obedient in future."

The language in which the treatment is described is calculated to give a disagreeable impression of a mode of procedure which in itself is, as described, highly objectionable. Nothing can produce a worse impression on the minds of students than that a senior member of their body should describe a proceeding which is of a critical and serious character—if at all admissible—in language which conveys an impres-

sion of roughness amounting to brutality. If physical measures intended to produce a strong moral impression and a sense of discomfort are admissible in medical practice, they need to be regulated by the nicest judgment, and applied with the utmost regard for delicacy and humanity of feeling. The tone of this letter seems studiously to suggest an opposite class of sentiments. If a gentleman choose to employ the language of a garotter in recommending a surgical proceeding, he must not be surprised if he bring himself into comparison with the class whose verbiage he adopts, and whose practices he recommends in so many words. Such a letter is painful to read, and ought never to have been written; certainly it ought never to have been allowed to see the light. Another such escapade would bring the *Guy's Hospital Gazette* into serious disrepute.

HEALTH OF THE NAVY.

THE annual report of the Medical Department of the Navy is unusually bulky. Its interest is, however, mainly statistical, and it appears to us overloaded with such details. The health of the force has suffered from zymotic epidemics. Ample testimony continues to be borne by the medical officers of the home force to the salutary influences of the Contagious Diseases Act, even on the present limited sphere of operation. We shall analyse further this rather dry blue-book.

SANITARY INSPECTION OF SHIPS.

THE Board of Trade have given notice of their intention to appoint a medical officer to report on the sanitary condition of ships, to inspect emigrants, and to perform such other duties in connection with ships, seamen, and emigrants, as may be required. The salary will be £300 *per annum*. Candidates, who must not be above 40 years of age, are invited to send in their applications before December 15th.

SMALLPOX AND VACCINATION.

THE annual report of the Homerton Fever Hospital, which is one of the institutions raised under Mr. Gathorne Hardy's Act of 1867 by the managers of the metropolitan asylums, has just been presented to the Board by Dr. Collie, the medical superintendent. This hospital was, when first built, used for the epidemic of small-pox, which was then (February 1871) just rising into great proportions. From the middle of February until the middle of June nearly 1,200 cases were treated within its walls. These institutions are rate-supported, and the patients are admitted on the orders of the relieving-officers of the various unions in the metropolis districts, the purpose being to isolate these contagious diseases and prevent the spread of infection. Dr. Collie first gives his experience of the small-pox which came under his notice, and his deductions are of a valuable character. According to Mr. Marson's standard of efficient vaccination, only 13 in 1,000 of the cases which came into Homerton had been properly vaccinated. Taking, however, the very low standard of the Vaccine Institute of 1820, there were but 65 in the 1,000 cases properly vaccinated. As another instance of the importance of vaccination, Mr. Marson shows that of 100 children attacked with small-pox, 68 had not been vaccinated at all, 15 had been badly vaccinated, 10 "fairly well" vaccinated, and but 7 well vaccinated. Of these children, 26, all unvaccinated, had small-pox in a severe form; not a single severe attack occurred in a vaccinated child, and only 7 well vaccinated children had the disease, which consisted of slight indisposition, accompanied by a few pimples, hardly deserving the name of small-pox. Of 152 cases of severe small-pox, after 12 years of age, 51 per cent. occurred among the unvaccinated, 23 per cent. among the badly vaccinated, 4 per cent. among the "fairly well" vaccinated; and among the "well" vaccinated there was but one case. Of all the cases in the hospital, not one death occurred to a properly protected person; and the proportions of deaths have been, to persons over 15 years of age, the unvaccinated, 47 per cent.; the badly vaccinated, 26 per cent.; the tolerably vaccinated, 8 per cent.; the fairly vaccinated, 4 per cent.; and the well vaccinated, none at all. No case of small-pox had been seen after revaccination. The hospital was opened for fever cases, after being cleared of small-pox and thoroughly disinfected, on the 1st of October of last year; and since that date there had been admitted 611 cases, including 192 cases of disease (or nearly one-third of the whole) other than those for which the hospital was intended to provide. Of the whole number, 434 had been discharged recovered, 124 had died, and 15 were sent to the Small-pox Hospital. The mortality of the whole had been 20 per cent.; but, deducting those cases (31 in number) in which death occurred within twelve, twenty-four, and forty-eight hours of admission, and who were, therefore, beyond treatment, the mortality was reduced to 13.5 per cent. The cases were divided into typhus, 82; enteric, 183; scarlet, 79; simple continued, 75; measles, 8; small-pox (sent in mistake), 17, other acute diseases (sent in mistake, or by wrong diagnosis), 157; debility, 10. Of these patients, 278 were males and 333 females; and 190 of the males and 244 of the females were discharged recovered, while 15 were sent to the Small-pox Hospital. Dr. Collie considers that the typhus returns prove that the epidemic of that disease, which commenced in 1861, has now practically ceased, for in the year before 411 cases were admitted into the London Fever Hospital, the position of which, in respect of the pauper poor, has been taken by Homerton Hospital.

THE DRUITT FUND.

THE results of a life spent in public work, and aiming at the reduction of new principles to common practice, bring their own unspeakable reward, both in the nature of the labour and the pleasure of watching the gradual development of its fruits. Even disappointment in public effort is not wholly bitter; for no man works long or intelligently without grasping the conviction that something of failure is inherent in progress to success; that delay, opposition, and repulse, strengthen and solidify, while they retard construction. Such work, however, is exhausting; and, if long continued, it imposes a strain upon the mental and physical constitution which searches all the weakest parts and tries the most vigorous frame. Commonly, also, the work of the journalist who avows himself such, and takes the full responsibility of his work, is rather hostile than helpful to other pursuits by which men gather fortunes and provide for years of idleness. Dr. Druitt has been prominent as a sanitarian, as a journalist, and as a writer. In these pursuits, he has rendered public services of which the immediate recompense bears no relation to their usefulness and desert. Comparatively early in life, he has been overtaken by illness, which compelled him to withdraw a year since from active and lucrative employment, and which condemns him to at least two years more of enforced abstinence from work. The leading members of the profession have felt called upon to take part in a movement intended at once to do him honour and to afford a large and substantial mark of the esteem in which his services have been held. At the outset, most of the best known men in leading positions have been earnest to testify their desire to share in this helpful and honourable testimony; and we do not doubt that, as the nature of the proposed fund and its excellent reasons and objects become more widely known, the profession generally, although often and heavily taxed, will respond to the generous invitation with characteristic warmth and liberality.

THE ADULTERATION OF FOOD AND DRINK.

AT the meeting of the Association of Medical Officers of Health on November 16th, the President, Dr. Letheby, made some remarks on the Adulteration of Foods, Drugs, etc., Act, especially in reference to the fifth section, which relates to the appointment of analysts. He had been requested by Quarter Sessions and Local Boards in several parts of the country, to give them some idea as to the salary and mode of remuneration of the public analysts to be appointed under the Act. The Act simply stated that the local authorities should pay to the analysts such salaries or allowances as they might think fit. He said there were three ways in which this might be done. Assuming that the analyst performed about 250 analyses a year, he thought, if paid by salary only, he should receive £175 *per annum*; if by allowance only, he should receive for the first

100 analyses one guinea each, for the second 100 half a guinea each, and for each analysis over that number 6s., that being a medium between 2s. 6d. and 10s. 6d., which the analysts were empowered by the Act to charge for an analysis ; and if he should be paid partly by salary and partly by allowances, his salary should be £100, and the allowance for every analysis six shillings. These seemed to him to meet the requirements of the Act and to be fair modes of payment. Dr. Stevenson thought no reasonable board would object to these suggestions of Dr. Letheby. He himself preferred that the payment should be made by fees. Dr. Tripe and Dr. Liddle approved of the scheme, but expressed the opinion that the onerous duties of the medical officers should not be increased by adding to them the work of the analyst, and that many of them did not possess the qualification for analytical duties which the Act required. Dr. Burge urged that various local boards should combine in the appointment of analysts so as to save expense and to secure uniformity in the mode of conducting the analyses. Dr. Hardwicke thought that, though the medical officers of health might not at present possess a competent "chemical and microscopical knowledge," they would be able to do so in the course of six or twelve months. The suggestions of the President were unanimously approved of by the Association ; and it was agreed that Dr. Letheby should, in the name of the Association, urge upon the President of the Local Government Board the necessity of carrying out strictly the fifth section of the Act, which provides that the analysts should possess "competent medical, chemical and microscopical knowledge."

THE CHOLERA IN EUROPE.

DURING the second half of October, 4,477 new cases of cholera occurred in various districts of Austrian Gallicia. There were also 1,003 cases remaining under treatment on October 15th, making in all 5,480. Of these, 2,909 recovered, 1,677 died, and 894 remained under treatment.—No cases of cholera occurred in Vienna or the immediate neighbourhood during the week ending November 14th. In Buda, the total number of cases of cholera from October 18th to November 14th (inclusive) was 535 ; of these 235 recovered, 181 died, and 119 remained under treatment. In Pesth there had been up to November 15th 228 cases of cholera, with 41 recovered and 74 deaths. For the purpose of treating the disease, the latter city has been divided into districts, to which fifteen physicians are appointed. Their residences are denoted in the day-time by flags, and at night by lanterns, so that the public may know where to make application. Sixty men have been appointed to see that cleanliness is maintained ; they are stationed at twenty different points, at each of which three men watch in rotation.

THE HEALTH OF MALVERN.

DR. GRINDROD, of Malvern, writes to dispute the statement in the Registrar-General's report, that Leamington is lowest in death-rate amongst the inland watering-places. According to this return, the death-rate of Malvern is given as 20.2 per 1,000, and that of Leamington as 19.4 per 1,000. Dr. Grindrod says that the Registrar-General lumps not fewer than seven parishes together with Malvern, and also adds in the County Lunatic Asylum. Deducting these, and taking Malvern proper, Dr. Grindrod continues : "I have verified all my facts by a strict reference to the registry of the district registrar, and my estimate of the population comprised under the divisions of residents and visitors of Great Malvern is, I believe, underrated. The result is :—Total deaths per 1,000 of the population for seven years, *i.e.*, 1864, 5, 6, 7, 8, 9, and 1870—Residents and visitors, 14.5 ; residents only, 12.9. Taking, however, the years 1867, 8, 9, and 1870, the average mortality stands—Residents and visitors, in each 1,000, 13 ; residents only, 11.7 Mortality in Leamington, 19.4 ; mortality in Malvern, 14.5 or 13 ; Malvern, residents only 11.7. The error lies in the singularly unjust mode of tabulation adopted by the Registrar-General, and which certainly does not aid the public in arriving at an accurate decision as to the relative salubrity of inland or marine watering-places. I claim for Malvern the lowest average rate of mortality of any watering-place, inland or marine, in England."

SCOTLAND.

DR. PIRRIE delivered the opening address, on the 15th instant, at the Aberdeen Medical Students' Society. Transfusion of Blood was the subject of the lecture.

A LETTER, containing a cheque for £120, has been received by Mr. Robert Arthur Simpson, the medical student whose active exertions in behalf of his fellow-sufferers in the Kirkdale collision were recorded in a letter published in the *Times* of October 4. Mr. Gibson, the secretary of the Caledonian Company, who writes the letter, says :—"I take the opportunity to express to you the cordial thanks of the directors for the good service so humanely rendered by you to the poor sufferers on that sad Wednesday morning of the 2nd of October at Kirtlebridge."

THE LADY MEDICAL STUDENTS.

THE case of Miss Jex-Blake and others *versus* the University of Edinburgh came before the court again on the 13th instant. The court gave further orders for the printing and boxing of certain arguments. Judgment will be held over in the meantime. The Lords of the second division of the Court of Session consider the case so important, that the court proposed to lay it before the whole of the Judges. The arguments will not be lodged until after the Christmas recess, so that the question of the lady students being permitted to finish their studies at Edinburgh or not, can hardly affect their position this winter session, so far as any progress in their medical studies is concerned.

MEDICAL OFFICER OF ABERDEEN.

DR. FRANCIS OGSTON has been reappointed Medical Officer of Health and Police Surgeon of Aberdeen. It has been decided to leave over the question of the appointment of a medical attendant to undertake the treatment of cases during epidemics.

THE HEALTH OF GLASGOW.

AT the meeting of the Police Board on Monday, the death-rate was stated to have fallen to 24 per 1,000, while the average of the five preceding years had been 31 per 1,000.

IRELAND.

IT is announced that Mr. Hargrave is about to resign the Professorship of Surgery, which he has long held, in the Royal College of Surgeons in Ireland.

THE CORK BOARD OF GUARDIANS.

THIS Board some time since adopted a resolution, "That in future, when any medical officer in the district requires assistance, the aid of the other medical officers in the district must be obtained without additional expense to the union." The following extract from a letter from the Local Government Board on the subject will interest Poor-law medical officers, and show the precise state of the case as it stands at present.

"In reference to the guardians' resolution drawing the Board's attention to the matter, and requesting their observations thereon, I am directed to state that, under the Dispensary Regulations, article 21, paragraph 2, 'the medical officer is requested to attend every poor person in the district or division of a district under his charge,' when he shall be required to attend as medical officer by a ticket signed in the manner therein mentioned, and the Board are of opinion that when a dispensary district is divided into subdistricts, and a medical officer is appointed for each subdistrict, each medical officer's responsibility is limited to the division or district for which he is appointed, and that there is no authority to require him, by any ordinary medical relief ticket, to visit a case outside the limits of the subdistrict for which he is appointed. If, therefore, a medical officer of one subdistrict be called upon, in a case of emergency and danger, to assist the medical officer of another district, it can only be in his capacity as a private practitioner, and in that capacity he is entitled to remuneration for his services.—By order, B. BANKS."

It must be borne in mind, however, that the second medical man must be called in through the intervention of the relieving officer, otherwise there will be found to be, in most instances, great difficulty in obtaining his fee.

FAREWELL DINNER TO DR. GUENEAU DE MUSSY.

On Wednesday evening a farewell dinner was given to Dr. Gueneau de Mussy by about fifty of his medical friends, under the presidency of Sir Thomas Watson. A more distinguished medical gathering could not have been collected. It included, besides the President, Sir William Jenner, Sir William Gull, Dr. Quain, Dr. Arthur Farre, Sir W. Fergusson, Sir James Paget, Sir Henry Thompson, Sir Ranald Martin, Mr. Hancock, President of the Royal College of Surgeons, Mr. Curling, President of the Royal Medical and Chirurgical Society, Dr. Priestley, Dr. Peacock, Dr. Russell Reynolds, Dr. Barnes, Dr. C. J. B. Williams, Mr. Spencer Wells, Mr. De Morgan, Dr. Sieveking, Dr. Barry, Dr. A. P. Stewart, Mr. Callender, Dr. Vintras, Mr. Mac Cormac, and others bearing honoured names in the profession. It is unnecessary to say that so high a compliment has rarely been paid to the personal qualities and character of any physician, foreign or native. The presidency of Sir Thomas Watson gave a crowning grace to the entertainment, and the few heartfelt and sympathetic words in which he took a public farewell of professional life, in replying to the toast offered by Sir James Paget, gave to the events of the evening something of an historic character, for no physician has ever been more deservedly beloved than Sir Thomas Watson, and there is no more gentle or noble figure in our catalogue of British medical worthies.

After the conclusion of the dinner, Sir Thomas Watson proposed the usual toasts, in words far removed from the commonplace, and with an earnestness which met with a sympathetic response. He then rose and said :

I must now ask your attention to the special object of our present meeting. We are assembled, as you all know, to offer our combined benediction, and to give God speed, to our parting guest and professional brother, Dr. Gueneau de Mussy ; to mingle with the regret, which we all feel in losing him, our warmest wishes for his future welfare ; to convey to him the expression of our lively estimation of his worth and character, our respect, esteem, and affection for his person. Dr. Gueneau de Mussy has now dwelt among us for nearly a quarter of a century. I am not here to affront his taste and yours by vague phrases of blind and fulsome adulation. I must say of him before his face what I should unquestionably say, if I had to speak of him at all, behind his back. I hold it to be imperative upon me to state what seem to me plain truths ; and I must bring, very briefly, before your notice some of the circumstances of his past life, for they give to the present occasion its motive and its colouring.

During the period of his professional study, Dr. Gueneau de Mussy became a favourite pupil of M. Andral, and subsequently of M. Chomel, who, as you well know, have been two of the most distinguished among the many distinguished Parisian physicians of the last half century. Very early in his active career he obtained an university appointment in one of the large hospitals of that city. In 1847, he first sat foot upon English ground, passing rapidly through London on his way to Dublin, which he visited with the express purpose of investigating for himself the question which was at that time exciting the keenest interest and discussion in Paris, as well as elsewhere, respecting the existence of two or more distinct species of fever, which had previously been confounded together under the one name of continued fever. There he very nearly lost his life under a severe attack of one of those species of typhus fever.

In the following year he was sent from Paris, by the advice and selection of Chomel, to inquire into and consult upon a mysterious disorder, seemingly of an epidemic or endemic character, which was harassing the Orleans Royal family and their household, then resident in honourable exile at Claremont. It is well known with what sagacity Dr. Gueneau de Mussy detected the nature of the prevalent disorder, and applied its remedy, after tracing it to its previously unsuspected source, the presence of lead in the drinking-water used by the inhabitants of the mansion at Claremont. From that time, foregoing professional prospects of the highest promise in Paris, Dr. Gueneau de Mussy voluntarily partook of the expatriation, and attached himself to the fortunes of that Royal family ; and now, with abiding loyalty, he returns to his native country with the surviving members of the same Royal house, to whom, during their long banishment, he had been, as he still remains, the valued and trusted servant, physician, and friend, sharing alike the shadows and the sunshine of their domestic and of their national life.

Doubtless, in quitting Paris in 1848, he left behind him dear connexions and mournful reminiscences ; but I think that on his return to his natural home, he will have to bear the painful straining—for I will not anticipate the absolute breaking—of many strong fibres of attachment with which he has become bound to many an English heart. All who are present to-night know what has been his history while here ; how easily, how honourably, with what simplicity of manner and good sense, he has moved among us in the exercise of our common calling ; how, while commanding a large share of lucrative practice, not only among his own countrymen resident here, but also among Englishmen and Englishwomen of all ranks, he has, without jars or jealousies on either side, secured to himself universal approbation and confidence. Pursuing his craft as a physician in amicable association and upon equal terms with ourselves, without any shade of overweening pretension on the one hand, or any shrinking from the exercise and the assertion of his own independent judgment on the other, he has readily fallen in with our habits, adopted our technical language and formularies, and blended easily and harmoniously with our charitable, our social, and our scientific institutions. It is no slight evidence of his professional merit that, after a few years' residence in London as a member, he was adopted into the Fellowship of our College of Physicians. It is not generally, I apprehend, an easy thing for a foreigner—a competing foreigner—to conciliate the favour and liking of a sensitive, and struggling, and somewhat jealous profession like our own ; but it was made easy to him by his perfect temper, his wise discretion, his fine sense of honour and courtesy, his gentle yet always frank and manly bearing. Upon his more direct personal accomplishments, his generous and liberal spirit, his social qualities, it would, before this audience, and in his presence, be a mere impertinence for me to dwell at all. In what I have taken leave to say of him, I am not conscious of having overstepped the limits and the claims of strict truth, or condescended to flattery or exaggeration of any kind. I feel confident that you all concur—your very presence here signifies your concurrence—in that tribute of admiration, regard, and regret, which you have done me the great and unmerited honour of making me, this evening, the mouthpiece. Without further tempting your patience, or taxing my own strength, I will now ask you to drink health, long life, and happiness, and to bid a kind farewell, to our departing friend and guest, Dr. Gueneau de Mussy.

Dr. Gueneau de Mussy replied :

It is impossible for me to imagine a greater compliment or one more grateful to my feelings, than that which you have paid me to-day—a compliment all the more precious, because of the smallness of my merits. For assuredly, if you have given me this proof of your goodwill and friendship, it is not for any remarkable attainment in science, nor for any pre-eminent success in the practice of the profession of which you are yourselves such distinguished ornaments. I must, therefore, take this tribute as addressed to my personal character ; and this justifies me in believing that a year's absence has not lessened the esteem and friendship that I was so fortunate as to win during my stay among you. What higher satisfaction can be given to a man who like myself, after more than twenty years' experience, has learnt to appreciate the rare qualities and great virtues which govern the medical profession in this country ? There is no need to repeat that which has been so often said, and said by others as well as by medical men, that no profession imposes higher duties than ours. But I want to say that in no other country does this profession hold morally, intellectually, and even socially, a higher position than in England, which position is due even less to your unsurpassed scientific knowledge and practical skill, than to that so rarely equalled sense of duty which teaches each one among you what he owes both to others, as well as what is due to himself. It is that sense of duty which, when once science has discovered what is useful or necessary, engenders the perseverance and tenacity by means of which you happily carry on the art of healing and relieving, daily nearer and nearer to the limit of what is possible. Again, it inspires in you the indefatigable devotion, which, as individuals, you bestow on your fellow-creatures ; and the permanent vigilance for the public welfare in which you unite as a body.

Now that I have, in very inadequate terms, tried to explain what I consider the highly characteristic and dominant merit of my professional brethren in this country, you will perhaps understand how much I must be touched by this mark of your sympathy. May I not also refer to this exquisite and refined sense of duty what I should like to call the the profound science of gracious hospitality, which you know how to practise as no others do—a hospitality which I have enjoyed for so many years, finding myself completely at home amongst you, and the remembrance of which will last as long as I live?

I will abuse your patience no longer to-day. Whatever I might say—and it is but little that I can say—would be always far below what I feel and what I think. In any case, I trust you will allow me to hope that I am not looking on these friendly faces for the last time; but that, should occasion bring any of you to Paris, you will not let me miss the pleasure of welcoming you to my country. And yet I ask you to hear one word more. If anything could make the compliment you show me to-day more valuable in my eyes, it is the presence of the venerable friend who has with so much kindness consented to preside. In him we recognise the living personification of perfections to which we all can and ought to aspire. The great value of his teaching lies less in those lectures so highly appreciated, in which he conveys the benefit of his vast and judicious experience, than in the example of his honoured *life*, which we may hope will be preserved for many years to come. Gentlemen, I wish to end these few words by expressing my gratitude to, and admiration of, your great medical corporations. I ask to be allowed to propose as a toast, "The Royal College of Physicians, and the Royal College of Surgeons."

Sir WILLIAM GULL, in replying for the College of Physicians, as Senior Censor, said that the College of Physicians was anxious, he believed, to assist all within its influence to fit themselves for the performance of their arduous duties, and the College sympathised with all that was advanced, whether in the science or the literature or the practice of medicine. It weighed well the moral attributes of men, for no man could do his duty as a physician who is not highly endowed with moral sense. The physician has constantly to solve not only questions of art, but problems as to what is right and just as to himself and to his patient. The College of Physicians will always strive to ascertain and to fulfil what is due to all its Fellows; to require of them not only an ample professional knowledge, but the faithfulness to what is right, and the exercise of it. The physician knows no politics. He was once asked by a distinguished man what were his politics. He replied that they were in a sense, but in a higher sense, those of a chronometer: the mainspring, or general instincts, urged him forward in any line of progress, but judgment, knowledge, and experience, were ever controlling the instincts, and guiding them, if he might say so, to keep time in the movement. Though no politicians, the whole body of Fellows would gladly welcome their parting guest back again if the course of events in his native country should so order it.

Mr. HANCOCK in a few words returned thanks for the College of Surgeons.

Sir JAMES PAGET rose to propose the health of the Chairman. He said:

We are bound to drink his health and wish him long life to enjoy all the good that his long good life has gained for him. For we are all his pupils; not only as students of the works which he has published from the stores of his vast and well considered experience, but as students of his life—a life of unsurpassed gravity, sincerity, and uprightness—a life full of lessons on the right use of great intellectual power. He has taught us the right use, not only of great power, such as his own, but of power of whatever lower degree—its use both in the necessary business of our lives, and in mutual counsel, and in the maintenance of the honour and highest interests of our profession. We owe him grateful thanks for these and many things besides; for the honours which he has won for our profession, and in which we as his brethren share; and, not least, for his genial kindness in presiding over us to-night, and giving to our meeting a grace the like of which could not be given, even by all the heartiness with which we might receive and part from our guest and friend. We wish him, then, long life: we could wish that a part of his immortality could be spent on earth, so that those to come long after us might have the happiness which we have had, of living with him whom we admire as a wise physician, a true English gentleman, a thorough good man.

Sir THOMAS WATSON replied:

Any words which I could command would very feebly express my grateful sense of the kind manner in which you have been pleased to receive the toast proposed by my friend, Sir James Paget, in terms which, though I well know that they were perfectly sincere, I am too conscious have been carried by his friendship beyond any merit that I could pretend to. I must content myself with thanking very heartily both you and him; and, though I am unwilling to consume any more of your time, I would gladly take the opportunity furnished by the presence of so large a number of the most eminent members of the profession, now—when I am drawing near the close of a career which, though begun somewhat late in life, has been prolonged to, within two or three years, the great extent of half a century—I would fain, I say, take this opportunity, for I can hardly expect another such, of saying, in the fewest possible words, that I feel deeply grateful for the help, the forbearance, the constant respect, and the invariable kindness which it has been my desire to receive and my endeavour to deserve from the great body of our profession; which it has been my exceeding happiness to have received abundantly; and of which I shall cherish the comforting recollection so long as God may permit my reason and my life to last.

THE VOLUNTEER MEDICAL REGULATIONS.

WE are glad to be able to state that Mr. Cardwell has decided to revise the recent regulations regarding the Volunteer Medical Staff. We are informed by Dr. John Murray, honorary secretary to the Volunteer Medical Association, that he has receved a communication from the Secretary of State for War, to the effect that the subject of the allowance for medical attendance on the permanent staff of Volunteers is under his consideration, and that further instructions will in due course be issued.

REPORT ON THE WATER SUPPLIED TO LEAMINGTON.

THE investigation of the deaths from typhoid at Leamington leads us to the conclusion that they are due to a defective water-supply, and at the present time it is important that there should be no mystification on the subject.

The general water-supply to the town of Leamington is undoubtedly very impure at the present time, as is shown by the following analysis of a sample taken from the tap at the Town Hall. One million parts of this water contained

0.02 parts of Free Ammonia
0.16 parts of Albuminoid Ammonia;

whilst drinking-water of good quality does not contain more than 0.06 or 0.07 parts of albuminoid ammonia. We have seldom met with a worse sample of water from a water-works. The water from the well in Tachbrook Road was likewise very bad. One million parts contained

0.04 parts of Free Ammonia
0.12 parts of Albuminoid Ammonia.

The water from the well at No. 7, Gas Street was of fair quality. One million parts contained

0.02 parts of Free Ammonia
0.06 parts of Albuminoid Ammonia.

Dr. Letheby's analysis of the Leamington water likewise exhibits the organic nitrogenous matter in the water as being much higher than that usually present in good water. He abstains, however, from drawing any conclusion from that fact, inasmuch as rivers are in flood just now; and some water-works, whose filtering arrangements are adequate in fair weather, are unable to cope with the flood. The fact, however, remains that, at present, Leamington water is quite as impure as the very worst London water; and there is nothing in any of the published analyses which can authorise the declaration that this organic contamination is not due to sewage pollution.

ASSOCIATION INTELLIGENCE.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE next meeting will be held in the Midland Institute, Birmingham, on Friday, November 29th, at 3 P.M.

VINCENT JACKSON, Wolverhampton, } *Honorary*
R. JOLLY, Birmingham, } *Secretaries.*

Birmingham, November 18th, 1872.

BATH AND BRISTOL BRANCH.

THE next meeting of this Branch will be held at the York House, Bath, on Thursday, December 12th, at 7.30 P.M.; T. G. STOCKWELL, Esq., President, in the Chair.

R. S. FOWLER, } *Honorary Secretaries.*
E. C. BOARD, }

Bath, November 24th, 1872.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Opening of Medical Session.—Banquet to the Medical Profession by the Mayor.—The Medical School.—Meeting of the Association in 1873.—*Parsimony of a Board of Guardians.—Poisoning by Mussels.—New Hospital for Infectious Diseases.—Health of Liverpool.*

THE opening of the medical session this year in Liverpool has been marked by events of more than ordinary professional interest. The evening meetings at the Medical Institution were commenced with a *conversazione*, at which upwards of 120 were present, including a large number of guests, to whom cards of invitation had been issued by the President, Dr. Cameron, who delivered on the occasion an able and interesting inaugural address. The two theatres and other spacious apartments were thrown open, and contained an extensive and admirably arranged series of microscopical objects, casts, drawings, and pathological specimens; novelties in surgical and obstetrical instruments and appliances; pharmaceutical preparations, and other objects of professional and scientific interest. Tea and coffee were served in the library, and a very agreeable and interesting evening was passed.

The Mayor of Liverpool, John Pearson, Esq., gave a grand banquet on October 31st, at the Town Hall, to the medical profession of the town. The invitations included about 120 medical guests, chiefly the honorary officers of the medical charities. This recognition of the gratuitous services of the profession by the chief magistrate, although not unprecedented, has not been made for some years; and the late Mayor has been much commended for reviving, before the close of his year of office, a custom which some of his predecessors in the civic chair failed to recognise.

The opening day at the Medical School was a great success. The entry of new students has been good. A large and attentive audience assembled to listen to the introductory address of Mr. Banks, an abstract of which has already appeared in the JOURNAL. The address was highly original, and delivered in an animated and attractive style, and was listened to throughout with attention, and highly applauded at its close. The extension and improvements in the school-premises are fast approaching completion. They comprise the enlargement of the dissecting-room to nearly twice its original dimensions; a new and spacious museum; a series of laboratories, class-rooms, and an additional theatre for the chemical and physiological departments; a new and commodious library and students' reading-room, with other necessary accommodation. The whole, when finished and furnished with the appropriate apparatus and fittings, will make this school as complete and thoroughly adapted for medical teaching in all its branches as can be well desired. Amongst other improvements in the staff, the lecturers have appointed a salaried demonstrator, who devotes his whole time to the school. Although some inconvenience is felt from the delay in completing the buildings, the school is in full working order, and the usual plentiful supply of subjects has come in. Of the £5,000 required for the improvements, more than £4,000 has already been subscribed; the remainder is expected to be raised in a short time.

The prospect of a meeting of the Association in London next year has been received with much favour by the members of our Branch in this neighbourhood. There is no doubt that Lancashire and Cheshire will furnish a large contingent to the metropolitan gathering. Our own Branch breaks new ground next year by holding the annual meeting for the first time in the town of Warrington. An illustration of the rapid extension of the Association in this district is seen in the fact that in 1867, only five years ago, the Lancashire and Cheshire Branch numbered 223 members, while at the present time there are 420, nearly double the number on the list: and, as an example of what Branch Councils may further accomplish by careful and judicious financial management, we have the satisfaction of being able to state, authoritatively, that of those 420 members there are not 20 whose subscriptions for the current year remain unpaid. The usual annual appeal for new members will be issued by the Branch Council before the close of the year, instead of waiting until January, as it is thought this arrangement will be more convenient for those new subscribers who wish to receive the JOURNAL from the commencement of the new year.

A curious example of what parochial parsimony and medical competition will sometimes effect is shown in the report of the proceedings of the West Derby Board of Guardians, from which it appears that they have recently appointed a medical officer for the township of Childwall, at an annual salary of two guineas!

A case of poisoning from mussels has lately occurred in this town. A man aged 31, having eaten some mussels late on Saturday night, was taken ill shortly afterwards, and died about five o'clock on Sunday morning. The symptoms observed were nausea and vomiting; suffusion of the eyes, which were bloodshot; a feeling from constriction about the neck; dryness of the throat, which was vascular and congested; pain in the back of the neck and left arm; partial paralysis of one leg. It was stated at the inquest that three men and a boy ate amongst them upwards of four hundred raw mussels from the same bulk as those given to the deceased, without ill effect. The brother of the deceased also ate some and was taken ill, but recovered. Accidents of a similar kind have occurred in Liverpool at various times; and in all previous instances, as in this case, it has been impossible to discover why, amongst several persons who have eaten the fish, some have suffered no ill effects, while one or more have died. No satisfactory explanation has yet been given either as to what particular part of the mussel is poisonous, nor how it is that, amongst a large number of the mussels, a portion only appear to be capable of producing deleterious effects. The only real safe course seems to be to eat no mussels.

The new Hospital for Infectious Diseases at Everton was formally opened on the 5th November. It is built on the pavilion plan, on an elevated and isolated site. It will accommodate one hundred patients, divided into three classes, who pay respectively two guineas, one guinea, and half a guinea a week for their maintenance. Patients may be attended either by the hospital staff, or, if they prefer it, by their own medical attendant. The necessity for such an institution in a town like Liverpool is obvious, as it is the only provision that exists for the reception of those attacked with infectious diseases outside the walls of the workhouse.

Liverpool has been free from epidemic diseases for a considerable period; the death-rate is, consequently, much below the ordinary average, and the town exceptionally healthy. This satisfactory sanitary condition has been attributed to the abundant water-supply we have enjoyed during the long continued heavy rainfall; but a more probable explanation would be found in the long run of commercial prosperity, and consequent absence of the usual amount of destitution and want of employment amongst the operative classes.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Royal Infirmary.—Manchester and Salford Sanitary Association.—Operations in Manchester.—Medical Students and Owen's College

THE trustees of the Manchester Royal Infirmary have at length passed the Reform Bill of the Weekly Board, and, in so doing, have placed our charity upon the same footing as the great London and Continental hospitals. They have also adopted the suggestions of the Board in regard to the election of honorary officers; the general body of trustees having vested their votes in a selected council of thirty, who are chosen in the following manner. The Weekly Board nominates a hundred and fifty eligible men, and from these the fifteen hundred trustees select thirty to represent them in all the duties connected with the elections. The composition of this council of thirty is to be determined upon next Monday; they will proceed forthwith to draw up bye-laws for their guidance, and then the candidates will be requested to send in their testimonials. The vacancies will thus be filled up about the close of the year, so that the changes, which will then be complete, will have occupied a period of six months. It is satisfactory to be able to add, that the entire changes meet with warm general approval, and the altered mode of election with all but unanimous approbation.

The Manchester and Salford Sanitary Association have been talking about various plans of dealing with the excreta of the city, but nothing has as yet been decided upon by the Committee. Some improvements are announced in the annual report of the General Health Committee of Salford, which has just been issued. This document states that the Model Slaughterhouse has been so beneficial that it is resolved to close a still further number of private slaughterhouses, and to extend the accommodation of the public abattoir. The report further states that there were 653 cellar-dwellings at the commencement of the year, of which number 54 have since been closed, making a total of 240 closed since 1866.

There have been several operations of interest and importance at our different hospitals within the last two or three weeks. At St. Mary's Hospital, ovariotomy was successfully performed a fortnight ago, making

the sixteenth operation of the kind performed at this charity during the year, of which number eleven have been successful. At the same hospital, Mr. W. Whitehead removed the entire uterus, on November 13th, in a case of fibrous tumour of that organ. The case unfortunately terminated fatally eight hours after the operation, from shock ; but it gave the poor woman her only chance of life, as is clear from the fact that the pressure of the enormous uterus was so extreme that she had to be tapped once a week to remove the ascitic fluid. During the operation, hæmorrhage was restrained by digital compression of the abdominal aorta, the pressure being made directly upon the vessel through the incision. This is the second time the operation has been performed at this hospital. The former case, which was under the care of Dr. Clay, made a good and complete recovery. At the Royal Infirmary, many capital operations have been performed within the last three weeks, including ligature of the femoral artery for popliteal aneurism, two cases of lateral lithotomy, two cases of amputation of the thigh, and one case of amputation at the hip-joint. The latter was a remarkable case, and well worthy of being recorded. The patient, a lad of seventeen, was admitted into the hospital, under the care of Mr. Lund, for spina ventosa of the lower end of the femur. On November 1st, Mr. Lund amputated at the hip-joint ; and at the present date (November 18th) the wound and the lad are both nearly well. The operation, which was most skilfully performed, occupied thirty-five seconds, and was treated, both at the time of operation and since, on the strictest antiseptic principles, as, indeed, Mr. Lund treats all his cases. From first to last the boy has never had a bad symptom.

A committee meeting of the medical students' subscription fund, towards the erection of a suitable school, was held on Friday, November 15th, when it was announced by the secretary, Mr. Jordan, that the subscriptions already received amounted to upwards of £300, and that the entire sum promised to the general committee was over £15,000. This latter sum includes £10,000 given by Miss Brackenbury.

ABERDEEN.

[FROM OUR OWN CORRESPONDENT.]

The Medical School.—The Aberdeen Medical Student.—Medical Library.—Lord-Rector.—Teaching of Pathology.

THE Medical School, which has been reopened this month, presents several new features of interest.

In the first place, the Maternity Hospital is now in full working order, and can hardly fail to be a benefit to the students. Professor Inglis deserves much credit for having carried out the establishment of this institution, in the face of much opposition and discouragement.

Next, we have the acquisition of a medical periodical, *The Aberdeen Medical Student*, which is to be issued fortnightly during the session; it is edited and conducted by a committee of the students. In spite of its high price, the first number has been well received, and is a very creditable specimen. The professors and the medical faculty have mostly promised it their support, one of the former making it a condition that it should abstain from criticising university matters.

It is rumoured that the returns of attendance on, and fees paid to, each professor, are of a surprising character.

The question of a catalogue of the medical library in Marischal College has been fairly shelved, chiefly through the apathy of the medical professors. It is to be regretted that they showed so little interest in the welfare of their faculty, which contributes the major portion of the university funds—funds which will doubtless be applied to the printing of the catalogue in King's College. There is much need of reform in the management of the medical library ; it is at present almost useless to the graduates and students, as several of the professors monopolise the newest works, and all attempts to get them out of their hands are unattended to.

The choice of a new Lord Rector occupies a good deal of attention, but as yet it is impossible to form any opinion who will be the favoured candidate.

The dearth of good surgical cases and operations is unfortunately as great as it has been for the last twelve months. The extra class on Pathology is again carried on this session ; and it is much to be wished that it and other extra classes should be made more remunerative to the gentlemen who conduct them, by compulsory examination for degrees on these subjects. It is hardly respectable that the Doctorate of Medicine should be obtainable, at Aberdeen, by men who may be ignorant of all except the most antiquated pathology, and one half of whom are not instructed in the use of the ophthalmoscope, the laryngoscope, the speculum, and other means of modern research. A strong effort in this direction must shortly be made in Aberdeen, if its school of medicine is to keep pace with the requirements of the times.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 22ND, 1872.

T. B. CURLING, Esq., F.R.S., President, in the Chair.

ON THE MORBID EFFECTS OF ALCOHOL AS SHOWN IN PERSONS WHO TRADE IN LIQUOR. BY W. H. DICKINSON, M.D.CANTAB., F.R.C.P.

THE paper was based upon an analysis of the *post mortem* and case-books of St. George's Hospital for thirty years. This comprised the particulars of the examination of the bodies of 149 traders in liquor. For comparison, there were taken from the same source the same number of examinations of persons otherwise and very variously employed, and not known to have been drunken. Tabular abstracts, representing the condition of each organ in the two classes, were incorporated in the paper.

The two classes were first compared with reference to the distribution of in-door and of out-door occupations, in order to ascertain how far any morbid differences might be due to a different measure of exposure to weather. Of the alcoholic traders four to three, of the non-alcoholic three to four, worked indoors. A comparison of the ages at which the members of each class died showed that the alcoholic trader died on an average at the age of 36.8 years, the non-alcoholic at 40.6 years ; the shortness of life on both sides being partly due to the calculations referring only to hospital patients.

The morbid changes belonging to the two series were then considered in detail, the organs being taken in the order in which they would be reached by a fluid absorbed by the veins of the stomach. The liver in the alcoholic series presented great increase of cirrhosis, which disease was found in twenty-two persons of the alcoholic, and in eight of the non-alcoholic series ; the liability to cirrhosis being thus nearly trebled by a liquorous pursuit. Fatty degeneration was also increased. In the lung, pneumonia was rather less frequent with the alcoholic, but empyema belonged especially to the alcoholic series. Tubercle in every shape was most frequent in the alcoholic traders. Under alcohol, every kind of disease of the lung to which the term tubercular could be applied was increased. The increase, however, was greatest where the disease was shown to be truly tubercular by the concurrence of similar disease in other organs. This multiple form of the disease affected thirty persons of the alcoholic series, nineteen of the non-alcoholic. Tubercle, including all kinds, affected the lungs in sixty-one persons of the alcoholic, and in forty-four of the non-alcoholic class. In the brain, the liver, the kidneys, the spleen, bowels, mesenteric glands, and peritoneum, tubercle was at least twice as common in the alcoholic as in the non-alcoholic category. As to the heart and arteries, atheroma and fatty degeneration were found most numerously in the alcoholic series ; endocarditis and pericarditis in the non-alcoholic. Pericarditis, though less frequent under the influence of drink, was more often suppurative, following the same rule as pleurisy. Hypertrophy of the left ventricle, unconnected with valvular or aortic change, was also most frequent in the alcoholic series, and its excess was greater than could be explained by the increase of renal disease. The brain in the alcoholic class displayed a marked preponderance of inflammatory affections, and of hæmorrhages. Under the same influence, there was also a decided excess of accumulations of watery fluid indicating atrophy in the cerebral substance. In the alcoholic class the power of healing was weakened and the process of repair rendered slow and unsafe by liability to diffuse cellulitis, and, in general terms, by the substition of purulent and non-adhesive products, apt to spread and disseminate, for those of the adhesive and circumscribing sort. Tangible changes in the kidneys were noted in 82 persons on the alcoholic side, in 83 on the non-alcoholic. Under alcohol, the most marked excess was in the number of kidneys described as enlarged, coarse, and congested. Lardaceous disease, possibly in connection with the fewer accidents among the traders in liquor, and also the large white kidney of tubal inflammation, occurred most often in the non-alcoholic list. Intertubal or fibroid change occurred as granulations in 31 of the alcoholic to 27 of the non-alcoholic category. This slight preponderance under alcohol of the granular kidney was accompanied by a more than proportionate prevalence of vascular disease, as evinced by apoplexy and simple hypertrophy of the heart. Thus, under alcohol, acute, active, and obvious forms of renal disease were partially replaced by the chronic, insidious, and latent. With liquor was a smaller amount of dropsy and of discovered albuminuria, and a smaller number of deaths attributable to renal disease, but a larger amount of cerebral uræmia, apoplexy, and cardiac change. From the information comprised in the tables, to

which was superadded a comparison of the condition of the kidneys in fifty-eight persons who had died with delirium tremens, and the same number who were killed by accident without that complication, it was inferred—firstly, that alcohol has no effect in causing lardaceous disease; secondly, that it promotes granular degeneration, though not to an extent commensurate with the arterial change; thirdly, that the frequency of active nephritis is not increased by alcohol, though fatty and other latent tubal disturbances often result from this agent; lastly, that the kidneys are, on the whole, affected less injuriously by liquor than are the liver, the lungs, the blood-vessels, and the nervous system.

After giving a general summary of the conclusions at which he had arrived, Dr. Dickinson said:—"So far we have seen only the ill which alcohol produces. It may be asked, Is there none which it obviates? Apart from its medicinal action, which the evidence before us does not touch, has it no *per contra* of prevention? It is not easy to answer this inquiry. Some active inflammations, such as pneumonia and endocarditis, are diminished in the alcoholic trades; but it must at once be seen that the increase of the alcoholic disorders must necessarily cause an apparent diminution in all which are unaffected by this agent. A man may be saved from pneumonia or acute rheumatism, not because alcohol is antagonistic, but because it kills him prematurely in another way. He can die but once. Therefore, though under alcohol some forms of disease are comparatively infrequent, we must use much caution in concluding that it has a directly preventive influence. Nevertheless, it may be laid down as an axiom that any drug which can do harm can do good. Disease is most various, and may, or rather *must*, represent contrary conditions. It may be positive or negative, plus or minus. Too much or too little of any of the shapes of heat, food, and work, may spoil the equipoise of health. If a drug promote one change, it may prevent its opposite. Alcohol certainly gives an asthenic type to disease. Although we cannot as yet say that it defibrinates, yet it retards adhesive and plastic processes. This influence may be beneficent if it hinder the development of acute inflammation, and obviate the formation of coagula where, as in acute rheumatism, the process is harmful. It is possible that by some such antagonism we may explain the remarkable paucity of endocarditis in the alcoholic series. But, at the best, the protecting is less certain and less effective than the deteriorating influence. In brief and final enumeration, alcohol replaces more actively vital materials by fat and fibrous tissue; it substitutes suppuration for new growth; it promotes caseous and earthy change; it helps time to produce the effects of age; and, in a word, is the genius of degeneration."

Dr. ANSTIE said that, even admitting that the facts were correctly stated in the paper, and the numbers were sufficient for conclusions to be drawn from them, it must be remembered that Dr. Dickinson had spoken of a certain class only, persons following a special occupation. He was surprised at the greater tendency to suppuration referred to by Dr. Dickinson. Any one who had seen cases of alcoholism in its slighter forms would agree with him that the adhesive inflammation was very commonly met with among them. He had not found cirrhosis so common after the use of alcohol as was generally supposed. He had had, during fifteen years, a large number of patients under his observation, and had followed up their career as closely as possible; but he had met with, among all classes, drinkers or not, only fourteen cases in which cirrhosis was so distinct as to require the patients to be taken into hospital. He agreed with Dr. Dickinson in assigning to affections of the nervous system a foremost place among the results of alcoholic-drinking. Many of the patients suffered from changes in the nervous system alone. It was not easy to decide, from the conditions found after death, as to the effect of alcohol in inducing inflammation; for many drinkers ultimately died of brain-softening or other diseased states, who probably at some previous time had had attacks of inflammation. There could be no doubt that, in the drinking class taken as a whole, fibroid change was by far more frequent than tubercle. It was common in persons of this class to find fibroid contractile deposits in the lungs. He was pleased to find that Dr. Dickinson confirmed the opinion which he had for years held (in contradiction to the ordinary supposition) that kidney-diseases were not specially caused by drink. In Glasgow, where there was a very large consumption of alcohol, there was no extraordinary amount of renal disease. The idea as to the causal relation between alcohol-drinking and kidney-disease arose probably from the notion that alcohol was specially eliminated by the kidneys—a notion which has been shown to be incorrect.—Mr. SAVORY asked whether the numbers in the two classes of patients referred to in the paper ought not to be compared with the total population.—Mr. POWER referred to atrophy of the optic nerve as an effect of spirit-drinking. It was usually no indication of urinary disease, and was apparently part of general nervous disorder. It was relieved by giving up spirit-drinking, and by the subcutaneous injection of strychnia, or the internal use of such remedies as strychnia, quinine, and iron.—Dr. GREEN said that the difference of opinion as to the frequency of the occurrence of cirrhosis after spirit-drinking arose probably from the difference of meaning attached to the word. In *post mortem* examinations, there was often found to be some fibrous change, with fat in the liver-cells.—Dr. SYMES THOMPSON said that it was well known that, after pleurisy, purulent effusion was more common in spirit-drinkers than in other persons. This was often a matter of importance in the diagnosis, in aiding one to arrive at a conclusion whether pus were in the pleura, or not.—Dr. DICKINSON admitted that the cases on which he based his paper were not many; but a small number of accurate *post mortem* examinations were more valuable than ten times the number of cases merely observed clinically.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 8TH, 1872.

SIR WILLIAM GULL, Bart., M.D., President, in the Chair.

Epithelioma of the Upper Jaw.—Mr. LAWSON exhibited a patient from whom he had removed a large epitheliomatous tumour of the upper maxilla, first by excising the diseased mass, and then by freely applying the actual cautery and chloride of zinc paste spread on small pieces of lint. The man was admitted into the Middlesex Hospital in March 1872. He had then, over the superior maxilla of the left side, a soft elastic tumour about the size of a small egg, which was evidently growing from within the antrum. The bone over it had been partially absorbed, and the tumour was pressing upon the skin, which in places was adherent to it. He could blow through the left nostril, showing that the cavity of the nose was not encroached on by the growth. On looking into the mouth, there was a small soft tumour bulging above the alveolus, about the size of half a walnut. The patient was discharged from the hospital in the following July, all traces of the disease having been eradicated. Mr. Lawson remarked that the cases of soft tumours of the upper maxilla which seem peculiarly fitted to this mode of treatment are those in which the hard palate has not been invaded by the disease. As a further illustration of the permanent advantages which will sometimes follow the use of the chloride of zinc paste combined with the excision of the tumour, Mr. Lawson brought forward a poor woman from whom he had in 1866 excised a large scirrhous growth from the orbit, and afterwards applied the chloride of zinc. In this patient, the whole orbit became detached in one piece, and the woman had since continued quite well.—Mr. HEATH said that, for epithelioma and other diseases of the jaw, where there was freedom of the mucous membrane from disease, the prospect of operation was encouraging. He himself did not object to sacrifice the skin.—Mr. LAWSON, in answer to Mr. Bryant, who referred to the rarity of epithelioma of the antrum, said that the disease showed the ordinary appearances of epithelioma.—Mr. HULKE thought it doubtful if the epithelioma originated in the antrum, as the antrum did not exhibit any bulging out of its anterior wall, or the other symptoms which would have been expected. Probably the disease originated in the alveolus, and invaded the antrum.

Hydatids of the Liver.—Dr. DUFFIN read the histories of seven cases that had been treated by tapping with the fine trocar and cannula. In three of these, secondary enlargement of the liver came on from ten to fourteen days after tapping, and subsided spontaneously in from two to four weeks. In one instance, not only did extensive frictions exist, but the fluid contained one-fifth of pus. Seventy-two ounces were evacuated. No bad symptoms followed. In two cases, suppuration followed the puncture; in both, the cysts were crowded with daughter-cysts. Dr. Duffin adverted to the importance of clearing out the cysts as soon as possible after suppuration by a free opening, and to the value of antiseptics. The comparative merits of the small trocar operation and of electrolysis were then reviewed. It was admitted that gradual percolation into the peritoneal cavity was generally unattended by danger. Cases were cited where recovery had taken place after large quantities of hydatid fluid had been poured rapidly into the serous cavity. An instance of alarming symptoms after gradual percolation was also cited. In half of Dr. Fagge's cases, percolation was admitted. Ought we to aim at this? Might not adhesions prevent it? The author thought that simple acupuncture might account for the good results in Dr. Fagge's other cases. He gave instances showing how small an injury sufficed to destroy the vitality of the hydatid. It had, however, frequently failed. In alluding to the absence of suppuration in Dr. Fagge's cases, the age of his patients was commented on. Of fifteen cases of secondary suppuration collected by the author, in seven the number of daughter-cysts had been large; in the remainder, six had been cysts of enormous size. Much handling of the cyst at the first puncture was de-

precated, and partial emptying considered usually sufficient.—Dr. GREENHOW said that, in five cases which had been treated by him, he had not found any of the symptoms mentioned by Dr. Duffin. He had used a very fine trocar, care being taken not to admit air. He gave particulars of these cases; and said that in one, a girl aged 11, pain in the region of the liver, fluctuation, and a small abscess, occurred several years after the puncture; and in the abscess remains of a hydatid cyst were found. She recovered.—Dr. ALTHAUS preferred electrolysis to tapping.—Dr. BROADBENT had tapped three cases with a fine trocar, without symptoms of fever afterwards; and in one case, that of a child, trickling into the peritoneum was followed for the next twenty-four hours with diarrhœa.—Dr. POORE wished to hear the opinion of members as to the cause of the suppuration of hydatid cysts.—Mr. BRYANT thought that the suppuration would depend on the size of the trocar. He considered it better to draw off only a small quantity of fluid. Pus before operation came from the death of the animal. He suggested, in suppurating cysts, the introduction of a very large cannula, nearly an inch in diameter. He thought that the good in electrolysis proceeded from the puncture.—Dr. BUZZARD thought that the death of the hydatid caused the pus, and related a case in point. He also related a case in which the cyst perforated into the stomach.—Dr. POORE did not consider that the death of the parasite was sufficient explanation of the occasional suppuration. Had we not a right to assume that, in all cases in which puncture was followed by shrinking of the cyst, the death of the parasite took place? and yet it was well known that suppuration only occurred in a small minority of cases which were cured by puncture. The suppuration, again, was not merely due to the disintegration of "daughter-cysts"; for this explanation would not account for the grave constitutional symptoms evinced by the patient under these circumstances.—Mr. HARRY LEACH referred to a case at the Seamen's Hospital in which the cyst was opened with an aspirator without the admission of air, but that still suppuration ensued.—The PRESIDENT observed that Dr. Babington invented a very fine trocar to tap hydatid cysts. Dr. Babington only removed a small quantity of the hydatid fluid. He thought that some cases would suppurate, whatever was or was not done. There was a question, he thought, of the existence of simple cysts, not hydatid. Sir Benjamin Brodie met with what he thought to be one; it burst, and the patient recovered. Brodie said he had seen these burst or shrivel up, and do no harm.—Dr. DUFFIN, in reply, said he now thought it better to take off a small quantity of fluid. The trocar used was a fine capillary one, made as fine as possible for the purpose. With regard to suppuration, he thought that admission of air might produce it, but that it occurred occasionally without this. When it did take place, a very large cannula should be put in, and the cyst washed out frequently with disinfectant fluid.

Foreign Body in Wound of Cheek: Symptoms of Nervous Disturbance.—Dr. GEORGE JOHNSON related a case in which trismus, with facial neuralgia and palsy, and a recurrence of epilepsy, were excited by a foreign body in a wound on the cheek. H. M., aged 44, a wheelwright, was admitted into King's College Hospital on July 17th. On July 4th, he was cut on the cheek by a blow from an iron axle that fell against his face. The wound, having been washed, was strapped up by a druggist; it healed, but remained very painful. On the evening of the 12th, he had an epileptic fit. In early life, he had been subject to epilepsy, but, until the occasion mentioned, had been free from fits for twelve years. On the morning of the 13th, he had difficulty in opening the mouth and in closing the left eye. This difficulty continued, and increased until the time of his admission on July 17th. The left side of the face was paralysed, the features being drawn to the right. When he attempted to shut both eyes, the left remained partly open. He could separate the incisor teeth only to the extent of one-eighth of an inch. The left masseter muscle felt permanently hard and rigid. Severe pain was felt over the left side of the face, with a sense of numbness in the skin. There was a scar, about three-fourths of an inch long, an inch below the left eye; the cicatrix being hard and very tender on pressure. Asked if he thought it probable that dirt had got into the wound, he said that the iron which struck him was covered with grease and dust. Dr. Johnson then directed Mr. Birch, the house-physician, to cut through the cicatrix; and, this being done, a sharply angular piece of flint, nearly as large as a grain of wheat, was discovered and removed. It weighed half a grain. Water-dressing was applied to the wound. At first, no medicine was given; but after the second day, as he continued to suffer from pain which disturbed his rest, twenty grains of chloral hydrate were given twice in the twenty-four hours. The symptoms gradually passed away. The pain subsided; the muscles closing the jaw relaxed; and the facial muscles recovered their power. When he left the hospital on the 29th, there was still a trace of facial palsy; but on August 9th, when he came as an out-patient, he reported himself quite well. On September 26th, he again presented himself, and said that he had continued well. He appeared in perfect health. Dr. Johnson referred to a similar case which he had published (*Proceedings of the Royal Medical and Chirurgical Society*, 1870-1). A boy, aged 13, was admitted in June 1870, with trismus and tetanic rigidity of the trunk and extremities. The symptoms, which had existed for rather more than a week, had commenced about ten days after a wound on the thigh by a sharp piece of wood. The wound had healed, but the cicatrix was hard and very tender on pressure. While examining the case, Dr. Johnson remembered two fatal cases of traumatic tetanus referred to by Dr. Alfred Taylor in his book on *Poisons* (2nd ed., p. 143). In both cases, the wound had healed; but in one there was found after death, beneath the cicatrix, a piece of iron; and in the other, a splinter of wood. Dr. Johnson then requested Mr. Whitmore, the house-surgeon, to incise the cicatrix; and, this being done, a piece of woollen stuff, of the size of a small pea, was discovered and removed. The stick, which wounded the boy's thigh, had pierced his trousers, and, carrying with it a piece of cloth, had left it in the wound. Fifteen grains of chloral were given every six hours for a few days. The symptoms gradually subsided, and he was discharged well on July 27th. Dr. Johnson remarked that the chief interest of the two cases consisted in the fact that formidable nervous symptoms were excited by the presence of a foreign body of small size beneath the cicatrix of a recently healed wound. The two foreign bodies—the angular bit of flint and the small lump of wool—were exhibited to the Society.—Mr. ERNEST HART referred to a similar case in his practice, in which the subcutaneous injection of Calabar bean was followed by an increase of the symptoms; but, after opening a tender cicatrix, the patient recovered. He gave particulars of a second case, in which the tetanus supervened after the removal of the foreign body. The patient had been operated on for varicocele; but the wires had been for some days removed, when he was seized on the fourteenth day with tetanus.—Mr. WILLETT referred to a case recently under his care, in which, after much exposure, tetanus supervened ten days after a rather extensive injury to the hand with no foreign body in it, and proved fatal in thirty hours.—Dr. BROADBENT thought that Dr. Johnson's cases were interesting, as showing the effects of peripheral irritation; and related the case of a woman in which removal of the dead phalanx stopped the fits; also that of a woman in which the ulnar nerve was cut by accident, and followed afterwards by fits. There was probably a foreign body in this case.—Mr. HULKE referred to a similar case recently in the Middlesex Hospital, of a woman who was struck in the face with a clothes-prop. She died of tetanus a few days afterwards; and several splinters of wood, one of them one inch long by half an inch broad, were found in the orbit.—Dr. JOHNSON made a few remarks in reply.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

LONDON, with a death-rate of 19 per 1,000, was again last week the healthiest large town in the United Kingdom, except Leicester and Norwich, with rates of 17 and 19 respectively. In the other large towns the returns ranged from 20 at Nottingham to 42 at Oldham.

THE members of the Hunterian Society were received by their President, Dr. Herbert Davies, on Monday evening. In the course of the evening some highly interesting experiments were performed by Dr. Norris, of Birmingham, illustrating his well known researches on the passage of blood-corpuscles through the walls of the capillaries.

SALARIES OF MEDICAL OFFICERS IN IRELAND.

AT a meeting of the Medical Officers of the dispensary district of the South Dublin Union, on November 18, the following resolution was unanimously adopted:

"That, owing to the increased duties in connection with the various dispensaries, the steady and continuous rise in the price of every article of domestic consumption, house rent, etc. the present salaries are wholly inadequate to meet the various and increasing demands upon us, and enable us to maintain the position we occupy in our profession; it is, therefore respectfully requested that the Board of Guardians of the South Dublin Union will favourably consider this resolution, and raise our salaries to £150 a year each."

The salaries of all the medical officers of the Athlone Union have been increased from £100 to £120 *per annum*.

EXAMINATION OF PAUPER LUNATICS.

THE Guardians of St. George's, Hanover Square, lately communicated with the Local Government Board, expressing their disapproval of the practice of paying the fees of medical men for examining pauper lunatics only in cases where certificates of insanity are actually granted. In reply, Mr. Hibbert, M.P., writes to explain that when a medical officer is summoned to attend before a magistrate to give evidence by certificate respecting the insanity of a pauper, he is entitled to be paid fair compensation.

PUBLIC HEALTH ACT: MEDICAL OFFICER FOR BIRMINGHAM.

BY the casting vote of the Mayor, the Town Council decided on Tuesday to decline the offer of the Local Government Board to pay one-half of the salary of the medical officer of health and inspectors of nuisances, on condition that such officers were appointed under the 10th section of the Public Health Act. The Council preferred their power over the appointment of the salaries and duties of their own officers, independently of the department. A committee having considered the requirements of Section 10 relative to the appointment of a medical officer of health, recommended that the committee be authorised to advertise for candidates, to examine their testimonials, and to submit to the Council the names of two gentlemen selected as eligible for the appointment. They also recommend that the duties of the medical officer of health be identical with those specified in the Metropolis Local Management Act (18 and 19 Vict. c. 120, s. 132).

THE EAST LONDON WATER-SUPPLY.

DR. CORNER, Medical Officer of Health for the hamlet of Mile End Old Town, has issued a report calling attention to the power possessed and freely exercised by the water-companies in cutting off the water-supply. This power is often carried into effect to the danger not only of the health and lives of the families so deprived, but also of the whole community. This course is adopted where the landlord is in arrears with payment of water-rate, and the fact has only come to the knowledge of the sanitary authorities weeks after the event, and when unknown and, perhaps, fatal mischief has been caused. The immediate effects and subsequent consequences of a number of poor families in several crowded houses—and it generally occurs to groups of houses—being suddenly deprived of water may be partially imagined, as also the straits of begging, borrowing, and even buying from their neighbours, to which they are reduced in their efforts to maintain cleanliness and decency. The companies certainly possess and freely use this legal power; but Dr. Corner points out that they also possess the legal power to proceed summarily against the landlord to recover the rate. This course, however, is never adopted, but that power is invariably used which inflicts unjust punishment upon the helpless occupiers, and through them causes peril to the public health. The landlord is informed of the situation, but, generally, for some time continues "not to pay," and in this way, by a sort of improvised drought, and through the instrumentality of the water-company, he gets rid of an impoverished, non-paying, or troublesome tenant, ultimately, of course, at the cost of and injury to the whole community.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners, on November 12th.

Baily, Frederic William, Highbury
Benham, Henry James, Wigmore Street
Biggs, Henry Grave, L.R.C.P.Edin., Southsea
Brown, Joseph L'Oste, L.R.C.P.Lond., Grantham
Coates, William Harrison, L.S.A., Henley on-Thames
Duke, David, L.S.A., Kennington
Fletcher, George, Bromsgrove
Goodchild, John Arthur, South Eaton Place
Gray, Frederick Archibald, Stonehouse, Devon
Greaves, Edward, L.R.C.P.Edin., Great Easton, Leicester
Hands, Arthur, L.R.C.P.Lond., Inkberrow, Redditch (Birmingham School)
Hopkins, Rees, L.R.C.P.Edin., L.S.A., Pontypridd, Glamorganshire
Hopper, Arthur Richard, Liverpool
Horton, Walter, L.R.C.P.Edin., Wednesbury (Birmingham School)
Jenkinson, Harold, L.S.A., Ranskill, Nottinghamshire
Le Mottée, George Herbert, L.S.A., Guernsey
Lidderdale, James, Great Bedwyn, Wilts
Molyneux, Harold Joseph, Wigan
Morgan, George, Pontypridd, Glamorganshire
Parker, George Williams, L.R.C.P.Lond., L.S.A., New Cross Road
Robey, Henry, Newcastle (Birmingham School)
Robey, Ralph Prime, Newcastle
Snell, Simeon, Leeds
Steele, Henry Francis Arthur, Liverpool
Turnell, Arthur Pythias, Brixworth, Northamptonshire
Vowell, Charles Martin, Charlton Kings
Webster, Joseph Henry, L.R.C.P.Edin., Nottingham
White, Ernest William, Norwich
Whitefoord, Adam John, L.R.C.P.Edin., St. John's Wood
Wright, John Frederick, L.S.A., Seymour Street

Four candidates were referred to their professional studies for six months.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 14th, 1872.

Bailey, John Andrew, Bushey, Herts
Bruce, James, Kidsgrove, Stafford
Godding, Charles Cane, Portsmouth
Hirons, George Merriman, Alvechurch, Worcester

MEDICAL VACANCIES.

THE following vacancies are announced:—

ADDENBROOKE'S HOSPITAL, Cambridge—House-Physician.
CHARING CROSS HOSPITAL—Chloroformist.—Demonstrator of Anatomy.
CHELSEA—Medical Officer for the South East District: £80 per annum, and extra fees.
CHELTENHAM GENERAL HOSPITAL AND DISPENSARY—House-Surgeon's Assistant and Dispenser: £50 per annum, board and residence.
CONINGSBY, Lincolnshire—Medical Officer to the Lodges of the Manchester Unity of Odd Fellows and the Foresters Clubs.
CRAIGNISH, Argyleshire—Parochial Medical Officer.
DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION—Medical Officer: £200 per annum and residence.
EAST PRESTON UNION, Sussex—Public Vaccinator for the No. 2 B Worthing District.
HOWDEN UNION, Yorkshire—Medical Officer and Public Vaccinator for the Newport District: £32:10 per annum, and extra fees.
HUNTINGDON COUNTY HOSPITAL—House-Surgeon; £60 per annum, board and lodging.
INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.
LEICESTER PROVIDENT DISPENSARY—Medical Officer.
LIVERPOOL—Third Medical Inspector of Emigrants at Liverpool: £300 per ann.
LONDON FEVER HOSPITAL—Resident Medical Officer: £200 per annum, residence, coal, gas, and attendance.
MEATH INFIRMARY, Navan—Apothecary, Secretary, and Registrar: £52:13:8 per annum, furnished apartments, coal, and gas.
MITCHELSTOWN UNION, co. Cork—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Galbally Dispensary District: £100 per annum, and fees.
NAVAL MEDICAL SERVICE—Assistant-Surgeons.
NORFOLK AND NORWICH HOSPITAL—Assistant-Surgeon.
OWENS COLLEGE, Manchester—Assistant Lecturer in Chemistry and Junior Demonstrator in Chemical Laboratory: minimum income, £250 per annum.
ST. MARY, Islington—Medical Officer for the Canonbury District: £90 per annum, and extra fees.
ST. THOMAS'S HOSPITAL—Medical Registrar.—Surgical Registrar.
SEAMEN'S HOSPITAL (late *Dreadnought*), Greenwich—House-Surgeon.
SHEFFIELD GENERAL INFIRMARY—Assistant House-Surgeon; £65 per annum, board, lodging, and washing.
SLIGO UNION—Apothecary to the Sligo Dispensary: £100 per annum.
SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds—Three Physicians.
TIVERTON UNION, Devon—Medical Officer for the Workhouse: £30 per annum.—Medical Officers for the Eastern, Cadbury, and Washfield Districts: £70, £27, and £15 per annum, and fees respectively.
WESTMINSTER GENERAL DISPENSARY, Gerrard Street, Soho—Surgeon.
WORCESTER GENERAL INFIRMARY—House-Surgeon: £100 per annum, board, and lodging.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BLAKE, J. Ffrench, Esq., appointed Resident Obstetrical Officer to the Charing Cross Hospital, *vice* W. M. Atkinson, Esq.
DELAMOTTE, Peter, Esq., appointed House-Surgeon to the Charing Cross Hospital.
EAGER, T. Cawley, Esq., appointed Honorary Assistant-Surgeon to the Royal Surrey County Hospital, Guildford.
HARRIS, William J., Esq., appointed Medical Visitor for Private Lunatic Asylums in the District of West Sussex.
ORWIN, Arthur W., Esq., appointed Resident Medical Officer to the Charing Cross Hospital, *vice* Peter W. Delamotte, Esq.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

JAY.—On November 11th, at Chippenham, Wiltshire, the wife of Henry Mason Jay, F.R.C.S., of a daughter.

DEATHS.

CARTWRIGHT, John Talbot, Esq., Surgeon, of Wolverhampton, at Shifnal, aged 62, on October 26th.
*EYLES, Richard Strong, Esq., at 12, Bloomsbury Square, aged 82, on Nov. 16th.
HUNTER, W. E., M.D., at King's Lynn, aged 62, on November 2nd.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY .....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Lichtenberg, "Two Cases of Rhinoplastic Operation"; Dr. Broadbent, "A Study of a Case of Heart-Disease, probably Malformation."

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. Spencer Wells. "Results of Five Hundred Cases of Ovariotomy"; Mr. Lawson Tait, "On a new form of Trocar for Ovariotomy."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

THE communication of Laudator Temporis Acti in reply to, and in further review of, Dr. Wilks's Address, is somewhat late. Other opportunities will no doubt arise for the discussion of the points involved; or they may be treated in a separate form by lecture or otherwise.

WE are compelled by want of space to defer the publication of the list of subscribers to the Druitt Testimonial Fund, reports of Branch meetings, Societies, letters, etc.

MR. WALLACE DREW's communications are in hand for publication as soon as space can be found for them. If he thinks that room can be found for them earlier, we have no objection whatever to his communicating them to any other periodical in preference.

MR. WORTH is referred to the printed notices at the head of the column.

WE do not at all clearly apprehend the nature of the question which Mr. Manley (West Bromwich) wishes to bring under our notice. Perhaps he will kindly enter into a more detailed explanation than that contained in his brief communication.

THE letter of Mr. Steele (Liverpool) shall have our best consideration. Its suggestions are very much in accordance with our expressed views on former occasions.

MR. RICHARD BARWELL writes to say that the mechanical shoe for the treatment of club-foot, described last week in the JOURNAL by Mr. R. Davy, is practically identical with that introduced by Dr. Sayre, of New York, five years since, described by him in his *Manual of the Treatment of Club-foot* in 1869, shewn by him here in 1871, and since manufactured by Mr. Weiss from his pattern. The one only point in which it differs, is that Sayre uses spring-force instead of screw-force, which Mr. Barwell thinks more physiologically efficacious.

WE regret not to be able to give Mr. Kesteven the information which he desires.

IN Mr. Garman's communication last week, for "monogram", read "monograph".

THE statement of our contemporary was evidently founded on imperfect information, and was neither just nor courteous to the practitioners of Bishop's Stortford who signed the memorial. Now that our contemporary has had the opportunity of examining the memorial hastily condemned without seeing it, an *amende honorable* will no doubt be made.

DR. KIDD.—For all articles not signed, the editor assumes the sole responsibility. To state whether or not any particular article proceeded from his pen, would only satisfy an idle curiosity.

MR. MANN (Manchester).—Not suitable for publication.

ETHER.—Very good ether may be obtained, at very moderate wholesale prices, a Messrs. Huskissin and Sons, 77, Swinton Street, Gray's Inn Road.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

MR. JEAFFRESON (Newcastle-upon-Tyne).—At an early opportunity.

SPHYGMOGRAPHS AND OPHTHALMOSCOPES.

SIR,—I shall feel obliged if you or any of your readers can give me any advice regarding sphygmographs, as I purpose purchasing one. I should wish to know who is considered the best maker, and the price of one. Also, I shall be glad to know if Hawksley's Self-Illuminating Ophthalmoscope is of any practical use?

I am, etc., HENRY A. MARTIN, M.D.

9, Hubert Terrace, Dover, November 19th, 1872.

DOCTOR, WHY MR.—Can any of your readers give the origin of the Cockney habit of calling a physician Mr. instead of Dr., and a surgeon Dr. instead of Mr. At the metropolitan hospital I now attend I have observed that the practice amongst the patients is almost universal. I think the patients consider the title of Dr. hardly commensurate with the dignity and mysterious knowledge of the physician as represented by the stethoscope and the urine-test apparatus. They are apt to connect the sale of "a pen'orth o'pills", tooth-brushes, and plasters—a melancholy custom in practice amongst the lower stratum of the medical profession in London—with the title of Dr. But why should they throw the title at the surgeon? Is it, as you very wittily hinted in a recent leader, that they observe that the surgeon presents too much of the educated artizan, and that they are thus reminded by the sight of so many knives, splints, and bandages, of the "doctor's" shop in their neighbourhood, let alone the custom rather common to poor practitioners and surgeons of adhering firmly to the free use of purgative pills, lotions, and plasters.

A PROVINCIAL IGNORAMUS.

ANÆSTHESIA AMONG THE CHINESE.—According to a reputed discovery by M. Stanislaus Julien, it appears that as far back as the third century of our era, the Chinese were in possession of an anæsthetic agent, which they employed for producing insensibility during surgical operations. A description of this was discovered by M. Julien in a work preserved in the Bibliothèque Nationale—called *Kou-kin-i-tong*, or a *General Collection of Ancient and Modern Medicines*—which appears to have been published in the sixteenth century. In a biographical notice of Hoa-tho, who flourished under the dynasty of Wei, between the years 220 and 230 of our era, it is stated that he gave the sick a preparation of cannabis (*Ma-yo*), who in a few moments became as insensible as one plunged in drunkenness or deprived of life; then, according to the case, he made incisions, amputations, and the like. After a certain number of days, the patient found himself re-established, without having experienced during the operation the slightest pain. It appears from the biography of Han that this cannabis was prepared by boiling and distillation.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Nov. 16th; The Manchester Guardian, Nov. 20th; The Ulster General Advertiser, Nov. 16th; The Bath Express, Nov. 16th; The Scotsman, Nov. 18th; The Pembrokeshire Advertiser; The Lincolnshire Chronicle; The Norwich Argus; The Orkney Herald; The Yorkshire Post, Nov. 18th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—
Dr. W. B. Cheadle, London; Mr. Callender, London Mr. Jonathan Hutchinson, London; Mr. Soutter, London; Dr. Dyce Duckworth, London; Mr. Wallace Drew, London; Dr. G. H. Savage, London; Mr. Manley, West Bromwich; A Member; Dr. P. Boulton, London; Mr. Ikin, Leeds; Dr. Aveling, London; Dr. Kershaw, Royton; Mr. R. Barwell, London; Mr. Simpson, London; Mr. Domville, London; Mr. C. A. Salter, Bath; Dr. F. J. Brown, Rochester; The Secretary of the Royal Medical and Chirurgical Society; M. Dupuy, Brussels; Mr. Green, Bristol; Mr. Jeaffreson, Newcastle-upon-Tyne; Mr. Coles, London; Mr. James, Snitterfield; Dr. T. R. Fraser, Edinburgh; Mr. J. W. Langmore, London; Mr. J. Morley, Barton-on-Humber; Dr. Drummond, Manchester; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. Wanklyn, London; The Secretary of the Pathological Society; Dr. Rutherford, London; Dr. Cholmeley, London; Dr. Wingate Saul, Lancaster; Mr. S. Wood, Shrewsbury; Mr. B. T. Cartwright, Wolverhampton; Mr. Procter, Shifnal; Mr. Winterbotham, Bridgwater; Mr. Kesteven, London; Dr. Corfield, London; Mr. Garman, Wednesbury; Mr. Blake, London; Mr. Watkins, Worcester; Dr. H. Barnes, Carlisle; Mr. Craister, Bramley; Dr. Dickinson, London; Mr. Jay, Chippenham; Dr. Crisp, London; Mr. Brigstocke, Calne; Dr. R. C. Croft, London; Mr. Wilson, Withington, Manchester; Mr. G. J. Sealey, Weybridge; Mr. Hitchcock, Greenwich; Mr. Lawson Tait, Birmingham; Dr. Cobbold, London; Dr. Cartwright Reed, Fulham; Dr. Heaton, Leeds; Mr. V. Jackson, Wolverhampton; Dr. Sedgwick Saunders, London; Mr. Justice, Mallow; Mr. Woolcott, London; Mr. Eager, Guildford; Dr. A. Meadows, London; Mr. De Lamotte, London; Mr. Mann, Manchester; Mr. Jessop, Leeds; Sir James Paget, London; Dr. Murchison, London; Mr. Harris, St. Leonards; Mr. Hodgson, Brighton; Mr. Cribb, Bishop's Stortford; Mr. Couper, London; Mr. Teevan, London; Mr. Sidney, London; Dr. J. Wakley, London; Dr. Smart, Penge; etc.

BOOKS, ETC., RECEIVED.

Statistical Tables of the Patients under Treatment at St. Bartholomew's Hospital during 1871.

Human Physiology, the Basis of Sanitary and Social Science. By T. L. Nichols, M.D. London: 1872.

A Manual of Botany; including the Structure, Function, Classification, Properties, and Uses of Plants. By Robert Bentley, F.L.S. London: 1872.

Transactions of the Pathological Society of London; comprising the Report of the Proceedings for the Session 1871-72. London: 1872.

CLINICAL LECTURE
ON
DELAYED UNION AND NON-UNION OF BONES.

By GEORGE W. CALLENDER, F.R.S.,
Surgeon to St. Bartholomew's Hospital.

Amongst the cases in Harley Ward, gentlemen, is that of a man aged 43, who has broken his right leg; and, although it is true that, in the great majority of instances, our fractures are easily managed throughout their repair, yet, as in the present case, it occasionally happens that we have anxiety as to the result, or are obliged even to be content with a repair which is faulty either as regards the look or as regards the utility of the limb. I may have an opportunity for showing to you, by some cases in point, how we are sometimes unable to prevent the latter unfavourable ending. I now, however, propose to tell you of the trouble which occurred in the case to which I have referred, to give you its explanation, and to point out some common causes of delay in the union of bones, which, if not counteracted, furnish the greater number of cases of so-called non-union of fracture.

This man fell into a well, and, striking his right leg against a piece of timber in his fall, was brought to the hospital with a transverse fracture of the tibia and fibula—a fracture caused, you will observe, by direct violence. The injured limb was placed on a back-splint, and swung in the ordinary way; and, fourteen days later, the apparatus was readjusted. It was not, however, until the expiration of thirteen weeks that the bones united, and then not firmly; so that his leaving the ward has been delayed until the present time, nearly sixteen weeks after the accident happened; whilst, as most of you are aware, five or six weeks, in an ordinary case, would have sufficed for the cure.

Soon after this man's admission, we noticed that the limb was becoming œdematous; and this œdema persisted, increasing the size of the leg, with a firm and dense hardness of its tissues, for nearly all the time during which union of the fracture was so slowly progressing. This œdema indicated, as it always does in these cases, obstruction of some large venous trunk. The violence which breaks the bones of a limb, especially when applied directly, causes bruising of the soft parts about the fracture, as shown in an ordinary way by ecchymosis of the tissues; and if, as sometimes happens, a considerable vein be torn, or flattened by the pressure against it of displaced bone, we find that its canal becomes obstructed by a clot of blood both above and below the seat of injury, and in this way circulation through the vessel is arrested. We frequently have opportunities of seeing this condition of the veins in cases of severe fracture which terminate fatally; and in the *System of Surgery* I have referred to several *post mortem* examinations in which this obstruction of the veins was shown to have existed. When a great vein is thus closed, the balance between the arterial and venous vessels in the limb is so disturbed that, whilst the usual arterial supply continues, the veins which are left unhurt are unequal to carry off the venous blood; and thus there follows after a while that ordinary relief of the over-distended veins by which the œdema of the extremity is established, and during the continuance of which the repair of the fracture is sure to be slow, if, indeed, it make any progress at all. When, then, you see this state of things—an œdema beginning and persisting after a fracture—you may be sure your patient will make a very slow recovery from the injury.

I refer you to the remarks I have made elsewhere (*System of Surgery*, vol. iii, p. 366) for an explanation of the manner in which the clot is, by degrees, so altered in its character as to allow the re-opening of the vein. Either it, the clot, shrinks to one side of the vessel—that to which it is most firmly held by the secondary clots extending into collateral branches; or it is slowly tunnelled through by the action of the blood-stream. With either, the subsidence of the œdema marks the completion of the process, and more rapid repair of the fracture ensues. And let me add that this is the usual way in which the circulation rights itself; for, in these cases of occlusion of large veins with fracture, the obstruction is not compensated for by any change in, such as dilatation of, the other veins of the limb, although these vessels may have been unhurt at the time of the accident.

Such is the explanation of delayed union in not a few cases; and in such cases, knowing the cause, and the attendant symptoms being well marked, you will be prepared to allow an unusual length of time to elapse before you will expect firm union of the bones. Even after union has taken place, it is especially necessary to guard these fractures, as the patient first begins to move about, with the gum-and-starch bandages, of which, let me add, you will find the use far preferable to that of the plaster of Paris, of which patients complain as heavy and uncomfortable.

It is surprising how long union is delayed in some cases. I have known it deferred, in the case of a woman whose thigh-bone was broken, for ten months; her history was told by Mr. Whitmore at the Abernethian Society last session. In the case of a soldier, the humerus was two years and a half before it united; and in Mr. Stanley's case—the one in which he first inserted ivory pegs—two years elapsed before the femur was repaired. Now, in any of these cases, if treatment had not been persevered with, the delayed union would have drifted into the state known as that of non-union—a trouble which we should seldom witness if the causes of delayed union were more closely examined, and time allowed for, or treatment adapted to, the wants of each case. As it is, non-union of a fracture is a rare occurrence. Lonsdale, Hamilton, and others with large experience, have rarely met with such cases in their own practice. Here, in our wards, I find there has been but one case in two thousand five hundred fractures, excepting, of course, certain fractures, such as the transverse of the patella, to which I will presently refer; so that, the occurrence being so rare, it is, in my opinion, quite needless to seek for its explanation in the constitutional conditions you will find enumerated in surgical works. Age, pregnancy, debility, paralysis, may be dismissed from consideration; and, as to the influence of syphilis, you have only to visit any one of our accident wards, and you will find evidence enough to prove that it is no obstacle to the repair of fractures. Nor has the seat of the injury, including the relation to the nutrient vessel, anything to do with the non-union of the broken bone (with the exceptions I will presently name); although the delay in union may be thus explained, and great care in the treatment may be thus in some cases called for.

It must be admitted, however, that some conditions, chiefly of a local character, absolutely prevent a broken bone from being mended. Such fractures as result from cancerous infiltration of bone are practically irremediable; so also are those which involve a bone atrophied from disease. There was an instance of this some four years ago in the hospital wards, in the case of a man who had the lower end of the femur hollowed out into a large abscess-like cavity, the wall of which, thin as parchment, had cracked across at the condyles, and would not repair. Then, again, there are cases in which foreign bodies interpose between the fractured ends, of which Sir Jame Earle's case of a portion of deltoid muscle getting between the broken pieces of a humerus, and the occasional wedging of a piece of broken and subsequently necrosed bone between the fractured ends, are instances; and, lastly, other cases in which it is difficult, sometimes impossible, to keep the broken portions in apposition, as in some cases of fracture at the neck of the thigh-bone, and in most instances of transverse fracture of the patella, which is an injury almost invariably repaired by fibrous tissue. But, if we allow for these cases, we have remaining some instances of non-union which do not admit of explanation on such local grounds, and which are generally referred after a time to air, to age, sometimes to youth, or to some of those constitutional conditions which I have ventured to tell you cannot be credited with the occurrence of non-union; although one, perhaps—namely, debility—may be responsible for delayed repair. From such cases, a certain number may be deducted which, without question, have been badly treated by inexperienced or untutored persons—fractures occurring on board ship, and the like; and then, of those which remain, it is within my experience that they are examples either of delay in the process of repair, as from the obstruction of veins, or of delay through the interposition of certain mechanical difficulties; and in these cases a favourable result may be generally obtained by treatment. For convenience in mentioning them, these latter may be referred to as fractures with certain displacements of bone, fractures extending obliquely through bone, and fractures in the vicinity of, not extending into, joints; and in each of these delayed union may be traced to the fact that sufficient time has not been allowed in the first instance for the firm union of the bones; for in each a longer time is needed than is thought necessary in the case of other, or, as they may be termed, ordinary fractures.

The fractures with displacement may be illustrated by an example taken from the femur. Quite recently, a youth has been under treatment in my wards with a fracture of the femur, which had been treated on board ship, and which had united very slowly, with shortening and a considerable bend outwards of the shaft of the bone. The patien was himself conscious of the weakness, as he called it, of the limb when he first began to move about; and he was aware that the bending o

the bone had increased at this time, which was before his admission here. In fact, the union, which might have been sufficiently good to support the weight of the body if the two parts of the femur had united so as to preserve the proper axis of the limb, and to allow the shaft to bear naturally the pressure from above, was insufficiently firm to resist the same pressure when brought to bear upon a shaft in which the fracture was joined at an angle; and the uniting tissue, under these circumstances, yielded, and in time, it is not unlikely, had he persisted in moving about, would have given way altogether, and we should have had a case of what would be termed delayed union. It would have been said that the patient had moved about before the union was firm; or that, from some cause or other, firm union had been delayed; whereas the union was probably as good as in ordinary cases suffices to support the body, but in this instance was overstrained by the weight pressing at an angle instead of in the proper long axis of the thigh-bone. This case, then, represents a class in which longer time should be given for the consolidation of the repair than is needed when the long axis of the shaft can be properly preserved during the progress of union.

It is a somewhat similar condition which exists in cases of oblique fracture. The tibia—the bone of the leg which sustains the weight of the body—is often fractured so that two very oblique surfaces are left in contact. These specimens from the museum are examples of this injury. When such a hurt has to be treated, I always allow an extra fortnight—say six weeks in all—before the apparatus is disturbed and the patient allowed to put his foot to the ground; and for this reason. In these fractures, the whole weight of the man falls on and strains the new material, which has joined the fracture, in such a fashion that there is always a tendency for the upper fragment to glide off, or to be launched as it were, from the lower; the latter part of the bone giving little if any support, whilst in a transverse fracture, or a fracture only slightly oblique, it largely assists in bearing the superincumbent weight. Imperceptibly, it may be, in such a case, the union gives way; pain is felt by the patient; and, on re-examining the limb, repair is found to be incomplete. All the cases of non-union of the bones of the leg which have been brought under my notice, have been instances of oblique fracture; and every now and then, in these wards, we have found it necessary to put up afresh a fracture of this kind, upon which a patient has been allowed too soon to bear his weight.

Of fractures near a joint, that of the humerus in its lower third is, perhaps, of all the one most often followed by non-union. Various explanations have been offered with reference to this particular failure of bony union; but certainly in one case we could trace it to this, and I suspect, in most cases, it is in this direction that the cause is to be looked for. A fracture of the humerus is put up; and the forearm, at least for convenience, is placed at a right angle, and slung. As the case progresses, a question is raised as to the possibility of the elbow being stiff. The hand and forearm are flexed and extended a little, and the joint is said to move freely. If this examination be repeated, you must not be surprised if you find, when in due course you come to examine the fracture, that it has not united. The elbow being for the time somewhat stiff from disuse, it was not the joint which moved, but the fracture which was rocked in flexion and extension, as it easily may be when you act on it with the great leverage given you by the forearm, and so was hindered from becoming firm. I never knew an elbow-joint to be anything but temporarily stiff after a fracture of the humerus not extending into the joint; so that in these cases there is no excuse for handling the forearm. The arm should be left perfectly at rest during the entire process of repair; and no movement of the elbow should be permitted until it is certain that the bone is firm.

If you remember these as typical of certain classes of cases, you will be prepared to prevent the occurrence of non-union in most of the comparatively few cases in which special care will be called for. Of another class—that of failure of bony union from the difficulty of keeping the separate fragments in juxtaposition, as after transverse fracture of the patella—you may learn from this patient, recently discharged from Harley Ward, who has sustained an injury of this nature, that it is not impossible to obtain osseous union even under what at first may appear unfavourable circumstances, if only you give time for the process to complete itself, and take care that in the meanwhile no strain is allowed to stretch the fibrous tissue which at first unites the pieces of the broken bone.

HÆMORRHAGE AFTER TONSILLOTOMY.—As a means of preventing the sometimes severe and obstinate hæmorrhage which attends excision of the tonsils, M. Broca recommends compression of the carotid artery against the transverse process of the sixth cervical vertebra, so as to allow the formation of coagula in the small tonsillar vessels.

ON THROMBOSIS AND EMBOLISM: CASES WITH COMMENTS.*

By GEORGE JOHNSON, M.D., F.R.S.,
Physician to King's College Hospital; Professor of Medicine in King's College, London; etc.

WITHIN a comparatively short period, I have met with a considerable number of cases of disease in which fibrinous coagula, large or small, either fixed or movable and floating within the circulatory system, have played a conspicuous part; and I trust that a brief narrative of some of these cases, together with some reflections suggested by them, may not be without interest for this Society. I will preface the recital of the cases by a very few general remarks.

The chief among the conditions which are known to determine the formation of coagula within the circulatory system are the following.

1. Stagnation of blood, or retardation of the blood-stream—as, for example, in an aneurism after ligature or compression of the artery; in the right side of the heart when there is an impeded escape of blood through the lungs or through the left side of the heart. Amongst the causes of an impeded flow of blood through the lungs, may be mentioned the state of apnœa which results from pneumonic consolidation from the pressure of liquid on the pleura, or from obstruction in the larynx. The operation of tracheotomy too long deferred may fail to save life, in consequence of coagula within the pulmonary artery, the right cavities of the heart, and the systemic veins. A coagulum may form in a dilated left auricle, consequent on constriction of the mitral orifice. Of this there is a good example in one of the specimens on the table. Again, coagula may form in the right side of the heart when, in consequence of weakness of the walls or dilatation of the cavities, there is an incomplete emptying of these cavities and a partial blood-stasis.

2. Coagula will form and adhere upon any part of the interior of the heart or of the vessels which may have been roughened or abraded by disease or accidental injury. Thus fibrinous concretions form upon the surface of a cardiac valve which has been roughened by inflammation, upon the rough ends of a ruptured tendinous cord, upon the edges of a crack in the endocardium or in the inner coat of an artery; and the blood may coagulate and form a thrombus within an artery which has been roughened by atheromatous or calcareous degeneration, or by syphilitic or other forms of inflammation.

3. A small coagulum often forms the nucleus of a larger concretion. Thus, as layer upon layer of laminated fibrine forms within an aneurism, or on the warty concretions covering an inflamed cardiac valve, so a nucleus of coagulated fibrine within one of the cavities of the heart may rapidly increase by determining a further deposition upon its surface; so minute floating particles of fibrine—capillary embola—may lead to the formation of larger coagula in the systemic veins, in the right side of the heart, or in the pulmonary vessels.

4. There is reason to believe that in certain states of system, such as are found, for instance, in rheumatic subjects, the blood contains either an excess of coagulable material or material which is more than ordinarily prone to coagulate, possibly in consequence of the presence of some morbid material in the blood.

My first three cases are examples of thrombosis in the right side of the heart—a result, as I suppose, of weakness of the heart's walls, dilatation of the cavities, and consequent partial stasis of blood in holes and corners of those cavities.

CASE I.—Mr. H., aged 64, had not been in his usual good state of health for about four months before his death, which occurred on October 25th, 1871. In June, he had an attack of what was called "gastric disorder", after which he suffered from shortness of breath on walking uphill. On one occasion in particular, while walking up a steep hill at Dover, his breathing became very difficult. This was at the end of September. Immediately after this, he returned to his home in London, where I saw him occasionally with my friend Dr. Lavies, who was in daily attendance upon him. Mr. H. was then confined to his room with a feeling of general weakness, a quick and feeble pulse, hurried breathing on any exertion, some œdema of the ankles, and crepitation over the bases of both lungs. The heart's impulse was feeble, but there were no abnormal valvular sounds. The urine was normal. One of the most distressing symptoms was a sensation of alarm and impending suffocation on first awaking. There was a considerable amount of subcutaneous and abdominal fat, and we con-

* Read before the Medical Society of King's College.

cluded that we had to deal with a fat and flabby heart. This condition varied from time to time; but, on the whole, he appeared to be improving, under the influence of rest and judicious nursing. On the morning of October 25th, he awoke; told the nurse, who was sitting by him, that he felt comfortable; and asked the time. She said, "A quarter to three." He began to reply, "Oh, a quarter," but suddenly stopped in the middle of the sentence: the nurse turned and saw that he was black in the face; his tongue protruded between the teeth, both arms and legs were convulsed, and in a few minutes he was dead.

At the *post mortem* examination, we had the assistance of Dr. Kelly. There were small spots of ecchymosis beneath the pericardium. The heart was large, with much fatty growth on its surface. The right side, but especially the auricle, was much distended with blood. A firm decolorised coagulum filled the apex of the right ventricle, adhering closely to its inner surface, and extended about three or four inches along the pulmonary artery. Its diameter there did not appear sufficient to obstruct seriously the current of blood; but it was also continued backwards through the tricuspid orifice into the auricle, where it formed a band two inches long, an inch wide, and a quarter of an inch thick. The outer surface of this firm clot had been moulded on the wall of the auricle; but it was now free in the cavity, and it had evidently been driven by the current of blood over the tricuspid orifice, the sudden and complete obstruction of which had caused general venous distension, with lividity of the surface, and arterial emptiness, cerebral anæmia, and consequent convulsions. The lungs were gorged and œdematous at their bases; the bronchi were deeply congested, and contained much frothy mucus.

There can, I think, be no doubt that the abrupt arrest of the circulation in this case was caused by the separation of the fibrinous coagulum from the wall of the auricle, and its consequent valve-like flapping over the tricuspid orifice.

It is probable that this fatal clot had been gradually forming for some weeks before death; and that the immediate cause of its formation was the imperfect contraction of the fat and flabby right ventricle, and the consequent incomplete emptying of its cavity.

CASE II.—On November 7th, 1871, I saw Miss R., aged 19. She was breathing rapidly and deeply. She said, "I feel as if I could not get a sufficiently deep breath." Her lips were livid, and her skin pallid; the pulse small, rapid, and feeble. The hands felt cold; the temperature in the armpit was 98 deg. The chest in front was everywhere resonant, except over the middle lobe of the right lung, where it was quite dull. The respiratory sound was exaggerated (puerile), except over the dull space before mentioned, where the respiration was inaudible. The dyspnœa rendered auscultation at the back difficult; but moist *râles* were heard over both lower lobes. With these sounds, however, there was a free entrance of air. I expressed my belief that she was dying from obstruction at the right side of the heart or in the pulmonary artery. As she had spat some blood a few hours before, it was probable that the dulness over the middle lobe was the result of pulmonary apoplexy. My first visit was at 3 P.M. At 7 P.M., her condition remained the same. She died at 11 the same evening.

Dr. Kelly made an inspection with me, thirty-four hours after death. The middle lobe of the right lung was solidified by impacted blood. In other parts of the lungs, there were a few smaller hæmorrhagic patches, and also some ecchymoses beneath the pleuræ. The bronchi were congested, and contained much bloody tenacious mucus down to their smaller branches. This condition of the bronchi was general over both lungs. The cardiac area was rather larger than usual; a little clear fluid in the pericardial cavity. The right side of the heart was full of black coagulum.; the left side moderately full. Each ventricle formed an apex, so that the heart's apex appeared double. The valves were all healthy. The right ventricle was dilated; its columnæ carneæ and musculi papillares was thicker than usual. A large loose *post mortem* coagulum lay in the right auricle, ventricle, and pulmonary artery. In the appendix of the right auricle was an adherent, pretty firm, decolorised clot of fibrine, entangled in the musculi pectinati. Similar but smaller clots were found in the apex of the right ventricle, where the deep fossæ between the prominent musculi papillares form a complicated network most favourable for the formation of a thrombus. On opening the pulmonary artery, a clot was found at the commencement of each main branch; and firm decolorised clots were met with in the smaller branches as far as they could be dissected, so that these vessels were actually distended by coagula which had been driven into them by the right ventricle. The pulmonary veins were healthy, and contained a little fluid blood.

In the early part of the year, Miss R. had been much frightened by a domestic occurrence. From that time she suffered from occasional palpitation, cough, and difficult breathing. She was a zealous dancer; but always, after waltzing, she looked pale, and suffered from palpitation. About three weeks before her death, she was much distressed by the loss of a locket, the gift of her deceased mother. She became feeble, and her breathing was oppressed. On October 31st, she had great difficulty in attending a wedding as bridesmaid; and, after the ceremony was over, she went to bed thoroughly prostrated. She suffered from increasing difficulty of breathing and palpitation, occasional sickness and cough, with frothy mucous expectoration, which had an occasional rusty tinge. On the morning of the day on which she died, she spat up about a tablespoonful of pure blood. This was followed by an increase of dyspnœa; and at 3 P.M. I found her in the condition which I have already described, the symptoms continuing unchanged until her death at 11 the same night.

In this case, dilatation of the right cavities of the heart—a result, probably, of the combination of feebleness of the muscular walls, emotional excitement, and over-exertion in dancing—led to the formation of coagula in those portions of the auricle and ventricle where, in consequence of incomplete contraction of the walls, the blood is liable to stagnate. Then branches of the pulmonary artery were gradually and successively blocked by embola detached from clots within the right cavities. At length, the obstruction to the pulmonary circulation was so great as to excite urgent dyspnœa, which was still further increased by the hæmorrhage and the consequent impaction of blood in the terminal bronchi and air-cells. It is probable that the blood escaped from ruptured *bronchial* capillaries, the result of a retrograde passive engorgement of the bronchial veins consequent on the block in the *pulmonary* vessels. The ecchymoses beneath the pleuræ were explained by the same backward engorgement of the bronchial veins and capillaries.

CASE III.—Mr. B., aged 33, a merchant, of somewhat intemperate habits, had hæmoptysis about the middle of March 1872. For this he was seen by Dr. Mumford, who found that he was passing copiously urine having a specific gravity of 1035, and containing much sugar. I saw the patient with Dr. Mumford on March 28th. In addition to the diabetic symptoms, there was crepitation at the apices of both lungs. On April 17th, the symptoms were somewhat mitigated. The patient was dressed and downstairs. On April 23rd, I was called to see him at 8.30 in the evening, in consequence of a serious aggravation of his symptoms. I found him in bed, breathing hurriedly and deeply. The hands were very cold and clammy; the pulse small, feeble, and rapid; the lips blue; the face pale and anxious. The respiration was puerile everywhere except at both apices, where loose crepitation was audible. The sounds of the heart were normal, except that the first sound was shorter than usual. I was told that difficulty of breathing had been gradually coming on for two days, and that the dyspnœa had been urgent for about twelve hours. I expressed my opinion that he was dying from a coagulum at the right side of the heart. He died at 11.30 A.M. the following day.

Thirty hours after death, Dr. Kelly examined the body with Dr. Mumford and me. A firm colourless clot was found adherent to the apex of the right ventricle; this extended along the pulmonary artery, becoming small and black beyond the bifurcation. At the pulmonary orifice, the clot was equal to about one-third the diameter of the vessel. It extended also backwards from the ventricle through the tricuspid orifice into the auricle, where, on the auricular side of the tricuspid orifice, it was enlarged to the diameter of nearly an inch; so that the tricuspid orifice was much obstructed, and the auricle was distended with dark liquid blood; while the ventricle was little if at all distended. The walls of both the auricle and the ventricle were thin, soft, and covered by fatty growth. The left cavities were empty. There was a moderate quantity of serous fluid in the pericardium, and some spots of ecchymosis beneath the serous layer. There were cheesy deposits in the apices of both lungs, and two small cavities in the left apex. The lungs were gorged with serum; the mucous membrane of the bronchi was congested, and covered by frothy mucus. This engorgement with mucous exudation must have come on after my visit—*i. e.*, during the last fourteen hours of life, a result of passive congestion of the bronchial veins and capillaries, in common with the whole systemic venous system, consequent on the obstruction at the right side of the heart. The serous effusion into the pericardium and the ecchymoses beneath the membrane were results of a similar passive engorgement of the coronary veins and capillaries.

The formation of the clot in this case probably began in the apex of the right ventricle—a result of partial stasis of blood there, consequent on degeneration and impaired contractile power of the muscular walls. The patient, for some weeks before his death, had been subjected to frequent and violent emotional excitement, which may probably have increased the distension of the right cavities, while it tended to lessen the contractile power of their walls.

It is not without interest to remark that the symptoms which result

from a plug of fibrine at the right side of the heart or in the pulmonary artery bear a striking resemblance to some of the most characteristic symptoms of cholera collapse. Dr. Alfred Carpenter has published a remarkable case of embolism of the pulmonary artery, in which, as he says, "the only symptoms wanting to make the case apparently one of cholera were alvine discharges and cramps in the limbs." (*Lancet*, September 23rd, 1871.) The symptoms actually observed in that case were blueness of the surface, coldness of the uncovered parts of the body, cold clammy perspiration, coldness of the breath, sinking of the eyes, feebleness of the voice, a feeble thready pulse with hurried breathing, excessive thirst, and almost complete suppression of urine, two ounces of urine only being passed one day, and another day less than two ounces.

An embolon passing into the pulmonary artery, and not causing a fatal obstruction there, may excite inflammation of the tissue of the lung.

CASE IV.—I am indebted to my friend Dr. I. for the outline sketch of an illness of which he was himself the subject. He is in his fifty-second year, and has had repeated attacks of gout. While travelling in Switzerland, he sprained his left knee severely on August 3rd, 1872. On the 7th, he had gout in that joint and in the ankle on the same side. Next day, the left foot was inflamed; and on the following day, the right foot. On August 12th, the gout was gone, and the knee better. On the 15th, he went downstairs. On the 16th, 17th, and 18th, the calf of the left leg was increasingly painful. On the 16th, while sitting quietly, he felt a curious sensation in the left calf and along the thigh, and felt sure that a clot had started on its travels. In about two minutes, he felt it settle in the right lung, two inches below the nipple. He was not at first conscious of any dyspnœa; but a friend called, and in conversation he found that he was short-breathed. A short irritative cough came on. Pulse 76. On the 21st, the pain in the left calf was so severe as to compel him to lie in bed. He then found that the leg below the knee was much swollen and hard. The dyspnœa was so great that he could neither read aloud nor talk. On the 24th, there was pain along the course of the femoral vein, and the vein felt hard and distended. On the 28th, the whole left limb was from two to two and a half inches larger in diameter than the right; dyspnœa more considerable. The temperature of the left leg was 104 deg.; that of the right, 98 deg. He had extreme debility, and complete loss of appetite. On August 29th, he left Zermatt in a litter at 7.30 A.M., and reached Visp at 6.30 P.M. August 30th, he was in bed all day, with pain in the right side. On August 31st, he was travelling by carriage and rail from 7 A.M. to 1 P.M. The dyspnœa was so severe that he could with great difficulty take half a tablespoonful of soup at a time. In the afternoon, there was intense pain below the right mamma, and the physical signs of pleurisy were present. On Sept. 1st the cough was more severe; he expectorated one large solid mass of blood and mucus, followed by three smaller masses; and the cough ceased for the day. Sept. 2nd. Cough and expectoration returned from 4 A.M. to 6 A.M., then ceased; pleuritic pain continued. On Sept. 3rd, he slept soundly, for the first time since the sprain, thirteen hours; sweated profusely; the morning cough and bloody expectoration were as before. He went to Geneva in an invalid carriage; on arrival, the dyspnœa was extreme, so that he could not talk in his usual tone of voice. From this period, all the pulmonary symptoms gradually abated, and his appetite and strength returned; but the limb remained enlarged and painful. I saw Dr. I. in London on September 30th. There was then no trace of mischief within the chest; and, with the exception of the remaining swelling and weakness of the left lower extremity, he was in his usual good health and spirits.

In this case, the original source of the mischief was a clot which had formed in a vein in the leg, consequent on a partial blood-stasis connected with the gouty inflammation.

CASE V.—On October 26th, 1871, I saw, with Mr. Erichsen and Mr. Jones of Epsom, a gentleman aged 64, who, having had much mental anxiety for several months, suffered from sciatica on the left side. This came on in May, and continued for several weeks. Then, one day in July (?), he was seized with sudden faintness at the water-closet, and nearly died. A second faint occurred the following morning. Then there followed the signs of pulmonary engorgement, wheezing over the chest, hæmoptysis, and signs of consolidation of a portion of one lung. The lungs gradually became clear; then followed a painful swelling of the left leg and thigh; and afterwards the right limb was similarly affected. When I saw him, both lower limbs were still swollen, and the left was discharging freely from punctures in the skin. The heart's sounds were normal, but the impulse was feeble. The pulmonary sounds were normal. There was a moderate quantity of albumen in the urine. I saw this gentleman again with Mr. Jones on February 16th. I then learnt that the swelling of the legs had gradually passed away; the urine had ceased to be albuminous. About a fortnight before, he had a sudden faintness, continuing for about twenty minutes; since then, he had a conviction that, if he swallowed food, it would not pass through him. He consequently refused nourishment, and became very feeble. The pulse was 120, weak, sometimes irregular; the heart's impulse feeble; the first sound sharp and clear. He gradually sank, and died from exhaustion.

In this case, it is probable that a thrombus, originally formed on the right side of a feeble and perhaps dilated heart, passed as an embolon into the pulmonary artery, where it caused pulmonary congestion and hæmoptysis; then coagula, passing into the systemic arteries and capillaries, led to the formation of coagula, first in the veins of one leg, and subsequently in those of the other. It is probable that the albuminuria may have been a result of embola in the renal vessels.

There is, I think, good reason to believe that coagula, which have originally formed within the pulmonary capillaries, may thence pass through the systemic arteries and cause capillary and venous obstruction in the lower extremities.

CASE VI.—In the autumn of 1869, I saw the following case. A married lady, aged about 40, the mother of a large family, healthy, but of a somewhat delicate frame, during the early part of September had a troublesome dry cough; and one day she began to cough up a large quantity of florid blood. So rapid was the hæmorrhage, that at one time she was nearly suffocated; and the active bleeding continued for several hours. I first saw her at Eastbourne, on September 17th, a week after the onset of the bleeding. She was then expectorating small quantities of semi-solid dark blood, which had evidently been for a considerable time out of the vessels. Percussion and auscultation over the front of the chest gave quite normal results; and, as the chest-walls were thin, the air could be heard entering the lung with great clearness. Over the right lower lobe at the back, there was marked dulness on percussion, and, on auscultation, rather fine crepitation, with diffused blowing expiration. The inference was, that the right lower lobe had been partially consolidated by blood driven into its tubes and air-cells. Percussion and respiratory sounds over the left back were quite normal. The pulse and breathing were somewhat quickened, but there was no febrile excitement. A few days afterwards, I heard that the chest-symptoms were better, but that the left leg below the knee had become painful and swollen, though not inflamed; and I suggested that probably some coagula from within the pulmonary capillaries, having entered the circulation, had led to the formation of coagula within the capillaries and veins of the leg. On October 4th, I again saw the patient. I found that, during the last few days, the painful swelling of the leg had entirely subsided; but this had been succeeded by urgent dyspnœa. The breathing was still upwards of 40 in a minute; the pulse rapid and feeble; the countenance anxious; the face pale; the lips livid. There was now normal resonance over the lower lobe of the right lung, the air entered freely, and there was scarcely a trace of crepitation left. Over every other part of the chest, percussion and respiration were quite normal. The blood which, for a time, had blocked a portion of the lung-tissue, had been expectorated; and evidently there was nothing in the state of the lung to explain the alarming dyspnœa. What, then, was its cause? Probably a fibrinous clot, from the temporarily obstructed vein in the leg, had made its way to the right side of the heart; and there was embolic obstruction of the pulmonary artery. The dyspnœa was due, not to want of air in the lungs, but to want of moving blood. After my visit, the dyspnœa continued and increased, and she died early on the morning of October 6th.

There was no inspection of the body, but there can be scarcely a doubt as to the sequence of events. Pulmonary hæmorrhage led to impaction of blood in the lower lobe of the right lung; this was soon expelled by coughing; but, meanwhile, probably coagula, formed within the pulmonary capillaries while the blood was rendered stagnant by pressure from without, passed into the circulation, and led to the formation of coagula within the capillaries and veins of the leg; thence coagula found their way back to the right side of the heart, where they increased and caused a fatal obstruction to the circulation.

CASE VII.—In confirmation of the explanation which I have given of this and the previous case, I may refer to a case related by Sir James Simpson (*Clinical Lectures on the Diseases of Women*, p. 354). A woman died of phlegmasia dolens of the left arm and side of the face some weeks after an exhausting labour. About a year before she became pregnant, she had an attack of rheumatic endocarditis. After her delivery, she had signs of embolism, first in the right brachial artery, and then in both legs; then came on phlegmasia dolens in the left arm. After death, the aortic valves were covered over with wart-like excrescences, and it is suggested as probable that fibrinous detritus, passing from the arteries into the capillaries and veins of the left arm, caused phlebitic thrombosis and the other phenomena of phlegmasia

dolens. It is notorious that coagula in the right side of the heart and in the pulmonary artery have frequently caused the death of parturient women. This fatal occurrence appears sometimes to have been unassociated with symptoms of blood-poisoning or of constitutional disturbance; and it seems not improbable that coagula from the uterine veins may pass into the returning current of venous blood and so form the nuclei of further concretions at the right side of the heart.

CASE VIII.—Five years ago, I saw, with Mr. Charles Matthews, a woman who, a few days after her confinement, had been suddenly seized with the most alarming symptoms of collapse. Mr. Matthews having been called to her at this time of alarm, heard a bellows-sound over the situation of the pulmonary artery, and he concluded that a clot was partially obstructing the vessel. On the following day, when I saw her with Mr. Matthews, the alarming symptoms had passed away, and the cardiac and pulmonary sounds were quite normal. A few days afterwards, she had phlegmasia dolens in one leg, and it is probable that fibrinous *débris* from the clot in the pulmonary artery may have passed through the capillaries of the lung into the systemic arteries, and thence to the capillaries and minute veins of the limb which was the seat of phlegmasia dolens. The passage of fibrinous coagula from the pulmonary capillaries into the systemic arteries, and the resulting phlegmasia dolens in one leg, would render this case analogous to Cases 5 and 6, which I have before narrated.

The late Dr. F. W. Mackenzie, in his elaborate paper on phlegmasia dolens (*Medico-Chirurgical Transactions*, vol. xxxvi), has shown that obstruction of the femoral or iliac vein causes soft œdema of the legs, but that, in order to excite the hard painful swelling which constitutes phlegmasia dolens, the smaller vencus radicles must also be obstructed; and he shows it to be probable that this obstruction is often the result of some morbid element in the blood which has gone the round of the circulation. Thus, in one experiment (p. 210), lactic acid having been injected into the right femoral vein of a dog towards the heart, not only were the right iliac veins and some of their branches obstructed by a firm adherent decolorised coagulum, but the right femoral vein, down to the popliteal and several of its branches, were similarly obstructed, and a firm coagulum also occupied the left femoral vein down to the popliteal. The coagula in the left femoral vein and in the right femoral beyond the place of injection are attributed to the action of the lactic acid after it had gone the round of the circulation.

Phlegmasia dolens, although in the majority of cases puerperal, is of by no means rare occurrence in non-puerperal conditions. Thus, out of 100 cases referred to and analysed by Dr. Mackenzie, no fewer than 40 were non-puerperal, and of these 40 about one-third occurred in males. Even in parturient women, it is doubtful whether it is ever a result of a direct extension of disease from the uterine to the pelvic and iliac veins. It seems on the whole more probable that some morbid material, possibly small fibrinous coagula or minute particles of fibrine in a state of decomposition, passing from the uterine veins into the general current of the circulation and returning through the systemic arteries, determines the coagulation of the blood in the capillaries and veins.

The greater frequency of the disease in the lower than in the upper extremities is probably accounted for by the retardation of the blood-stream in the more distant parts, where, too, the venous current has to return against gravity. It has also been suggested that the greater frequency of the disease in the left than in the right leg, in the proportion of three to two, may be, in part at least, explained by the fact that the left common iliac vein has to pass behind the right iliac artery, and when the blood-moving forces are feeble, it is thought that the pressure of the artery upon the vein may somewhat retard the venous current, and so favour coagulation of the blood. It is well known that swelling of one or other leg, sometimes of both—a form of phlegmasia dolens—is an occasional sequela of typhus and of typhoid fever. This complication has occurred in several cases under my own observation. What is the explanation of this phenomenon? While thinking over this subject in connexion with the history of the cases which I have here narrated, it has occurred to me that probably the swollen white leg after fever may be thus explained. Pulmonary engorgement, more or less, is a common result of fever, both typhus and typhoid; during this state of engorgement, coagula may form in the pulmonary capillaries, and, subsequently passing into the systemic circulation, may cause capillary and venous obstruction in a manner analogous to that in which I suppose it to have occurred in Cases 5, 6, and 7.

In a fatal case of typhoid fever (Sarah Gaily, xxvii, p. 69), in which there was much pulmonary engorgement, there was found after death a recent fibrinous patch in one kidney, a result, as I suppose, of the impaction there of fibrinous coagula from the pulmonary capillaries. The valves of the heart were quite normal, but the fibrinous patch was exactly similar to those which are often associated with warty concretions on the cardiac valves.* The probability of this being the true explanation of the swelled leg after fever is increased by the fact that a similar complication is occasionally observed in cases of phthisis, pleurisy, and pneumonia, in which cases it is likely that coagula may have passed from pulmonary capillaries into the systemic vessels. I have met with this complication in several cases of phthisis. The late Dr. Cursham has published four cases of phthisis complicated with phlegmasia dolens (*Medico-Chirurgical Transactions*, vol. xliii). In two of these cases there was ulceration of the intestines, but in the other two no such ulceration was found; and Dr. Cursham attributes the obstruction of the veins to "the presence of pus or some foreign matter in the blood."

Dr. Warburton Begbie, in a recent paper on the swelled leg of fevers (*Edinburgh Medical Journal*, September 1872), refers to four cases of pleurisy in which swelling of the lower limb occurred on the same side as the pleurisy. It is likely that coagula formed within pulmonary capillaries where the circulation has been retarded by the pressure of liquid in the pleura might pass on into the systemic vessels, and there become nuclei of new clots and consequent capillary and venous obstructions. If the occurrence of the swelling in the limb on the same side as the pleurisy be not a mere coincidence, it may possibly be due to the fact that, as a rule, a pleuritic patient lies on the affected side, and this position may involve greater pressure on the undermost leg and some additional retardation of the venous current in the compressed limb.

The lobular pneumonia which so often follows an extensive burn of the skin has for its probable exciting cause the passage of more or less completely coagulated blood from the seat of the burn into the minute pulmonary vessels; while the ulceration, which in these cases has sometimes been found at the commencement of the duodenum, may be explained by coagula passing through the pulmonary capillaries, forming embola in the intestinal vessels, and thus rendering circumscribed portions of the mucous membrane liable to be softened and dissolved by the acid chyme before it is mixed with the alkaline biliary secretion. These duodenal ulcers appear to be analogous to the so-called simple gastric ulcer; the most probable explanation of which is, that plugging of vessels in the mucous membrane by thrombosis or embolism kills a circumscribed patch of the membrane, and thus renders it soluble by the gastric fluid.

Time permits only a passing allusion to the various forms of brain-disturbance which are direct results of embolism or thrombosis. We have had in the hospital some most interesting typical cases.

In the case of a man named Edward Smith, in October 1867, with a diastolic bellows-sound at the base, there was sudden left hemiplegia; after death a plug in the right middle cerebral artery, with softening of the corresponding corpus striatum, warty vegetations on the aortic valves. In Sarah Elizabeth Keen, Dec. 1869, there was sudden coma, with first rigidity, then palsy of the right arm and leg; after death a thrombus was found in the atheromatous left middle cerebral artery, with softening of the whole corpus striatum and the outer part of the optic thalamus. In the last volume of the *Pathological Transactions* (xxiii, p. 94), Dr. Kelly has published a case of acute fatal chorea in a girl aged 9. Amongst other points of interest, there was softening of both corpora striata. Some minute arteries in the softened parts were filled with granular fibrine. There were recent soft vegetations on the mitral and tricuspid valves. It is certain that acute chorea is sometimes a direct result of capillary embolism of the corpus striatum and the neighbouring parts.

Another most interesting case is that of a young woman named Mary Ann Hennessey (vol. xliii, p. 269). She had rheumatism twelve years before admission; palpitation since; a systolic bellows-sound at the apex, sometimes high pitched and musical, then soft and blowing. The changing character of the murmur was probably a result of the alternate deposit and dislodgment of fibrinous concretions on the mitral valve. In addition, there was high and variable temperature; then plugging of the brachial artery, hæmaturia, probably from renal embolism; lastly, cerebral excitement, delirium, and illusions, consequent, as we suppose, on plugging of the cerebral vessels. In this state she insisted on going home, where we heard that the excitement soon passed off and she was able to attend to her shop.

I venture to make one generalisation which appears to me to be warranted by clinical observation. The symptoms to which a stationary clot gives rise by engorgement of vessels extending in a backward direction are usually of a passive character, and are developed slowly; on the contrary, when coagula, large or small, pass onwards with the blood-stream, they often excite active symptoms with great rapidity; the character of the symptoms being almost infinitely various, according to the nature of the part which is

* In some cases of typhoid fever, it is not improbable that coagula or some other form of blood-contamination may start from the vessels at the seat of the intestinal lesion.

implicated—whether lung, brain, kidney, intestine, etc.; and, again, whether arterial trunk, minute arterial branches, capillaries, or veins. Minute particles of fibrine mingling with the blood may probably go the whole round of the circulation with, of course, a liability to be arrested in any set of capillaries, and thus to become the centre and source of fresh mischief. There is reason to believe, too, that, apart from the mere mechanical results of floating masses of fibrine, fibrinous *débris* in the blood may have something of a toxic influence, and thus induce febrile excitement with a high temperature.

I cannot conclude without an expression of admiration for the clinical acumen of the late Dr. Kirkes, who was the first in this country to indicate what, in his paper in the *Medico-Chirurgical Transactions* (vol. xxxv), he calls "some of the principal effects resulting from the detachment of fibrinous deposits from the interior of the heart, and their mixture with the circulating blood." That paper opened out an entirely new field of pathological and clinical research, the importance of which is yearly becoming more apparent.

NOTES OF A CHOLERA-EPIDEMIC.

By CHARLES A. BRIGSTOCKE, M.R.C.S., Medical Officer and Public Vaccinator in the Calne Union.

ALTHOUGH cholera has visited this country as an epidemic three or four times, its cause and means of propagation are still so enveloped in mystery, that all additional statistics may prove of service, however unimportant in themselves.

The cholera-epidemic of 1866 visited the town of Llanelly (where I was engaged in active practice at the time) with great severity, no fewer than two hundred deaths from that cause having occurred in the town and immediate neighbourhood. I am decidedly of opinion that the more than usually fatal character of the scourge in this case may be fairly attributed to the following causes: first, the situation of the town, being in great part built upon marshy badly drained land near the junction of a river with the sea; and, secondly, the nature of the population, composed chiefly of work-people employed in the various collieries—iron, copper, and tin-works in the town and neighbourhood, with a large percentage fluctuating between pauperism and self-support. When to these unfavourable influences we add the fact that pigs were kept by many of the inhabitants in immediate proximity to their dwelling-houses, it would have been difficult to find a town more favourable to the development of cholera. There was scarcely any wandering epidemic but found a nidus there; while fever was an almost constant resident. It seems only fair to the local authorities to state, that since the visitation of cholera more attention, I believe, has been paid to the improvement of the sanitary condition of the town.

On July 4th, I visited a woman, aged 27, suffering from severe choleraic diarrhœa; and on the 7th, the first well marked case of cholera occurred in the district. The epidemic remained apparently quiescent for a short time, but then spread with frightful rapidity. At its acme, from fifteen to twenty-five attacks occurred daily; it then gradually declined, the last death from cholera happening in the early part of October.

During its spread, although it displayed a marked preference for the filthiest localities, yet, as if by exception to prove the rule, one or two of apparently the most healthy parts of the district suffered severely.

The following statistics of 192 cases of cholera, which fell under my own personal observation, may prove interesting.

	Cases.	Deaths.
Under 5 years	24	13 or 54.16 per cent.
From 5 to 20 years	33	9 or 27.27 ,,
,, 20 to 40 ,,	64	19 or 29.68 ,,
,, 40 to 60 ,,	49	18 or 36.73 ,,
,, 60 to 80 ,,	20	8 or 40 ,,
,, 80 ,,	2	1 or 50 ,,
Total	192	68 or 35.41 per cent.

Age of Males attacked.		Deaths.	Age of Females attacked.		Deaths.
Under 20 years	36	11	Under 20 years	21	11
From 20 to 40 years	33	8	From 20 to 40 years	31	11
,, 40 to 60 ,,	23	8	,, 40 to 60 ,,	26	10
,, 60 ,,	10	2	,, 60 ,,	12	7
Total	102	29	Total	90	39

From the above tables it will be seen that, although the disease attacked the series in not very unequal proportion, the deaths were much more numerous in the female sex, the percentage of deaths to attacks being in the case of males 28.43, and in females 43.3.

With regard to liability of attack; while the infirm and badly fed seemed prone to suffer, intemperance, contrary to general belief, did not appear to materially increase the liability; but, when attacked, those of intemperate habits had a much greater mortality: two of the patients, after recovery from severe choleraic diarrhœa, became intoxicated and sank during the algide stage in a few hours. Parturition occurring during cholera seemed (in the five or six cases which I attended) to produce an increased and favourable effort on nature's part to throw off the disease. One woman delivered of twins, however, sank rapidly, although, even in her case, the improved pulse and temperature gave evidence of the endeavour to rally. I need scarcely add that all the children were still-born. There did not appear any increase to miscarriage or abortions during the epidemic. The symptoms of cholera are so well known that I need not recapitulate them, but I may remark, *en passant*, that in the cases of three or four children there was very little vomiting or purging present. Severe cramps were the exception, not the rule. Most of those who died in the algide stage retained consciousness to the last; but in the majority of fatal cases occurring among children, convulsions or coma closed the scene; and, indeed, in the cases above mentioned, where little vomiting or purging was present, coma was present almost from the commencement of the attack, as if the choleraic virus acted narcotically on the system. Consecutive fever of any intensity was met with in but few cases, although two died from the resulting brain-congestion.

With regard to therapeutics in cases of true cholera, no drug seemed of much avail. Those who took medicine, and those who abstained from doing so, seemed to die with great impartiality. One man, who swallowed an ounce of carbonate of soda in mistake for sulphate of magnesia, recovered; another (a very severe case), who drank a quart of beer with brandy in it, rallied from that moment, and attributed his recovery to it. Of those drugs employed, small doses of calomel or of carbonate of soda seemed, if anything, to have a favourable effect. An endeavour to maintain the temperature of the body by means of hot bottles to the axillæ, feet, etc., with a supply of cold water to drink, seemed almost all (with one's present knowledge of the therapeutics of this disease) that one could do in the way of remedial measures. I think, considering the passive condition of the system, as evidenced by the suppression of urine, the dry skin, and intolerance of the alimentary canal, it is not surprising that drugs have no effect. Too much stress cannot be laid upon the importance of attending to the diarrhœa by which it is often, but not always, preceded, particularly as it is believed that, during an attack of diarrhœa, the body is more susceptible of the choleraic virus. Of course the diarrhœa may be treated in the ordinary way; but I may remark that, during an epidemic of cholera, it does not yield readily to treatment; and there would appear to be a much greater tendency to disturbed action on the part of the alimentary canal (evidenced by more or less pain), even where actual diarrhœa is not present. Many confirmed smokers were compelled to temporarily abandon the habit, owing to the resulting bowel-disturbance. As little alteration as possible should be made in one's habits, particularly as to diet. The quantity of vegetables and of stimulants taken might perhaps be slightly diminished; but even this would appear to require great care.

It would have been ludicrous, were not the subject such a serious one, to notice the precautions and nostrums so loudly vaunted at this time. Some invariably carried stimulants with them, to which they applied themselves with such industry that the amount of drunkenness was materially increased. Others looked upon spirits of camphor as an infallible means of safety. Among the workpeople, colliers, etc., in particular, whole families were dosed with this remedy, with the effect upon some of the infant children, as may be imagined, of producing symptoms of poisoning. To such an extent did the camphor mania run, that almost any price was given for the drug in the district. But it would be more easy to ridicule such treatment, were the medical profession able to do more towards the reducing of this disease.

With regard to sanitary matters in infected districts, all proper precautions should be taken when cholera is anticipated; but, during its presence, measures of this sort must be very cautiously carried out, lest fresh food be supplied for its propagation. All the ejecta should be carefully and speedily removed, and covered with earth or lime. The water-supply of the district should be particularly looked to. In the Llanelly district, the disease spread rapidly along the course of contaminated water-supplies. Yet so slow are the public to sufficiently estimate the importance of this source of danger, that, in the case referred to, the only means found successful in preventing the use of contaminated water was the emptying loads of lime into the streams.

Measures should also be taken for separating those attacked from those

free from the disease; and inspectors should be appointed to make daily visits to their respective districts, and report all cases of diarrhœa, etc. Supplies of medicine for the treatment of diarrhœa should be lodged with them, and made readily available to all applicants; and extra allowances in the shape of beef-tea, etc., should be given to those of the poorer classes who might be attacked with diarrhœa.

One important feature deserving of attention was that, during the prevalence of cholera, the cases requiring medical attendance for other forms of disease were very exceptional; it seemed as if this dire epidemic had swallowed up all the minor ills.

ON ANÆSTHETICS.*

By THOMAS JONES, M.D.,

Assistant-Physician to Victoria Hospital for Sick Children; formerly (for eleven years) Resident Medical Officer and Administrator of Anæsthetics to St. George's Hospital.

2. *Ether* was first employed by me as an anæsthetic at St. George's Hospital in the year 1861. Although it was administered on a large conical sponge (a very objectionable mode), I succeeded in almost all cases in producing the necessary degree of narcotism. It was given for several capital operations, and in cases requiring careful dissection, such as herniæ, with complete success. In the following year I discontinued its use, however, in the operating theatre, on account of the inconvenience occasioned to those present by the smell of the vapour, and from the time it took in some cases to get the patient under its influence, which was a very serious objection when several had to be operated upon. I, however, continued its use in cases which were considered unsafe for chloroform, such as those in a state of collapse from severe accidents. The stimulating effects of ether in such cases were attended with remarkably good results: they were generally in a better state after than before the operation.

In a paper read on this subject before St. George's Hospital Medical Society in 1863, I observed that the result of my experience to that time tended to show (1) that ether caused during the first stage more cerebral excitement than chloroform; (2) that it produced a greater degree of anæsthesia before the consciousness was completely abolished; (3) that during the stage of very complete unconsciousness, the reflex function of the cerebro-spinal centres was not abolished to the same degree as under chloroform; (4) that it stimulates instead of depressing the heart.

My subsequent experience confirms, in the main, these conclusions. Ether, unlike chloroform, would seem to exert no paralysing influence on the heart, carried to the extent necessary for the performance of operations. In the paper referred to, I related two cases in which ether was administered with good effect after chloroform had been tried and found to produce dangerous symptoms.

Dr. Snow states (*On Anæsthetics*, p. 362) that "ether is altogether incapable of causing sudden death by paralysis of the heart, which has caused the accidents which have happened during the administration of chloroform. I have not been able to kill an animal in that manner with ether even when I have made it boil, and administered the vapour almost pure. The heart has continued to beat after the natural breathing has ceased, even when the vapour has been exhibited without air. . . . I hold it, therefore, to be almost impossible that a death from this agent can occur in the hands of a medical man who is applying it with ordinary intelligence and attention". When this passage is taken in connection with the fact that Dr. Snow records in the same work no fewer than fifty fatal cases from chloroform, it is very wonderful that he should still persevere in the use of chloroform, especially when we find he observes (*op. cit.*) that he "usually rendered adult patients insensible in four or five minutes, and children in two or three", and that he "never failed to make the patient insensible in any one instance in which ether was administered". Hence, ether being in his hands perfectly successful and manageable, I cannot help agreeing with the opinion advanced in the leading article in this JOURNAL of the 16th instant, that he, like every one else, was considerably influenced in the choice of the anæsthetic which he used by the energetic and uncompromising advocacy of the discoverer of chloroform.

I think the disadvantages of ether over chloroform are really very few and trivial. I find that some prefer the flavour of ether-vapour to that of chloroform. Its pungency, when inhaled, only lasts a few seconds, and not at all in some cases, when properly administered. As to the question of cost, I also think this objection has been exaggerated. Methylated washed ether (which answers all purposes quite as well) can be bought for half-a-crown a pound. If the anæsthetic be given rapidly and unsparingly at the commencement, I do not think the dose for each patient should cost more than sixpence—so that, in fact, the cost is not much greater than that of chloroform.

With reference to the mode of administration, I think the plan recommended by our American friends is as good as any—namely, a thick towel, in half-dozen folds, arranged in the form of a cone. Care should be taken that its base should be large enough to take in the chin and the nose—its shape such as to fit the face accurately. A small sponge should be placed inside, which should be squeezed out of warm water after each case, to prevent its becoming so cold as to interfere with the evaporation of the ether. Mr. Warrington Haward's apparatus, described in this JOURNAL on the 2nd inst., is also a convenient method of administering it, and answers very well. But I find that the oiled silk, which forms its external layer, is an objection, because it interferes with the conduction of heat from the hand into the interior of the cone. In a cone covered with the oiled silk, the interior becomes so reduced in temperature that the evaporation of the ether is considerably checked.

Thinking that an inhaler would effect, amongst other advantages, considerable saving of the ether, I have had for some time my attention directed to this point, but have not as yet succeeded in suggesting any improvement upon the one adopted by Dr. Snow.

3. *The Combination of Chloroform and Ether.*—My experience, in the main, confirms the opinion held by Dr. Snow, that the combination of these two liquids combines the undesirable qualities of both. When the two agents are combined in their liquid state, one never knows what one is about. I should not have considered it necessary to allude to this point, had I not seen a communication from Dr. Edis in the JOURNAL of November 16th, still advocating this method—one which, I thought, had been given up some time since. I have, however, been in the habit for some years past of administering the vapours of these two agents to the same patient with considerable advantage. I begin with chloroform; but as soon as the pulse shows signs of failure, I commence the administration of ether, and continue its use until the pulse is restored, or as long as the patient remains quiet enough for the performance of the operation. In this manner, I believe, the cases of avoidable deaths from cardiac failure resulting from chloroform might be averted.

4. *Nitrous Oxide.*—When I consider the safety, ready applicability, and the pleasantness of this agent, together with the success attending it, I confess I am surprised that surgeons do not adopt it more generally than they do for the minor operations requiring but few minutes in their performance. I have succeeded in keeping the patients under its influence for eight or ten minutes by its reapplication from time to time. I think that for some cases of operations about the eye its use would be invaluable, seeing that it produces no sickness.

* Continued from page 577 of last number.

NOTE ON THE ADMINISTRATION OF ETHER.

By JOHN COUPER, F.R.C.S.,

Surgeon to and co-Lecturer on Surgery at the London Hospital; Senior Assistant-Surgeon to the Royal London Ophthalmic Hospital, Moorfields.

SOME years since, ether was repeatedly administered at the London Hospital, with unsatisfactory results. Although it was given in a full dose, complete narcotism was not speedily obtained, and was preceded by excitement and violent agitation of the limbs. The ether then used had not been specially prepared, and in all probability was not anhydrous. Certainly, its effects on these occasions were entirely different from those with which I have since become familiar, when pure anhydrous ether has been employed.

Having repeatedly seen the administration of ether by Dr. Joy Jeffries last August, I have since employed it exclusively, and propose now to state, briefly, the results of this short trial. The chief operations performed have been ovariotomy, lumbar colotomy, amputation through the knee-joint, partial resection of ankle, excision of tumour over the parotid gland, besides many eye operations.

The operations on the eye, for which an anæsthetic is required, demand, with few exceptions, narcotism as profound as can be safely produced. The reflex movements, produced by contact of instruments with the cornea, must cease before the operation begins; and, as a rule, they do not cease until a stage of narcotism, beyond that of insensibility to pain, is reached. I do not now inquire how far this need of profound narcotism explains the fact of a great chloroform mortality in ophthalmic practice. In regard to this point, it should be borne in mind that the number of cases in an eye-hospital requiring an anæsthetic is immensely greater than in a general hospital of equal size, and that a large apparent mortality in the former thus becomes a small death-rate.

At Moorfields, from eight to twelve patients are anæsthetised during the few hours of each day devoted to operations : thus the time consumed by each administration is of some, although secondary, importance. A slow anæsthetic is hardly admissible. Ether has been used there since August in a large number of cases. No difficulty has been found in speedily producing perfect muscular quiescence. The time necessary for complete narcotism is about the same as with chloroform—certainly not longer.

A marked and invariable feature has been the absence of all disposition to syncope. There have been no sudden failures of pulse, with pallid lips, even under the most lavish use of the anæsthetic ; on the contrary, complete muscular relaxation was generally associated with a flushed face and full pulse. A folded towel enclosing a piece of sponge has been the only inhaler used. Only when this is soaked with anhydrous ether is a vapour of adequate concentration obtained. The presence of even small percentages of water reduces the volatility of ether very considerably, and prevents a satisfactory result.

Without disparagement to less simple devices for administering a vapour of known strength, it may be asserted that the folded towel possesses great practical convenience, and has yet to be proved dangerous. By no other method can a vapour of adequate concentration be so readily obtained. Not only is there no danger in this lavish use of the anæsthetic, but narcotism is produced more quickly, and with less cerebral excitement, than is apt to result from too weak a dose at the outset. If the latter fault be committed, the patient becomes noisy and violent, and the vessels of his face and head become turgid—a condition unfavourable to many operations. On the other hand, by an adequate dose, narcotism, without excitement, is produced, and can then be easily maintained for an indefinite period by a less concentrated vapour.

The sole objection to this mode of administration is the overpowering sense of impending suffocation, apt to be produced by the first contact of the vapour with the air-passages. While my experience accords with that of Dr. Joy Jeffries as to the necessity for a strong dose at the outset, I do not believe with him that a forcible administration, in spite of the patient's struggles, is a desirable or necessary practice. By a little management in the case of adults, it may generally be dispensed with. They often take it without struggling, when forewarned that a few deep inhalations resolutely taken dispel the sense of choking. When their voluntary efforts fail to overcome the spasm of glottis provoked by the vapour, it is best to relieve them by momentarily raising the towel from the face, and allowing one full inspiration of unmixed air before panic takes possession of them. By this manœuvre the spasm instantly disappears, and does not return when a concentrated vapour is again inhaled. It should be remembered that the struggling occurs before the ether has had time to affect the brain, and the cause of it—the irritation of the air-passages—disappears at the very commencement of anæsthesia, after one or two full inhalations of vapour. Occasionally, no doubt, an adult is entirely wanting in self-command, and fails to co-operate in the administration. A little force may then be needed, but should not be prolonged more than a few seconds. After a few inhalations of strong vapour, a breath or two of unmixed air should be given, and the inhalation then resumed, probably without resistance from the patient.

Children must be narcotised forcibly, but their struggles are neither so violent nor so distressing to bystanders as those of adults. Ether does not blister even after prolonged contact with the skin, and in this respect is altogether different from chloroform and methylene.

The recovery from a properly conducted etherisation is usually characterised by a quiet, rather profound, slumber. Even patients known to be intemperate alcohol-drinkers do not recover more noisily than from chloroform.

After severe operations under chloroform, most surgeons have had to lament instances of death from obstinate chloroform vomiting, in which the shock of the operation is prolonged and intensified by incessant nausea, and the stomach continues, day after day, to reject food, until the patient dies exhausted. Mr. Curling records an instance after lumbar colotomy. A similar case occurred in my hands : they are by no means very rare. Operations implicating the pelvic and abdominal viscera appear to be especially liable to this accident ; and it would not be inopportune were obstetricians now to give the result of their experience on this point, in cases demanding deeper and more prolonged chloroform narcotism than is usual in normal labour.

More than a few months' experience is of course required to determine whether ether ever exerts this formidable effect on the stomach. Thus far, no such instance of it has occurred in my hands, or has come to my knowledge. In a recent case of ovariotomy, my house-surgeon, Mr. Sargant, maintained etherisation for nearly three-quarters of an hour without inducing retching. The intestines never even came into view during the operation : there was no subsequent vomiting. In a tedious operation of lumbar colotomy performed by me last month, the narcotism lasted more than half-an-hour. The patient vomited once immediately on leaving the theatre, but had no subsequent nausea. On the following day he was able to retain liquid food in his stomach, and has since made a good recovery from the operation.

Thus far my impression is, that ether is less dangerous to life than chloroform, on account of its inaptitude to produce cardiac syncope ; that its administration is rarely if ever followed by obstinate and dangerous nausea ; that it narcotises as quickly and as certainly as chloroform, and with as complete muscular quiescence ; and that recovery from it is generally quiet and satisfactory.

THE MORBID EFFECTS OF ALCOHOL.

By W. H. DICKINSON, M.D. Cantab., F.R.C.P.,
Senior Assistant-Physician and Lecturer on Pathology, St. George's Hospital ; Physician to the Hospital for Sick Children ; Corresponding Member of the Academy of Medicine, New York ; etc.

As the leader in last week's JOURNAL, upon the morbid effects of alcohol, is pointedly directed against myself, I claim the right of reply. The writer, who apparently did not hear the paper, has commented in a manner which, even on the showing of the abstract, appears to me to be unjustifiable. He has misrepresented the purport of the argument and disregarded the stated limits of the inquiry. In comparing traders in liquor with persons otherwise employed and not ostensibly drunken, I was careful to state that the inference that those who got liquor in the way of business for nothing took more of it than those who had to buy it, related to the general average. Among the 149 traders in drink may have been a teetotaller ; some of the contrasted class may have been intemperate in spite of the care used to exclude such. But it can scarcely be doubted that the average of imbibition was greater on the side of gratuitous drink, and sufficiently greater to give preponderance in the class where it was current to the diseases which drink engenders. The writer of the article admits the notorious inebriety of traders in liquor, but "demurs to the assumption that the morbid appearances found in the dead bodies of all hospital patients who have not been engaged in the liquor-traffic are certainly not the result of alcoholism"; and describes as fallacious "the assumption that, excepting known drunkards, temperance may be taken for granted among the entire population." He is welcome to demur to such fallacies ; they do not belong to me. As to persons not dealing with liquor or ostensibly drunken, my assumption is not that their diseases are invariably unconnected with drink, but that they are less often connected with drink than are the diseases of those who do so trade and are thus admittedly inebriate. The question is not between drink and no drink, or even between drunkenness and no drunkenness, but between more and less. All I assume is, that an average poor man who drinks at others' cost will take more than another who drinks at his own. If the writer question this, and deny that there is more intemperance on one side than the other, let me ask why it is that with the drink-traders cirrhosis of the liver is more than twice as frequent as with the contrasted class. If there be no excess of drink on one side, the fundamental proposition of my paper falls to the ground. If the excess exist where I have placed it, and be such as to tell upon health, then not my conclusions, but his criticisms, must be described as "misleading and mischievous."

The article then proceeds to inform us that "an ordinary *post mortem* record as to the appearance of the kidney affords no indication of the actual amount of disease. A kidney, which on a superficial examination might pass for healthy, may reveal to a skilled microscopic observer extensive and advanced degeneration." Are we to infer from this that it is of no use looking at the kidney except through a microscope? Bright made a few useful observations with the naked eye, an instrument, indeed, which is by no means without value in the detection of "extensive and advanced" renal changes. It needs no microscope to determine whether the kidney be twice or half its proper weight, or whether the surface be granular or the section that of a parsnip. The unassisted but practised eye, which though it does not scrutinise disjointed bricks comprehends the building, is a surer test for potential renal disease than the fragmentary microscopic examination which only is habitually practicable. And because we have not evidence of both kinds, shall we reject the more important?

The writer is kind enough to suggest total abstainers as a standard of comparison—an idea sufficiently obvious to have occurred to myself. The number is to be five hundred. Will he place me under still further obligation by producing them? a process which he himself admits

to be difficult. He must sternly exclude all broken drunkards from the immaculate array. An inquiry on this basis, however, though commended as likely to be instructive to myself, can convey no information to the writer of the article, since his far reaching knowledge enables him to forecast the results. Liberal with what has cost him nothing, he gives them to us. He has "no hesitation in declaring that they would show such a large preponderance of albuminuria amongst the tipplers, as would lead to the irresistible conclusion that alcohol in excess is a most powerful agent in the production of kidney-disease". He is among the prophets. Happy he to whom the results of an investigation are so manifest before it is begun that he has no hesitation in declaring them !—an economy of labour desirable in busy times.

The writer objects to mechanical principles. In considering the organs in relation to stomach-absorption, I had to take them in some order. I might have placed them alphabetically, or according to their distance from the centre of the earth, but it seemed more natural to refer to them according to their position in the path of the influence in question. I argue nothing from this. It is sufficiently obvious that, if any alcohol be altered in the liver, it cannot get unaltered to the lung, and that what escapes with the breath does not afterwards enter the general circulation. These simple considerations, mechanical though they be, are enough to guide arrangement, and have been thus used by Trousseau. My statements, however, were not based upon any considerations whatever beyond simple inspection. I went by what was seen, not by what might have been expected. If the liver displayed a more unequal distribution of disease than the kidney, the matter was one not of theory but of observation. I necessarily excluded all considerations connected with physiology as apart from the design and basis of the inquiry. I limited my business to the exposures of the *post mortem* knife—appearances rather than theories, results rather than modes of action ; not that I ignored the uses of physiological inquiry, but because I kept to the results of dissection, which it was the sole object of my paper to display. "The pathologist", says the article, "who ignores physiological considerations.....is not likely to throw much light upon renal pathology." I will rather say, the pathologist who in matters of simple observation does not ignore everything else, is likely to allow what he sees to be warped by what he expects, and to fall into grievous error.

I will refer to one other criticism—not that it needs an answer, but in evidence of the animus of the article. In the paper, the portal and hepatic veins, the vena cava, and the pulmonary artery, were not considered, for the obvious reason that they were not examined. The paper was avowedly based upon *post mortem* examinations made without special object, and, it is scarcely necessary to add, without habitual examination of these structures ; yet the eager critic affects to infer that, because no disease of these vessels was described, therefore none existed ; and proceeds to argue accordingly against what he calls my theory. How often, let me ask him, has he seen, in a *post mortem* examination made without special object, the vena cava, the veins of the liver, and the arteries of the lung, opened up? Considering the basis of the paper, the criticism is inappropriate, and, like the general style of the article, captious rather than judicial. The whole article, indeed, savours of the bar rather than the bench, and speaks with the impassioned voice of a combatant, rather than in the balanced tones which should proceed from the serene sky of editorial wisdom.

ON SUBCUTANEOUS ORTHOPÆDY *VERSUS* KNEE EXCISION FOR ANKYLOSIS.

By W. J. LITTLE, M.D.,
Formerly Physician to the London Hospital, etc.

In the JOURNAL of October 26th last, Mr. James Adams, surgeon to the London Hospital, has done me the honour of quoting my opinion, expressed in an article on Orthopædic Surgery in *Holmes's System of Surgery*, respecting the value of subcutaneous osteotomy applied to the relief of rectangular knee ankylosis, in the manner since described by my son, L. S. Little, in the *Medico-Chirurgical Transactions*, vol. liv, 1871, compared with resection at the knee in the manner in which it has been, in my opinion, too frequently practised.

Mr. J. Adams's neat and successful operation has two great drawbacks—viz., the subsequent occurrence of several weeks' suppuration, and the loss of two inches in length of the limb, owing to removal of a wedge-shaped piece of bone. Subcutaneous osteotomy at the knee, as practised by my son in the only recorded case of the kind, was, on the contrary, followed by no suppuration and by no similar shortening of the limb, inasmuch as no removal of bone takes place in subcutaneous osteotomy.

Notwithstanding my personal regard for Mr. Adams, and his having been one of my pupils, I cannot avoid characterising the removal of a wedge-shaped piece of bone, and consequent resort to a considerable open wound, as a retrograde step in surgery—a proceeding stigmatised years ago by me, when performed on less defensible grounds by Meyer, for the relief of severe knock-knee.

It is a practice opposed to the "conservative" surgery of the present day, one of the greatest triumphs of which has been the substitution of subcutaneous operations whenever practicable, without after-suppuration, for operation with a large wound, ablation of bone, and almost certain after-suppuration. Mr. J. Adams has in this case shown himself a good operator, but apparently wanting in confidence as a pathologist in one of the restorative processes of the economy. I entertain no doubt that, when selecting the method of partial resection rather than adopting subcutaneous osteotomy, he was apprehensive that by the latter method he might have greater difficulty in keeping the severed bones in suitable apposition for the purposes of future use of the limb. But experience of ankylosed joints shows that in the reparative processes which ensue when periosteal and bony structures are involved, an abundance of plastic materials, prone to bony consolidation, is thrown out, owing to which the limb, whether it be straightened without wound, with the help of anæsthesia and manual gentle violence, or whether subcutaneous osteotomy be resorted to, a continuous stable, more or less straight, more or less firmly united and normally shaped, femur and tibia is the result.

CLINICAL MEMORANDA.

THE TREATMENT OF STRICTURE.

In the JOURNAL of November 9th, Mr. Furneaux Jordan describes a new method of treating retention of urine and impassable stricture, *apropos* of which I would make a few remarks. I have no intention of claiming a priority for any one else in the operation described, nor yet of disparaging the new method, which, if it can be performed as easily and safely as the description leads one to imagine, deserves the name of "improved" in addition to new. My reason for writing is simply to put in a claim for trial for an old method, before any operative proceedings are thought of, whether bistoury or trocar be the instrument used. A glance at the diagrams given with Mr. Jordan's lecture will show that the difficulty in passing a catheter from before backwards, through such a stricture as is there figured, arises from the certainty of the end of the instrument catching in the pouch which surrounds the stricture ; or, to use Mr. Jordan's apt simile, its getting under, over, or at the sides of—in fact, outside—the narrow end of the funnel. Now the prevention of this is easily effected by what is generally known as "Hutton's railway catheter", or, rather, by a slight modification thereof. That commonly used consists of a No. 2 flexible catheter, cut off at the eye, and a piece of catgut instead of stylet, which, on the end of the catheter reaching the stricture, is pushed on into the bladder, and then serves as a railway for the catheter to run on. If, instead of a No. 2, we take a No. 10, cut smoothly across at the eye, and pass it down to the stricture, it is evident that its end will go into and fill up the circular pouch, and the centre of the stricture will project into the catheter somewhat like the os uteri into a vagina speculum. The next thing to be done is to inject a small quantity of oil into this tunnel, and then proceed to use the smaller instrument determined on, which may be a piece of catgut, a filiform bougie, or a No. 1 catheter. By the above method I lately succeeded in a case when I had almost given up hopes ; and I believe it may be of use in some other difficult cases, so I think it right to ask for it a trial.

P. J. MOLONY, B.A., M.B., etc.
Waterbeach, Cambridge, November 9th, 1872.

SYPHILITIC INFECTION BY A LOZENGE.

When attending the clinique of M. Hardy at the Hôpital St. Louis, in Paris, I saw a case of syphilis of a similar character to that mentioned by Dr. Drysdale, of infection from smoking a cigar. The subject was a child of about five years of age, who was brought to the hospital with a cutaneous eruption of an unmistakable syphilitic character, combined with other constitutional and local signs, the exact nature of which I now forget. M. Hardy was at first unable to trace the infective cause. He at length discovered that the child's brother was the subject of constitutional syphilis, and that some time previously he had, before the young patient presented any symptoms, given his sister a lozenge to suck, which had been partially dissolved in his mouth, and had thus infected the child. I remember nothing more of the con-

dition and history of the patient ; but the scanty details still perhaps remain sufficiently interesting and instructive. The main feature of the case, infection by means of the lozenge, was made perfectly clear at the time by M. Hardy.

JOHN MURRAY, M.D.,
Assistant-Physician to the Middlesex Hospital and to the Hospital for Sick Children.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

KING'S COLLEGE HOSPITAL.

CANCER OF UTERUS, VAGINA, AND BLADDER, WITH CYSTS IN KIDNEY.

(Under the care of Dr. PLAYFAIR.)

FOR the notes of this case we are indebted to Mr. Lawrence W. Spencer, Resident Accoucheur.

Mrs. B., a laundress, age 53, was admitted into the hospital on October last, complaining of general debility. Her mother died of phthisis at the climacteric period, and all her brothers and sisters died while quite young. She had been married twice ; first at the age of 23, her husband dying five years afterwards. By this marriage she had twins on two occasions, and one miscarriage. She married again six years afterwards, and had three more children. Of the seven children, only two are alive, one of whom is phthisical. Several of the children died of consumption. The catamenia appeared at the age of 17, and continued regular till their cessation at the age of 48 ; and she had never had menorrhagia. Eighteen months before admission, she noticed a reddish and offensive discharge from the vagina, which rapidly increased, and became yellowish-white in colour. Since the commencement of this discharge she had become weaker and thinner, losing colour and appetite ; having little sleep, and occasional pain in the hypogastrium. She had vomited very much, and now nothing would remain in her stomach. She had a well-marked cachexia. Her pulse was small and rapid on admission, being 120 ; her temperature was 99 deg. On October 12th, she was continually vomiting, and could keep nothing on her stomach. She had not passed one ounce of urine for two days, and on the introduction of a catheter nothing was drawn away. Her bowels were constipated. She was ordered three minims of dilute hydrocyanic acid, and 40 grains of bicarbonate of soda, in infusion of calumba, three times daily. On the 15th, she had still been vomiting everything she took, and the tongue was covered with a yellowish-brown fur. On passing a catheter, only one drachm of urine was drawn off, slightly albuminous. Her bowels were constipated ; the discharge from the vagina was most offensive ; she was hysterical. She was ordered to have an enema containing two minims of croton oil, a drachm each of castor oil and oil of turpentine, and an ounce of gruel. This opened the bowels once, after which a soap-enema was injected, and the bowels were opened again more freely. Brandy and beef-tea were then injected, as nothing remained in her stomach. On October 16th, it was found that she had not passed three ounces of urine for five days. There had been no coma, no convulsions, and no dropsy. She then passed 51 ounces of urine, the vomiting ceased, and she was able to keep a little food down. The bowels were opened several times. She became very drowsy, with twitching of the fingers occasionally. On October 17th, her pulse was small and feeble, but 120 ; temperature, 97°; and the general surface of the body cold ; the tongue was coated as before, although the bowels were opened four times. During the night she had passed 14 ounces of urine. On October 18th, she had taken a pint and a half of milk and two and a half pints of beef-tea. The bowels were opened freely, and 30 ounces of urine were passed. She had no sickness. The pulse was still 120, and small. She continued better up to the 28th October, taking her food fairly, and the bowels opened every day, when a recurrence of the sickness and vomiting took place ; her tongue became dry and much furred ; her bowels became constipated ; she passed only eight ounces of urine ; had great thirst ; and had hæmorrhage from the vagina. She vomited four times during the day and five times during the night ; and on the 29th October she passed only seven ounces of urine, and the discharge from the vagina was, if possible, still more offensive and increased. She was ordered again to have brandy and beef-tea enemata. She passed a most restless night, and vomited eight times. On the 30th, her pulse was 84, and more feeble than before. She passed eight ounces of urine. She was fed with beef-tea enemata, with brandy, but gradually sank and died at 12.15 P.M. on the 31st October.

At the *post mortem* examination, the anterior wall of the vagina, the posterior wall of the bladder, and the fundus uteri, were found infiltrated completely with cancerous deposit. The ureters were much dilated, the pelves of the kidneys much enlarged, as well as the organs themselves, and the right one contained one or two cysts.

ST. BARTHOLOMEW'S HOSPITAL.

OPERATIONS, NOVEMBER 23RD.

Polypoid Fungous Tumour of Scalp.—Mr. WILLETT removed this tumour, which was situated near the right occipito-temporal region, from a female patient, who stated that it had only been growing for the last seven weeks. It was now of the size of a small orange, and ulcerated on part of its surface, bleeding freely whenever it was touched or dressed. The patient was three weeks in the hospital, but during that period it had not grown much. After removal, it was found to be a gelatino-fibroid tumour, with striations from the pedicle and large loculi, and very freely supplied with vessels from the scalp.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

ACUTE PERITONITIS IN A CHILD SEVEN YEARS OLD : REMARKABLE TOLERANCE OF OPIUM : RECOVERY.

(Under the care of Dr. CAYLEY.)

EMMA MURPHY, aged 7, was admitted on January 20, under the care of Dr. Cayley. It was stated that the child had always been delicate, and was liable to attacks of abdominal pain, which were attributed to worms. Two years ago, she had had rheumatic fever. She had been for a long time the subject of a chronic vaginal discharge. Seven days before her admission, one of her usual attacks of abdominal pain came on. She was taken to a chemist, who gave her a "worm-powder," which acted violently on the bowels. After this the symptoms became much aggravated. On admission, she was seen to be a sickly-looking child, and suffering acutely from abdominal pain. The abdomen was everywhere extremely tender, but not much swollen. She lay on her back with her legs drawn up ; her breathing was almost entirely thoracic, and very shallow ; the bowels were loose, the motions light yellow and fluid. The urine was turbid with lithates, not albuminous. The tongue was coated and rather dry. The heart- and breath-sounds were normal. Pulse, 160; respirations, 72; temperature, 101.6 deg. She was ordered half a grain of opium with five grains of aromatic confection as a powder, to be taken every four hours. Mustard and linseed poultices to the belly ; milk and beef-tea diet, and four ounces of wine daily.

January 21st. Pulse, 180 ; temperature, 102.8 deg. There was no abatement of the pain or of the tenderness. She slept a little in the night. The pupils were rather large. She had had one loose motion. She complained much of thirst, but refused food. She had had no vomiting. The wine was increased to six ounces, and the powders were ordered to be given every three hours.

January 22nd. Pulse, 120 ; respirations, 80 ; temperature, 101.2 deg. The pain and tenderness continued unabated. There was much dyspnœa from the pain caused by the respiratory movements. She had vomited once; the bowels had not been moved. The tongue was thickly coated and dry. She slept a little in the night. The pupils were normal. The treatment was continued.

January 23rd. The pain and tenderness were rather less ; otherwise her condition was unaltered. The treatment was continued.

January 24th. Pulse, 126 ; respirations, 80 ; temperature, 100 deg. She slept well in the night. The pupils were large. The pain and tenderness were much abated. The bowels had been open once. She took her food better. The tongue continued dry and coated. The powders were ordered to be taken every four hours.

January 25th. Pulse, 126 ; temperature, 98.8 deg. She slept well ; the pain and tenderness were much diminished. The tongue was cleaner and moister. The bowels had been opened once. She was altogether much better. The powder was ordered to be taken three times daily.

January 27th. She had continued steadily to improve. The pain and tenderness had now quite disappeared. The powders were ordered to be discontinued and a quinine mixture to be substituted. The wine was diminished to three ounces daily.

From this time the child continued to convalesce, though somewhat slowly. She had become much emaciated during her attack. On January 20th, she took three grains of solid opium ; on the 21st, 22nd, and 23rd, four grains each day ; and on the 24th three grains, making eighteen grains in five days, without any manifestation of the usual physiological effects.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 30TH, 1872.

MR. STANSFELD ON THE PUBLIC HEALTH ACT.

IN pursuance of the resolutions passed by the Executive Council of the South-Eastern Branch, published in a recent issue, a deputation from that body attended at Gwydyr House last week to lay before the President of the Local Government Board a statement based upon those resolutions. Mr. Stansfeld took the opportunity of giving a very full exposition of his policy in respect to the Bill. His reply to the deputation appeared at great length in the daily papers, and has been the subject of much comment. It will need less criticism here, in that our readers are already well informed of the views discussed on both sides; and to debate them anew in any complete way would involve tedious repetitions of what has already been said. Some points of new interest may, however, be the subject of remark.

Mr. Stansfeld gave explanations of the appointments which have excited so much hostile comment. He said that the gentlemen appointed have been set to act as subinspectors of workhouses, and not as sanitary inspectors of the Board; that he has not yet made the medical appointments to inspectorships under the Public Health Act, which will obviously be necessary to an extent yet undetermined; and that he has asked Mr. Simon to prepare and lay before him a scheme for that purpose, which will have his best consideration. We had already intimated that this was pretty much what might be expected. The explanation seems, however, to us to be unsatisfactory in this respect. Mr. Stansfeld has set the old inspectors of the Poor-law Board to negotiate with the local authorities as to the extent and character of areas and the first steps to be taken to bring the Public Health Act into action. He has done this because they are experienced as negotiators. The art of negotiation is, however, not so difficult as is thus assumed; nor is it an accomplishment of which these particular inspectors possess a monopoly. The former inspectors of the Medical Department of the Privy Council are also, on their side, not deficient in experience or in success in dealing with boards of guardians and local authorities generally. This has been proved on repeated occasions. We have before us, and Mr. Stansfeld has before him, numerous printed documents, some of them published and some unpublished departmental reports, which afford conspicuous examples of great success in such negotiations in respect to sanitary works. In fact, the annual reports of the Medical Officer of the Privy Council are filled with such examples. These inspectors have the further advantage of a knowledge of the subject matter of the Act, and, in many cases, of an intimate acquaintance with the sanitary characters of the districts concerned. Of all this, and indeed of the principles of sanitary administration, the Poor-law inspectors, whom Mr. Stansfeld has preferred to employ, are profoundly ignorant. Moreover, they are widely at variance one with the other. It is perfectly idle to pretend that men such as Dr. Seaton, Dr. Buchanan, Mr. Radcliffe, Dr. Thorne Thorne, and others, would not have been as fully equal to negotiate with the various boards. Properly instructed by Mr. Simon in the views which Mr. Stansfeld might have wished to convey, they would have acted with coherence, with intelligence, and with precision. We wish to speak with all due respect of the Poor-law inspectors. We have watched their course in the matter. Some of them have shown a remarkable aptitude for acquiring and communicating principles; others have totally failed in the work. Mr. Henley is a notable example of success; Mr. Doyle just as notable an example of failure. They are acting in a strange haphazard manner. One of them calls meetings of the guardians, and instructs them as to the advantages of union; another calls meetings of Poor-law officers, and advises them to adopt a policy of disunion—every man for himself. Mr. Doyle has been perfectly successful in his district in promoting a policy precisely opposed to that announced by the President and pursued by Mr. Henley. We report in another column the results of the respective actions of Mr. Henley and Mr. Doyle.

For the rest, we may say that there is reason for regret that the South-Eastern Branch placed their resolutions before Mr. Stansfeld in the form and in the manner which they adopted. Unless very clear reasons exist to the contrary, it would be usually proper that, when the whole Association has appointed an annual Committee to take action upon a given subject, in which the Branches are represented, individual Branches should think well before they so act as to supersede that Committee, or before they go to Ministers with resolutions which differ from those which the Committee of the whole Association has adopted, and which general meetings of the Association have unanimously endorsed. The Association has appointed a large State Medicine Committee, which has been charged with the duty of considering such measures as the Public Health Act, and of communicating with Ministers in regard to it. The questions of area and of the employment of Poor-law medical officers have been assiduously and repeatedly considered by the State Medicine Committee; and, for reasons which seemed to them conclusive, they have considered a watershed area impracticable as the basis of a Public Health Act, and have always urged, in preference, a county area, with modified boundaries in particular cases. That principle has been reported, accepted, and affirmed by the Association in its general meetings. Before going to Ministers on this subject, the Executive Council of the South-Eastern Branch should, we think, have conferred with the State Medicine Committee, which represents them as well as other Branches. It is probable that they would have modified their opinions on the watershed question. In any case, they would have shown a more judicious sense of what is due from a part of an organisation to a body which has been officially elected to represent the whole.

The same remark applies to their resolution concerning Poor-law medical officers. It is not the opinion of the State Medicine Committee that Poor-law medical officers should not be employed as health-officers; but that, on the contrary, they ought to be so employed and well paid for the work. What has been claimed for them is, that they should enjoy the protection afforded by being able to present their reports to a principal medical officer of a large area, who would relieve them from the most dangerous and invidious task of proceeding against individuals

who will be, in many cases, either their immediate official employers or their private patients and neighbours.

All this has been put repeatedly, in a clear form, by the State Medicine Committee. In the rather crude and erroneous form in which the resolutions were framed, Mr. Stansfeld found the materials, which he was not slow to use, for an easy victory over many of the positions assumed by the deputation. In these respects, then, the incidents of the deputation afforded, we are bound to say, in our opinion, some cause for regret. On the other hand, it has produced, on the whole, a beneficial effect. It has awakened public attention to the policy which ought to be pursued; it led to articles more or less satisfactory; and to a correspondence, which may probably not be useless, in many of the papers. An article of the *Times*, which was unsatisfactory in some respects, yet affirmed strongly the principle of medical superintendence of the working of the Act; the *Daily News*, while concurring with all the other daily papers in rejecting the impracticable suggestion of watershed areas, accepted other of the more important recommendations of the Association; and the *Pall Mall Gazette* cleared away much of the confusion with which the published reports surrounded the question, and emphatically affirmed the propositions of the Joint State Medicine Committee of the British Medical and Social Science Associations. On the whole, the Executive Council of the South-Eastern Branch may consider that they have done more good than harm.

HINTS FOR STUDENTS OF CHOLERA.

We publish in our present number a communication from Mr. Brigstocke on an outbreak of cholera amongst the mining population of Llanelly in 1866. The paper possesses some interest, especially at this moment; but a perusal of it suggests that it might have been made more instructive if some details, which are wanting, had been given; and it may be useful to point out some of these.

The author says that the disease spread rapidly along the course of contaminated water-supplies. He also states that, "although it displayed a marked preference for the filthiest localities, yet, as if by exception to prove the rule, one or two of apparently the most healthy parts of the district suffered severely." Now, a diligent inquiry might probably have thrown some light upon these apparently exceptional cases. It might have shown that, healthy as the locality appeared to be, the water-supply was contaminated; and thus a complete explanation of these seemingly exceptional cases would have been given. The way to remove what seems to a careless observer to be the mystery of cholera-outbreaks, is to make a diligent search for all the known means by which the specific poison may be introduced into the system. Amongst these, contaminated water is one of the most common and most influential, though by no means the sole agent. We commend to the careful study of present and future observers of cholera epidemics an article on the Origin and Distribution of Cholera in the July number of our able contemporary the *British and Foreign Medico-Chirurgical Review*. It will be found that the subject is not quite so enveloped in mystery as our correspondent suggests. In order to prevent panic and a resort to such senseless measures as swallowing camphor during an epidemic, it is our duty to learn for ourselves, and then to impart to others the ascertained facts regarding the spread of cholera.

Mr. Brigstocke directs attention to the fact that the mortality was greater amongst females than males in his practice, in the proportion of 43.3 to 28.4. This difference appears to us to be explained by the fact that the age of the majority of males was more favourable for recovery than that of the females. It will be seen, on reference to Table 1, that the largest proportion of deaths occurred between the ages of 5 and 20. The second table shows that, while there were thirty-six males under the age of 20, there were but twenty-one females under that age. That table is incomplete in not showing what proportion of each sex were children under five years of age. The mortality is always greatest at the two extremes of age; and, if there was not a great preponderance of males under five years of age, the higher rate of mortality amongst the females in Mr. Brigstoke's practice is completely explained by the difference in the ages of the two sexes.

With regard to the statement that, "when little vomiting or purging was present, coma came on almost at the commencement, as if the cholera-virus acted narcotically on the system," we would suggest that the almost complete arrest of the circulation through the lungs, which, there is good reason to believe, is the essential cause of extreme cholera-collapse, explains, through the necessary suspension of the respiratory changes, the stupor which occurs in these rapidly fatal cases. It is only indirectly that the cholera-virus has a narcotic influence.

The assertion that "of course diarrhœa may be treated in the ordinary way," is too vague to be useful or even intelligible. It seems to have been thought that small doses of calomel may have had a favourable effect; and a supply of cold water to drink is spoken of as one of the few resources of our art. If the natural process of cure consists in the expulsion of morbid secretions, it is possible that calomel and a plentiful supply of cold water may assist that process, notwithstanding "the passive condition of the system and the intolerance of the alimentary canal."

We wish to afford every facility for placing on record observations relating to the causation, progress, and treatment of cholera; but we desire also to aid in introducing exactness and fulness into such observations; and for this purpose it is necessary that the facts thus far ascertained, and the laws which govern the extension and mortality of epidemics, should be mastered, and should be carefully borne in mind.

THE ANATOMY OF THE CEREBRO-SPINAL SYSTEM.

II.

We come now to the study of the cerebellum. According to M. Luys, the apparatus of cerebellar innervation constitutes a subsystem clearly isolated, in spite of its close connection, on the one hand, with the cerebral system properly so-called, and, on the other, with the spinal system. It is a true central apparatus, engendering and distributing the cerebellar influence by a special conductive system to an apparatus of peripheral reception. He compares this disposition to that of the circulating system. The cerebellum represents the heart as the central apparatus; the peduncles which emerge from it are the analogues of the arteries; and, finally, the capillary network of arteries can alone give an idea of the diffusion of the plexuses of grey peripheral matter, in which the terminations of the peduncular fibres are lost. The disposition of the cerebellar hemispheres recalls and reproduces that of the cerebral hemispheres. From the periphery of the cerebellum (cerebellar convolutions) start converging fibres, which terminate in a grey central nucleus (rhomboidal body of the cerebellum). From this nucleus spring three bundles of efferent fibres, constituting the superior,

middle, and inferior cerebellar peduncles. These peduncles all pass forwards and mingle with the elements of the nervous system, which appear to have exclusive relations with the motor functions. All three intercross at the median line with their congeners, and pass then into masses of nerve-cells, constituting nuclei spread out over the whole of the height of the encephalic isthmus. Finally, from these nuclei start grey fibres, which throw themselves into a special nervous substance, described for the first time by M. Luys under the name of peripheral cerebellar substance.

In this way the inferior cerebellar peduncles terminate, after decussation, in the grey masses of the olivary body (anterior and inferior olive of M. Luys). This anatomist has found in the thickness of the posterior pyramid an analogous nucleus of grey matter, which enters similarly into connection with the inferior cerebellar peduncles. This is the inferior and posterior olive. The median peduncular fibres cross each other also in the median line, and pass into the grey matter of the protuberance. Finally, the superior cerebellar peduncles, after a similar intercrossing, terminate in a grey mass, already described by Stilling as the red nucleus, and which M. Luys proposes to call superior olive, seeing its striking analogy with the grey nucleus of the bulbar olive.

From these different nuclei start grey fibrils, the ultimate termination of the peduncular fibres, which put themselves in connection with the fibres of the anterior spinal system, by the medium of the peripheral cerebellar substance. The latter extends on the neck of the bulb as far as the corpus striatum in a continuous layer, presenting here and there swellings, the most apparent of which is the *locus niger* of Soemmering. Histologically, this grey substance is constituted by a network of polygonal cells, provided with numerous prolongations. It is probably by the medium of these branching and anastomosing cells that the connections between the fibres of the cerebellar apparatus and those of the spinal apparatus are established. So far as concerns the latter, M. Luys is almost entirely in accordance with accepted opinions. It should be mentioned, however, that the posterior sensitive fibres of that apparatus are shown in his drawings as all terminating in one ganglion. From this ganglion start two orders of fibres. Those of one order connect themselves with the grey centre of the spinal marrow, ganglio-spinal fibres. These are properly the reflex motor fibres. The others take an ascending direction, cross each other at the level of the bulb, and, according to all appearances, terminate in the optic thalamus (ganglio-cerebral fibres).

As to the anterior or motor fibres, they emerge from the large asteroid cells of the grey matter of the anterior horns. Towards the bulb and the protuberance, these cells are agglomerated, and unite in masses to form the grey nuclei whence spring the fibres of origin of the cranial motor nerves, hypoglossal, facial, external oculo-motor, masticatory, etc. Finally, the cells of the anterior horns unite together, and with the nuclei of the corpus striatum, by fibres of which the *ensemble* constitutes the antero-lateral column, and, after decussation at the level of the bulb, the cerebral peduncles.

Combining the whole of these details, the following general conception is arrived at by this author. In respect to the sensitive fibres, a part of them, after having traversed the spinal ganglion, take their course directly into the large cells of the marrow. The impression in this case is not felt; the activity of the spinal cord only is called into play, and only a simple reflexion results. The other sensitive fibres, on the contrary, pass directly into the optic thalamus; there the impressions undergo a first relay; then they are radiated by the converging cerebral fibres towards the cells of the convolutions, when they become the materials of the ulterior operations of the intelligence. The will, thus awakened, enters into activity, and transmits, in its turn, its determinations along the path of the converging fibres, especially the cortico-striate fibres. The voluntary impulse thus arrives at the striated body; it is there reinforced; thence sets out again along the cerebral peduncles and the grey axis of the cord, and finally proceeds to excite the roots of the motor nerves, and to determine movement. As to the cerebellar apparatus placed at the confluence of the cerebral and spinal systems, it constitutes a sort of reservoir of nervous influence—an influence which appears to spread itself incessantly along the anterior spinal system, and to expend itself in answer to each appeal that reaches it from the superior voluntary centres. In the normal state, the distribution of the cerebellar influx in each half of the body maintains the physiological equilibrium. If this uniform distribution be disturbed, there appear immediately incoordinated movements, blind and irresistible influence, vertigo, and a veritable titubation.

Such is the anatomical scheme, and such the physiological system, deducible from M. Luys' researches, in Dr. Strauss's excellent abstract of them. We shall proceed critically to compare these with the results of other observers.

ETHER AS AN ANÆSTHETIC.

THE interest in the question raised by our recent appeal to the profession to give a full and ample trial once more to ether, as apparently a safer and not less valuable anæsthetic than chloroform, has extended throughout the metropolis and beyond the metropolis to the provinces. We continue this week the publication of Dr. Jones's paper, and we publish also a valuable contribution giving the experience of Mr. Couper. We are compelled to postpone, for want of space, letters from Mr. Jeaffreson (Newcastle) and Mr. Greenway (Plymouth), which speak favourably of ether. We learn from Mr. Wheelhouse that, at the Leeds Infirmary, in consequence of what we have felt it our duty to write on the subject, ether has had a continuous trial there as an anæsthetic during the last few weeks with favourable results, which confirm all that has been said of its efficiency. We hope next week to publish a communication from the resident medical officer, giving an account in brief of the results of fifty consecutive inhalations, as well as a similar communication from the Middlesex Hospital.

Our French correspondent writes that a summary of our recent articles has been republished in France, and that the question so raised is exciting renewed interest in Paris.

Dr. Morgan, of Dublin, whose preference for ether has twice recently been expressed in our columns, will read a paper and open a discussion on the subject at the next meeting of the Surgical Society of Dublin. We have the pain of publishing this week the record of another death during the administration of chloroform.

TWO milkmen in Liverpool were fined forty shillings last week, for adulterating their milk with water.

THE discussion upon the second and final report of the Committee of the Odontological Society, appointed to inquire into the action of nitrous oxide gas, will take place at the Society's meeting on Monday, December 2nd, at eight o'clock.

THE new Medical Microscopical Society will meet at 8 P.M. on Friday, December 6th, in the College Dining Hall, St. Bartholomew's Hospital, to sanction rules, elect officers, and receive names of intending members, etc.

THE LORD CHIEF JUSTICE BOVILL.

THE Lord Chief Justice Bovill is suffering from local symptoms which have given him much pain, but which are not regarded as dangerous. His medical attendant, Dr. G. Owen Rees, has reason to hope that in a few days the symptoms will subside.

HOSPITAL FOR BERWICK.

A PUBLIC meeting was held on Tuesday, at Berwick, for the purpose of taking steps to raise sufficient funds for the erection of the cottage hospital and infirmary for the town, which has just been commenced. The undertaking is being promoted by the dispensary managers.

THE CASE OF MR. CROFT OF SNITTERFIELD.

We call attention to the statement of the particulars of the case of Mr. Croft, surgeon, of Snitterfield, who is under prosecution for irregularity in signing a death-certificate, and must meet heavy legal costs at the next assize. We have already expressed the opinion—and it is the opinion of his professional brethren in the neighbourhood—that his case is one of peculiar hardship. Mr. Croft is in very delicate health, and has a large family growing up, and can ill afford the expenses thrown on him by a vindictive proceeding. A fund is being raised, among the subscribers to which the local practitioners, who knew him best, are prominent. We invite attention to the statement on the subject, which will be found in our advertising columns.

INTERNATIONAL EXHIBITION OF SURGICAL INSTRUMENTS IN 1873.

The first meeting of the Committee on Surgical Instruments was held on November 21st, at Stanhope Lodge, Kensington Gore. Among those present were Mr. Cæsar Hawkins, F.R.S., Mr. Prescott Hewett, Mr. Hilton, F.R.S., Mr. R. Quain, F.R.S., Mr. W. White Cooper, Mr. J. Luke, F.R.S., Mr. T. W. Nunn, Mr. E. Saunders, Dr. G. T. Gream, Dr. W. S. Playfair, and Dr. H. J. Domville, C.B. After discussing the objects and arrangements of the Exhibition the Committee proposed that, as an interesting addition to modern collections, the Royal College of Surgeons and other public bodies or private collectors should be requested to lend ancient surgical instruments and appliances, and that the Italian Government should be requested to lend those recently recovered from the ruins of Pompeii. In addition to other business, the Committee recommended that publicity should be given to the class by means of communications to the medical journals, and individual members of the Committee undertook to request instrument makers to give early information of their intention to exhibit specimens of their instruments in the Exhibition of 1873.

THE ADMINISTRATION OF PHOSPHORUS.

Apropos of Mr. S. M. Bradley's late communication to us on the subject of the usefulness of phosphorus in neuralgia, and remarking that chemists are beginning to find indications that this substance is about to have its turn of more or less lasting popularity as a remedy, the *Pharmaceutical Journal* of November 23rd gives an useful summary of the principal preparations. The result of the experiments of M. Dujardin Beaumetz, in 1868, was to reject solutions in ether and chloroform as producing injurious effects. Phosphorised oil in capsules is less objectionable, but after a time a deposit of insoluble phosphorus forms in the capsules. Phosphide of zinc contains one-fourth of its weight of phosphorus: it is said to be necessary, however, to use eight parts of the phosphide to obtain the effect of one part of phosphorus. Dr. Radcliffe's excellent formula for gelatinised phosphorus pills has already been mentioned: the following formula, by Soubeiran, is given by Dorvault as the best method of administering phosphorus internally. Phosphorated oil (French Codex), 8 parts; gum arabic, 8; peppermint-water, 100; syrup, 60—make an emulsion.

UNHEALTHY HOUSES.

The sanitary officers of the hamlet of Mile End Old Town have issued to the Local Board a report, in which they call attention to the condition of the dwellings of the poor in the locality. The smaller class of houses, intended for the crowded occupation of the poorer classes, is composed of small square-shaped compartments, with one aperture, more often to admit than to carry off smoke from the chimney, and others ostensibly to admit light and air; the whole being approached by a narrow passage and stairs, to which daylight is generally an entire stranger. Added to this unhealthy superstructure, this class of houses is generally built either upon "made ground", composed of refuse and *débris* of all descriptions, the organic portion of which presently fills the houses with various disease-producing gases; or they are erected upon newly opened ground, saturated with miasma, without the least attempt at protection by means of previous drainage or properly protected excavated foundations. No power is given to sanitary authorities to remedy this prolific source of disease; and the medical officer of health for Mile End affirms that he has vainly attempted to stop the evil in the district under his charge. The occupants of these new houses, often suburban, are of course surprised at the almost invariable visitation of scarlet fever, measles, or other infectious disease, within the first quarter of their occupation, the drainage and all visible surroundings being apparently unexceptionable. In the smaller class of houses, the Mile End authorities state that no attempt is made at scientific or effective ventilation; the bed-rooms especially are unhealthy, and cause much disease and injury to health. At all seasons, after being occupied the previous night, they are most offensive to persons entering them in the morning. This is the case even in higher class houses, and is greatly increased in cold weather, when the sleeping compartments are almost hermetically sealed. These and similar primary causes must, so long as they exist, always defeat direct measures to suppress and exterminate infectious diseases.

THE EPIDEMIOLOGICAL SOCIETY.

The following papers are announced for the Epidemiological Society this session: Dr. Mouat, on Medical Statistics, with especial reference to Cholera and Syphilis; Dr. G. Buchanan, on the Concurrence of Epidemic Diseases; Dr. W. Squire, on the Periods of Infection in Epidemic Disease; Dr. Smart, C.B., on Cholera in Insular Positions; Dr. Domenichetti, on Dengue.

INQUESTS.

The number of inquests held during the year 1871 was 25,898, as against 25,376 in 1870, and the verdicts were as follows:—Murder, 226; manslaughter, 176; justifiable homicide, 5; suicide, 1,464; accidental death, 11,316; injuries, cause unknown, 202; found dead, 3,048; from excessive drinking, 383; disease, aggravated by neglect, 201; want, cold, exposure, etc., 283; other causes, 8,594—total, 25,898. In 7,241 instances the deceased persons were under seven years of age, and in 4,250 of these under one year. The total cost of inquests, including the coroners' salaries and travelling allowances, was £80,446 10s. 9d., being an average of £3 2s. 1d. for each inquest. In 1870, the cost was £79,138 11s., or an average of £3 2s. 4d. Since the year 1867 the increase in the total cost of inquests has been less than £4,000.

CRUELTY TO A LUNATIC.

The *Birmingham Post* says that a most atrocious case of cruelty to a lunatic by a Cumberland farmer named Joseph Elliot is reported from Wigton. The victim of Elliot's brutality was his own mother, an aged imbecile. According to the evidence of a policeman, the poor woman was found fastened in a room, the window of which was boarded up; the only furniture was a chair without a back, and an old wooden bedstead, upon which was placed a thin chaff bed, through which the ropes could be felt; there was no clothing underneath the poor creature, and she lay crouched up, covered only by an old blanket, with no chemise. The stench in the place was almost unbearable. There was a plate of cold potatoes, with a broken spoon, lying among the filth on the bed when she was discovered. Her body was covered with sores, and the covering which she had on last (taken from her three days before) was in a shocking state. Elliot was committed to take his trial at Carlisle assizes.

HYDROPHOBIA.

The returns recently issued by the Registrar-General show that in England and Wales there were 32 deaths from hydrophobia in the year 1870—viz., 25 males and 7 females. All these deaths occurred in the north—10 in Lancashire, 9 in the West Riding of Yorkshire, 4 in Durham, and none in counties lying south of the Trent. In 1869, there were 18 deaths from hydrophobia in England—3 in London, the other 15 again in the north; viz., 7 in the West Riding, 5 in Lancashire, 2 in Durham, 1 in Cheshire. Hydrophobia comes and goes in periods. Thirty years ago it seems to have had a season of prevalence; for in the five years 1838-42, there were 73 deaths in England and Wales

from this disease, averaging nearly 15 a year, the range being from 7 to 24. The causes of death for the next four years were not abstracted; but there seems to have been a period of few deaths from hydrophobia, as there were but 5 in 1847 and 7 in 1848. In the seven years 1849-55, the deaths rose to 111, averaging 16 a year, the range being from 11 to 25. In the next eight years—1856-63—the deaths from hydrophobia fell to 26, averaging only 3 a year, and ranging from 1 to 5. In the next seven years—1864-70—this disease prevailed again, and the deaths were 134, averaging 19 a year, and ranging from 7 in 1868 to 32 in 1870. In the year 1870 the deaths from hydrophobia in England were at the rate of 62 in a million deaths from all causes.

SMALL POX IN VIENNA.

THERE has been another increase of the number of cases of small-pox, and of deaths from that disease, in Vienna. In the week ending November 8th, the deaths had fallen to 64, and the average daily number of patients to 375. In the week ending November 22nd, there were 106 deaths, and there were each day, on an average, 417 patients in hospital suffering from the disease.

ANALYSTS UNDER THE ADULTERATION ACT.

THE parish of Marylebone has appointed Dr. Whitmore as analyst under the Adulteration Act. Dr. Whitmore, in addition to his duties as medical officer of health, has made systematic and continuous reports on the gas- and water-supply of the parish, and has given a good deal of attention to the examination of food. During the cattle-plague, he investigated the characters of the milk supplied; and his evidence before the Royal Commission on Cattle-Plague was a good deal to the point. The Local Government are disposed to show a commendable severity in criticising the credentials of the analysts appointed, their approval being necessary to confirm appointments. They called for the testimonials of Dr. Hunter, whom the Lambeth authorities have submitted for confirmation, and may perhaps do so at Marylebone. Dr. Whitmore can, we think, show very good antecedents for such an appointment. If confirmed, he proposes, it is stated, to give his whole time to the duties of the two offices.

THE CHOLERA IN EUROPE.

CONSIDERABLE alarm has been manifested in Vienna in consequence of the expected arrival of a body of recruits from Galicia, where cholera has for some time prevailed severely, and where the inhabitants have not very enlightened notions as to diet and cleanliness. The alarm is the greater, as the barracks in which the recruits are lodged as they arrive are in the immediate neighbourhood of the General and Lying-in Hospitals. The sanitary council of Lower Austria has urged that a stop may be put to the transference of recruits from Galicia and Hungary, and that the Galician recruits already in Vienna may be removed to a locality apart from the other troops. The outbreak of cholera in Buda was, it is said, simultaneous with the arrival of military transports from Galicia.

HOSPITAL SUNDAY FOR LONDON.

A PRELIMINARY meeting of treasurers and gentlemen connected with Metropolitan Hospitals was held at the London Tavern, to consider the propriety of following the example of most of the large provincial towns, by having one Sunday in the year on which simultaneous collections are made in all the places of worship on behalf of hospitals and infirmaries. Between twenty and thirty of these institutions were represented, the chair being taken by Mr. Martin, of St. Mark's. Letters were read from the Bishop of London and Archbishop Manning approving the idea, and asking for further information: and statistics having been quoted to show that the adoption of Hospital Sunday in other towns had caused great additions to their funds without diminishing the support of regular subscribers, Mr. Currie (Chairman of the London Hospital) moved, and Mr. Pitcairn, of St. Mark's, seconded, the following resolution, which was carried unanimously: "That it is desirable that the principle of a Hospital Sunday shall be adopted in London." A committee was appointed to communicate with the heads of the different religious denominations in London, and to arrange details prior to calling a public meeting, at which the Lord Mayor will be asked to preside.

OVERLAIN INFANTS.

THE late Mr. Wakley, when coroner for Central Middlesex, repeatedly called attention to the number of children slaughtered by being overlain. The greatest number of this class of catastrophes occur on Saturday nights; and drunkenness of the mothers has often something to do with it. The majority of rich children are simply suffocated by sleeping under the bedclothes, and being deprived of fresh air during the night. Dr. Lankester this week, at an inquest held in the Gray's-Inn Road, on the body of an infant who had been suffocated while in bed with its mother, said that more than 3,000 infants were suffocated in England every year from being put to the breast and their mothers falling to sleep. In Bavaria there was a law which prohibited parents having children under two years old with them in bed, the result being that instances of suffocation of infants were very rare there.

THE LONDON MEETING: 1873.

THE *Times* refers in a well-considered paragraph to the importance of the forthcoming meeting of the British Medical Association in London, which it describes as "A Medical Congress", and refers to the great increase which has occurred in its numbers and importance since the last meeting in London. It alludes to the necessary efforts which the JOURNAL lately described as being in progress on the part of metropolitan members to give a worthy reception to the large body of country visitors who may be expected, and to reciprocate the cordiality with which metropolitan medical men are received by their brethren in the country on the occasion of the annual meetings. A meeting of the Reception Committee is summoned for Friday next, to consider the steps necessary for organising a fitting reception, and it may be hoped that it will be largely attended.

THE UNIVERSITY OF VIENNA.

THE installation of Dr. Späth as Rector of the University of Vienna took place on the 18th instant, in the presence of a large number of students. The retiring Rector, Baron Von Hye, read a report on the proceedings of the past year, concluding by expressing his satisfaction with the exemplary conduct of the students, no breach of discipline having occurred. Dr. Späth was then formally invested with the gold chain of office, and delivered his inaugural address, taking as his subject *Das Studiren der Frauen*. Recognising the intellectual capacity of women, he remarked that they could not be rendered fit for the tedious study or for the difficult practice of medicine. They were not made by nature for these. He warned the ladies against the superficial knowledge through which they lost their womanhood and yet did not become like men; and he denied that women might be usefully employed in specially treating the diseases of women and children, for the lady-doctor must possess general medical knowledge beyond what was required for these purposes. The address was listened to with much attention, and at its close was highly applauded.

DEATH FROM CHLOROFORM.

LAST week, at the Infirmary (Bristol?) before the coroner, Mr. Wasbrough, an inquiry was held on the body of Robert Thomas, 49 years of age, an ostler, who met his death under very painful circumstances while undergoing an operation at the above institution under the influene of chloroform. The evidence showed that the deceased was a man addicted very much to intemperate habits, and was employed as an ostler. He had been standing on a ladder to light a lamp in the yard, and in descending, the ladder upset, bringing the deceased with it to the ground. The poor fellow by the fall sustained a fracture of both bones of the right leg and a displacement of the ankle-joint. He progressed very favourably until Wednesday, when, in a fit of delirium which came on, he displaced his leg. It, therefore, became necessary to

re-set the leg; and, to perform the operation, the medical men had to administer chloroform, as the man's whole body was suffering from spasms, and he was extremely violent. After the chloroform had been administered he became quiet, and his breathing was more regular; but before the leg could be re-set his heart suddenly stopped. The usual restoratives, including artificial breathing, were administered, but to no effect. A *post mortem* examination showed that the deceased was suffering from disease of the heart and lungs, and the immediate cause of death was no doubt a diseased heart, whilst under the influence of chloroform. The jury returned a verdict in accordance with the above evidence. The preceding report reaches us not from the usual and most satisfactory source—an authorised report by the medical attendants concerned—but from the columns of a local paper, the *Western Daily Press* (Nov. 8th), kindly forwarded to us by a correspondent. At all times, but especially at the present moment, we desire to be able to put upon record all deaths occurring in Great Britain from or during the administration of anæsthetics. It appears to us to be a duty which every one, within whose experience such accidents falls, owes to his profession and to humanity not to fail to put it upon record. It is only by accurate detail of individual observations that trustworthy generalisation can be attained.

ROYAL COLLEGE OF SURGEONS, DUBLIN.

MR. HARGRAVE has resigned the Chair of Surgery in this College; and Mr. Wharton of the Meath Hospital, Mr. Croly of the City of Dublin Hospital, and Mr. Barton of the Adelaide Hospital, are named as likely successors. If the former gentleman take the preliminary step of resigning his seat on the Council fourteen days before the election, Dr. Mapother and Mr. Labatt have declared their intention of seeking the vacancy.

SCOTLAND.

HOSPITAL SUNDAY, an old annual institution in many parts of Scotland, took place in Edinburgh on Sunday last.

MR. GRANT DUFF declines to stand for re-election as Lord-Rector of the Aberdeen University. As a recognition of his great services to the University, a movement is on foot among the students to entertain him at a banquet.

THE managers of the Edinburgh Royal Infirmary have accepted the estimate for the new infirmary, which will now be proceeded with. The foundation and basement floor are approaching completion.

THE number of entries in the faculty of Medicine in the University of Edinburgh was, at the beginning of this week, 643, an increase on the number at a corresponding date last year.

THE *Aberdeen Medical Student* contains an article, in many respects very just, complaining of the want of sympathy displayed by the authorities of the medical faculty in the secondary position occupied by the medical students and graduates in many University matters. Our contemporary points out, for example, that the honours gained by medical graduates should receive similar recognition in the University Calendar to that which is afforded to those obtained by graduates in the other faculties.

STANDING SANITARY COMMITTEE FOR EDINBURGH.

THE report which was recently published by the Special Committee of the Town Council, appointed to consider the subject of the better organisation of the sanitary business of the city, has been adopted, on the recommendation of the College of Physicians. The report recommended the appointment of a Standing Health Committee.

GLASGOW UNIVERSITY MEDICAL SOCIETY.

DR. P. A. SIMPSON delivered the opening address, on Saturday last, in the Assembly Rooms, Bath Street, Glasgow. The subject of the lecture was "Intemperance in connexion with Insanity and Civil Law." The lecturer expressed his desire to see a law in this country in favour of restraint and treatment of the habitual drunkard.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.

THE following office-bearers have been appointed for 1872-3. *President:* Dr. William Pirrie; *Secretary and Treasurer:* Dr. R. Beveridge; *Librarian and Curator of Museum:* William Fraser, Esq.; *Council:* Drs. Jamieson, G. G. Brown, Corbet, Will, and Jackson; *Representatives to the North of Scotland Medical Association:* Drs. Pirrie and Beveridge, *ex officiis;* Dr. Jamieson and Mr. Fraser, elected.

THE DRUITT TESTIMONIAL FUND.

THE following names have been added to the General Committee: Sir Henry Holland, Bart., Sir William Jenner, Bart.; Drs. Basham, E. Clapton, A. Clark, Tilbury Fox, Habershon, Hawksley, F. Hawkins, Graily Hewitt, G. Johnson, Kingston, Murchison, J. W. Ogle, Pavy, Peacock, Priestley, Radcliffe, Owen Rees, Ringer, Silver, Tyler Smith, Sturges, Wiblin (Southampton); Messrs. Arnott, Bellamy, R. Bentley, Bowman, Brodhurst, Cartwright, E. Cock, White Cooper, Curling, Durham, Erichsen, Cæsar Hawkins, B. Holt, S. Jones, Maunder, Tomes, J. B. Walker, and Soelberg Wells.

Mr. Haynes Walton, the Treasurer, begs to acknowledge the receipt of the following subscriptions since Wednesday, the 13th inst.

	£	s.	d.		£	s.	d.
Mr. Noble	21	0	0	Dr. Fuller	2	2	0
Mrs. Baker	21	0	0	Dr. Walter Fergus	2	2	0
Mr. Alfred Denison	20	0	0	Dr. Walshe	2	2	0
J. Jonasson / Mastr. G. E. Jonasson	20	0	0	Dr. E. Clapton	2	2	0
				Mr. Bentley	2	2	0
Sir T. Watson, Bart.	10	10	0	Mr. A. Durham	2	2	0
Sir William Gull, Bart.	10	10	0	Mr. J. F. Clarke	2	2	0
Dr. C. J. B. Williams	10	10	0	Mr. E. Newton	2	2	0
Mrs. Noble	10	10	0	Dr. E. B. Gray (Oxon)	2	2	0
Dr. Priestley	10	10	0	Dr. Francis Hawkins	2	2	0
Mr. C. F. Maunder	10	10	0	Dr. Scrivener	2	2	0
Sir Henry Thompson	10	10	0	Dr. Alex. Fleming (Birmingham)	2	2	0
Mr. Erasmus Wilson	10	10	0				
Messrs. W. & A. Gilbey, by Mr. J. F. Clarke	10	10	0	Mr. Henry Arnott	2	2	0
				Mr. Septimus Sibley	2	2	0
Mr. W. K. Riddell	10	0	0	Mr. Critchett	2	2	0
Dr. De Grave (Croydon)	10	0	0	Mr. J. E. Mould	2	2	0
The Lord Chief Baron	5	5	0	Rev. T. Henry Carnegie	2	2	0
Sir W. Fergusson, Bart.	5	5	0	Dr. Hughlings Jackson	2	2	0
Sir H. Holland, Bart.	5	5	0	Dr. Marcet	2	2	0
Mr. Tomes	5	5	0	Mr. Thomas Lynch	2	0	0
Dr. Greenhalgh	5	5	0	Mr. N. Wilkinson	1	1	0
Mr. Henry Lee	5	5	0	Dr. Hunt	1	1	0
Mr. Spencer Wells	5	5	0	Dr. Harley	1	1	0
Dr. J. W. Begbie (Edin.)	5	5	0	Dr. Graily Hewitt	1	1	0
Dr. W. W. Webb	5	5	0	Dr. Kingston	1	1	0
Mr. Savory	5	5	0	Dr. Sydney Ringer	1	1	0
Mr. Adams	5	5	0	Dr. Habershon	1	1	0
Dr. Pavy	5	5	0	Mr. Stone	1	1	0
Dr. James Wakley	5	5	0	Mr. James Jago	1	1	0
Mr. John Simon	5	5	0	Mr. John Chatto	1	1	0
Mrs. Withers Moore (Brighton)	5	5	0	Mr. Hinton	1	1	0
				Mr. White Cooper	1	1	0
Mr. Cæsar Hawkins	5	5	0	Mr. E. Cock	1	1	0
Mr. Soelberg Wells	5	5	0	Mr. D. Fletcher	1	1	0
Dr. Morell Mackenzie	5	5	0	Mr. Taylor	1	1	0
Mr. Sanders	5	0	0	Dr. R. H. Semple	1	1	0
Dr. G. Owen Rees	5	0	0	Dr. Hensley (Bath)	1	1	0
Dr. Philip Frank	5	0	0	Dr. P. Allen	1	1	0
Mr. Erichsen	3	3	0	Dr. Langdon Down	1	1	0
Mr. Christopher Heath	3	3	0	Mr. Henry Thomas (Sheffield)	1	1	0
Dr. John Ogle	3	3	0				
Dr. W. Moore (Brighton)	3	3	0	Mr. Walter Rivington	1	1	0
Dr. William Cholmeley	3	3	0	Mr. W. Turner (Edin.)	1	1	0
Mr. Henry Smith	3	3	0	Dr. Brown (Edin.)	1	1	0
Dr. A. Meadows	3	3	0	Mr. E. Davis (Brentford)	1	1	0
Dr. C. Currie	3	3	0	Dr. Sanders (Edin.)	1	1	0
Dr. William Guy	3	3	0	Mr. E. L. A. Clarke	1	1	0
Mrs. Bacot	3	3	0	Mr. Francis Mason	1	1	0
Dr. John Wiblin	2	2	0	Mr. J. B. Walker	1	0	0

Subscriptions may be sent to the Treasurer, Mr. H. Walton, 1, Brook Street, Hanover Square; the Secretary, Mr. A. Norton, 6, Wimpole Street; or may be placed to the account of the Druitt Testimonial Fund, Union Bank, Argyll Street, Regent Street. Subscriptions will be acknowledged weekly in one or more of the medical papers.

THE PUBLIC HEALTH AND ADULTERATION ACTS.

DEPUTATION TO MR. STANSFELD.

An influential deputation from the Executive Council of the South-Eastern Branch of the British Medical Association waited upon Mr. Stansfeld, the President of the Local Government Board, at his offices, in Whitehall, on Thursday, the 21st instant, for the purpose of laying before him a series of resolutions passed by the Council, at a meeting at Redhill, on the 7th instant, in reference to the working of the Public Health Act. The resolutions were published at page 568 of the Journal for November 16th.

The deputation was accompanied by the Hon. J. P. Locke-King, M.P., Mr. H. W. Peek, M.P., and Mr. Ernest Hart, and consisted of Dr. Carpenter (Croydon), President of the South-Eastern Branch; Mr. Hodgson (Brighton), Secretary of the Branch; Dr. Holman (Reigate); Mr. Napper (Cranleigh); Dr. Strong (Croydon); Dr. Lanchester (Croydon); Dr. Carr (Blackheath); Dr. Westall (Kensington); J. Reid, Esq. (Canterbury); W. Wallis, Esq. (Hartfield); W. Wallis, Jun., Esq., and P. Wallis, Esq. (Guy's Hospital); Dr. Collet (Worthing); A. Kelsey, Esq. (Redhill); Dr. Barrington (Bexley Heath); Dr. Aveling (London); R. Gravely, Esq. (Newick); T. M. Butler, Esq. (Guildford); J. M. Burton, Esq. (Lee); J. Tomkins, Esq. (Beddington), etc.

Mr. Locke-King introduced the deputation.

Dr. Alfred Carpenter stated that the deputation came from the Executive Council of the South-Eastern Branch of the British Medical Association, and were not connected with any of the other deputations which had already been before the right hon. gentleman. They were not theorists who had no practical acquaintance with the difficulties of sanitary science, for they had been brought face to face with it in every sphere in the country districts. They represented about three hundred and twenty medical men practising in the counties of Kent, Surrey, and Sussex, who would have to transact a large amount of the work of carrying out the Health Act. A meeting of the Executive Council of this Branch was held on the 7th of the present month, when the resolutions on the paper he now handed in were unanimously passed. The first resolution referred to the fact that certain appointments under the Public Health Act had not been conferred upon members of the medical profession. They had no official knowledge of that fact; but they were told that no medical men had been appointed to carry into effect the provisions of the Public Health Act. It was patent that the tendency of such appointments would be to make the Act a dead letter, especially if the appointment were to be conferred upon legal gentlemen who, from their habits and mode of procedure, would be the least capable of carrying out the provisions of such a measure. It might be said in regard to the inspectors that they were now attached to the Local Government Board, and that the number of medical men attached to that Board would be sufficient with the lawyers to carry the Act into effect; but the opinion of the medical profession was that the medical officers were already overworked, and that there certainly would not be sufficient power on their part to cope with the difficulties that would have to be met. With regard to the second resolution, it was very generally understood throughout the country that the medical officers of the boards of guardians would be under the new arrangements the medical officers of health. The notes published by the *Times*, and which bore marks of official communication, led most decidedly to this conclusion. It was felt that if these gentlemen were to put the law in force in the way in which it should be put in force in reference to the nuisances that required to be removed under the Act, they would come into conflict with the very bodies that appointed them and paid their salaries. The feeling between them and the board of guardians would become one of estrangement; and it was improper that such a feeling should exist. Then, again, the medical officer could not separate his professional from his official relations, and to appoint the medical officer attached to the board of guardians the medical officer of health would be something like appointing an ensign to lead the British army in the event of an invasion by an enemy unseen; for it was the youngest men in the profession who accepted the post of medical officers of the boards of Guardians, men who acknowledged that they sought the post for the purpose of obtaining hereafter more lucrative practice from those with whom they must officially come into contact. Instead of young men, in such an emergency they required the services of men who had a knowledge of their profession beyond that usually taught in the medical schools; for sanitary work was a philosophical work, which at present was only partially understood, even by the most able to follow its study. When a young man started in life it was for the purpose of curing disease; and if he did start for the purpose of prevention, the probability was that he would not get much to do in the way of curing. In this way his public duty and his personal interests would clash, and the Act would virtually remain a dead letter. However many orders the Local Government Board might issue, unless there were some one to see these orders carried out, they would never be put in force, and they were not likely to be strenuously insisted on by those who looked mainly to the greatest offenders for their future income. The third resolution which had been passed had reference to the appointment of analysts under the Adulteration of Food Act. It was stated that these appointments were given to dispensing druggists in districts; but it was the opinion of the profession that such men were not competent to carry out the provisions of the Act, and that the appointment should be given to men having special qualifications, who had nothing to do with the trade of the district. It did seem curious that a druggist engaged in the sale of drugs, who often united in his business a grocery establishment, should be called upon to analyse his own materials. Certain suggestions had also been made by the Council, which the deputation were anxious the right hon. gentleman should consider. In the first place, they suggested that he should refuse his sanction to the formation of areas which had not been approved by skilled engineers, and which did not include the proper drainage or water-shed of the district; that he should refuse his sanction to the appointment of Poor-law medical officers as officers of health, unless they were specially qualified, or because the area was so thinly populated as not to allow of any other regulations; and that he should refuse altogether his sanction to the appointment of medical officers of health to small areas. The deputation suggested, Dr. Carpenter said, that Mr. Stansfeld should refuse sanction to the formation of any area not large enough to provide a salary sufficient to command the services of a fully qualified man; that he should urge upon local authorities the advisability of making such arrangements, and also that they should provide for the proper payment of their present medical officers for the extra services which the Act will throw upon them, not by a slight rise in their salary, but for the work they may be called upon to perform by the action of the medical officer of health, so that the visits of the latter may not be cause of loss to the union medical officer. This work would naturally be occasional, at times irksome and constant, at times unfrequent; they suggested, therefore, that these services should be extras rather than paid for in a fixed sum, so that there might be a proper inducement—that of interest and duty combined.

Dr. Holman (Reigate) spoke in favour of the watershed of a district being the area for which each medical officer of health should be appointed, and referred to his own neighbourhood for illustration of the difficulties which would attend upon any other arrangement. He dwelt particularly upon the importance of strictly carrying out the proposition conveyed in the second resolution. He thought his suggestions might be carried out without interfering with the Act.

Mr. Napper (Cranleigh) did not think it would be wise to constitute the Poor-law guardians the authority for making the local appointments. The carrying out of the Act must necessarily involve a considerable amount of expenditure, and as soon as the ratepayers came to consider that point, they would certainly appoint as guardians those persons who would have the work done at as cheap a rate as possible. The result would be that they would have a local body in authority who would throw every obstacle in the way of spending money. To remove that evil, he would propose to enlarge the district, and to appoint only one medical man for each enlarged district.

Dr. Lanchester (Croydon) thought that it was of the greatest importance that they should not have in these appointments young men fresh from the hospitals; but men whom the medical practitioners of the district would be ready to consult upon all subjects. In his opinion it was of great importance that the areas should be large, and the salaries in proportion. Good and able men should be invited to take the post, and that could only be done by having extended areas.

Dr. Carr (Blackheath) spoke in favour of extended areas for the operations of the medical officers, and generally in support of the points mentioned by Dr. Carpenter.

Mr. Stansfeld said—I have been very glad to receive this deputation. During the progress of the Bill, which became an Act of Parliament at the end of last session, I received many depntations, and was always glad to receive them. In the general result I have found that our differences were not so great as we had previously been inclined to suppose. That remark will, I think, apply to the present case. You appear to have been to a certain extent under a false impression in regard to the policy which I am desirous of carrying out in the Public Health Act. The two facts upon which that inaccurate impression appears to have been based, are these:—First, that in the Bill we declared

that the Poor-law medical officers should be the medical officers of health; and secondly, that immediately upon the passing of the Bill we made certain appointments. Now, as to those parts of the Act which concern the appointment of the Poor-law medical officers as medical officers of health, I explained that matter over and over again during the passing of the Bill. All we said was, that the Poor-law medical officers might be appointed. That is, we made it possible for the board of guardians, with our approval, to appoint in some cases the Poor-law medical officer as the medical officer of health. You, yourselves, contemplate that such appointments may in certain cases be advisable; for among the suggestions you make to me, I find the second is that I should "refuse my sanction to the appointment of the Poor-law medical officer as the medical officer of health, unless he is especially qualified." Now that is precisely the circumstance under which I think the Poor-law medical officer ought to be appointed, and it was to provide for such a contingency that these words were introduced into the Bill. I am quite sure that all who have read the orders recently issued concerning the appointment of the medical officers of health can no longer be under the impression that we are desirous, as a general rule, that the Poor-law medical officer should be the medical officer of health. The medical officer of health ought to be a medical man who, besides the study of the art of curing, has investigated the subject of the methods by which disease may be prevented and health secured. I am entirely in accord with you that our policy ought to be to secure as far as we practically can the appointment of medical men competent to be not only medical men, but medical officers of health. We then immediately come to the practical question, how that object can be best attained. If you look at the question simply from a mere scientific professional point of view, you are apt to overlook other considerations, and it is well that we should compare our views. The problem is not the best method of local health government, but the best method of local self-government; and whatever may be the prejudices, whatever may be the inertia, whatever may be the incapacity in various ways of those who must constitute the members of local government bodies, we have such material to deal with, and we cannot hope for a real and permanent success, save by working through and by means of such material. My policy has, therefore, been—having taken what I thought to be the largest practical unit of sanitary administration—to take the existing representative and administrative bodies, to give them these new, additional, and in some respects higher functions, and to have some faith that they will rise to the level of these new functions. It is of no use publishing to the world that you have no faith in these bodies through whom you have to work; and we cannot expect good work from them if we are to speak of them as if they were totally unfit for the business they have to perform. My theory is, that they are not unfit, that more and more you will get men on these boards who will take an interest in this sanitary question. I am met with the objection that the union will not be able to pay a medical officer of health sufficiently well to secure a man of first-rate ability. Those who jump rather rapidly at conclusions will say that because of this difficulty, which no doubt is a difficulty, we must reorganise the whole of our sanitary administration, and instead of having the guardians as a rural sanitary authority, we must construct watershed authorities all over the country. [Dr. HOLMAN said the remarks he had made had reference to the sanitary difficulties of the matter, and not to the payment of medical officers.] Mr. STANSFELD—In looking upon the watershed as the best area, you appear to have overlooked some other considerations which ought to be borne in mind. For instance, you have existing authorities in the boards of guardians, and I hold that it would be unwise to create new governing bodies if you mean to entrust powers to the old bodies in respect of the area over which they preside. It may be true that in regard to the watershed and in the conservancy of rivers the watershed area would be the legitimate area; but for all the occasional operations for which the great sanitary work of the country is maintained, house to house inspection can be properly administered within a more limited area. I entirely agree with what Lord Derby laid down at a meeting in the North last year, that the health of the country is not to be secured in the main by any large drainage operations, but that it is to be improved by an administration which shall secure close supervision and a prevention of nuisances. I cannot upset the arrangements already made, and say that there shall be a larger area, simply in order that I may appoint a medical officer of health at a higher salary. But I quite admit that it is of very great importance that the medical officer of health should be a high-class man, and that he should be adequately paid. Under the power of joint appointments which I expressly took in the Act, and under the orders recently issued, my policy would be to favour joint appointments of medical officers of health, so that you might hope to obtain the services of men of position and reputation and influence in the locality in which they live. There are occasions when the Poor-law medical officers would be the best medical officers of health; and there are occasions on which you might have medical officers of health appointed for unions instead of Poor-law districts. There are many cases in which you might have combined appointments for unions and local boards; and it would be even possible that in some cases you might succeed in having only one appointment for a whole county. Within my own knowledge a scheme of that kind has been discussed in reference to one of our counties, but my view is that the time has not yet arrived for dealing with the subject in its entirety. We have issued orders to which I have referred, and we have invited the various authorities to communicate with our inspectors, and to consider the question of the joint appointment of medical officers. What we have said is this—"We hope the local authorities will discuss schemes for the appointment, whether joint or separate, considering seriously whether they cannot unite the appointment, and then that they will propound their schemes to us." We will consider these schemes, and, not expecting too much, if we think they are satisfactory schemes, we shall approve of them, and then the medical officers of health shall be nominated, subject to our approval. In sanctioning the personal appointment, of course we shall be guided by the consideration which we have indicated in our orders, and we shall certainly require a sufficiency of competence. But it would be unreasonable to require the same efficiency in every case. If we have a dense population and a rich district where a high salary would be paid, we should have a right to expect, and could secure, greater sanitary efficiency in the medical officer of health than we should obtain in a sparsely populated and poor district. Even if at the outset of this sanitary local administration we got many appointments of medical officers who would not be quite so advanced in their notions of sanitary matters as you may be, a very great and good influence would be produced on the mass of the profession of the country, by importing into the sanitary machinery a considerable number of men, who otherwise would have thought of the cure, and not of the prevention of disease. With regard to expense, the expenditure necessary to carry out the Act of last session will probably be confined to the salaries of medical officers of health and inspectors of nuisances, and that is not an expense that will add perceptibly to the burden upon the ratepayers of the country. I am anxious to advert to a subject which appears to have created an undue impression upon your minds, namely, the appointment of certain assistant-inspectors as soon as the Act passed. It would have been extremely easy to ascertain the facts of the case; but no application was made to me. I have not appointed any assistant-inspectors, but what I have done, and the reasons for having done which I will now explain, is this. I have become convinced that, even in reference to the administration of the Poor-law before we became a Local Government Board, it was growingly difficult to deal harmoniously and satisfactorily with the local bodies over which we had to preside. I do not believe in harmonious relations between bodies of men conducted entirely by correspondence. I think if you have to deal with men, you should deal with them through men; and, therefore, I became convinced, even before the additional duties in regard to health were imposed upon this department, that it was sound policy to give certain higher duties and greater responsibility to our general inspectors, whom I have been accustomed to call the negotiators between local bodies and ourselves. Even in matters of Poor-law administration a year or more ago, I successfully carried out that policy by entrusting certain duties concerning the administration of out-relief to the inspectors, and leaving it to them to work out the matter with the various board of guardians. The result has been a considerable improvement in the administration of out-door relief, and the diminution of charge. When the Public Health Act was passed, instead of having to deal with seven or eight hundred boards of guardians, we had now to deal with seven or eight hundred board of guardians, and another seven or eight hundred local boards and town councils, acting in two capacities, firstly as municipal authorities, and secondly as health authorities. It seemed to me, under these circumstances, more than ever necessary that I should be able to rely upon negotiators. I therefore determined to make the Poor-law inspectors the Local Government inspectors for all purposes between this department and the local bodies, including boards of guardians. I wanted them to initiate the working of this new Act, and in order to give them time and freedom of mind to apply themselves to that work, I relieved them from the routine of workhouse inspection, by giving them assistant-inspectors. It is this assistant-inspector who has been magnified into the sanitary inspector who is to have under his supervision the sanitary wants of the country. Now I have not appointed a sanitary inspector at all, but I have simply appointed assistant-inspectors, so that the inspectors themselves may be left free to negotiate the initiation of this new Act. I am perfectly aware that this is not all the problem. There are occasions upon which we must have the inspec-

tion of the medical officer. Mr. Simon and his colleagues are considering the proposals which they may deem it their duty to make to me with reference to what shall be their place in respect to this new machinery. When I get those proposals, I shall consider them, and endeavour to appreciate and understand them ; but I shall test them by other considerations, and endeavour to arrive at that conclusion, which, on the whole, appears to me fitting at that time. I will now address myself to your resolutions and suggestions. [With regard to the first and second resolutions relating to the appointment of inspectors and the extent of the sanitary areas, Mr. Stansfeld made observations which amounted to a reiteration of some of the remarks above reported.] Your third resolution refers to the appointment of analysts. You say "That in the appointment of analysts under the Adulteration of Food Act, preference should be given to men having special qualifications for such duties, and who would also be entirely independent of personal interest in the trade of their several districts. The ordinary dispensing chemists and druggists of this country are, therefore, not qualified for such posts." Of course they are not qualified. I hardly conceive that the board would have sanctioned the appointment of a dispensing druggist, simply because he happens to be called a chemist. I do not know that that implies that he has a knowledge of chemical analysis. What we mean by an analyst is a man capable of chemical analysis, and we do not mean a chemist in any other sense of the word. I come now to your suggestions. You suggest that I should refuse my sanction to the formation of areas that have not been approved by skilled engineers, and that do not include the proper drainage and water shed of the district. I do not agree to that for the reasons I have already stated. Your second suggestion is that I should refuse my sanction to the appointment of Poor-law medical officers as medical officers of health, unless specially qualified. Now there are conditions under which I think the appointment of Poor-law medical officers would be unjustifiable, but there are other conditions which might have to be included, and which I should have to bear in mind, which would render such an appointment desirable. I have accepted a proviso that the first appointments shall be for a period not exceeding five years. Many appointments have already been made for a shorter period than five years. I cannot bind myself to say that there are no cases in which the appointment of a Poor-law medical officer to be the medical officer of health would be desirable. In some cases such appointments have already been made, and I have sanctioned them where it seemed desirable that we should begin by getting together all the information we could, and where it appeared that the first functions of the medical officers of health were to make an exhaustive study of the district, and to report its sanitary condition. There is a certain class of cases in which I have sanctioned appointments for six months only. At the end of six months we shall have reports, and be able to judge afresh. Your next suggestion is that I should refuse to sanction altogether the appointment of a medical officer of health for small areas. Now I do not exactly know what you mean by small areas? [Dr. CARPENTER explained that there were districts within districts which it was undesirable to separate.] Mr. STANSFELD—I wish you to see that, though it is very well you should propound these things in a clear and definite way, that I cannot undertake to bind my hands. I have to consider a variety of circumstances, as to time and place. Your remaining suggestions have reference to the payment of officers. I understand your proposition to be, that if there is a medical officer appointed, his requirements will probably involve some increased labour on the part of Poor-law officers, for which the latter ought to be paid. The proposition appears to be a fair one, but the question will arise whether you should simply increase his salary as Poor-law medical officer, or whether you should pay him proportionately in respect to the sanitary work he performs. That is a subject under my consideration, but it does not belong to me only. I must reserve any positive expression of opinion until I have consulted my colleagues.

Mr. ERNEST HART said that Mr. Stansfeld had intimated a belief that former deputations of the British Medical Association had conceived, in error, that he proposed in all cases to employ district Poor-law medical officers as officers of health, and objected to it. Not being a member of the present deputation, although he had been courteously invited to accompany it, he should not have spoken except to correct this misapprehension. The members of the State Medicine Committee had not, he thought, in any way misunderstood the precise purport of Mr. Stansfeld's observations and of the Act. It was, however, an error to consider that they had objected to the employment of Poor-law medical officers as health-officers : they had, on the contrary, advocated strongly and from the first the attribution to them of such functions. They thought that they should be all employed, each in his own district, but protected by the action of a principal medical officer of independent position, acting for a conjoint authority over a large district.

Mr. STANSFELD said that the question had been put to him very strongly on other occasions. It was said that a higher salary would be hardly all that was required, because able medical men might be afraid to take the position on account of the ill-will that might be engendered against them in the performance of their duties, and the opportunity it would afford for strangers to come in and eat into their practice. The protection they required, was that the Government inspector should be a real Government medical officer of the district. His reply to that view was that first of all, if such a scheme were possible, it would not fulfil the object of protecting the medical man; because the people complained against, and living in the locality, would well understand who it was that posted the inspector. Nor did he think it fair that the medical profession should make a claim to have the great sanitary work of the country placed in their hands, and then tell him that they had not the courage to perform their duties.

Dr. CARPENTER repudiated the necessity for protection for any but those not able to protect themselves Among them were those who were very young, and those whom *res angusta domi* made afraid of those in authority.

Mr. STANSFELD was quite ready to admit that they ought to be able and energetic men, and that they should be well paid. In that case he should be prepared to trust them, and he believed that men of that character, if they performed their duty as medical officers, although they might lose in some respects, would gain in others by the reputation they would acquire in the district in which they practised. He did not think they could construct any system of absolute protection for the medical men. If a medical man did his duty, he must run some risk.

Mr. LOCKE-KING thanked the President, in the name of the deputation, for the courtesy with which he had received them.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL OFFICERS OF HEALTH.

AT the forty sixth meeting of the East Kent District of the South-Eastern Branch, held at Canterbury on November 14th, Mr. Wilks of Ashford in the Chair, the report of the Committee appointed to draw up a plan in promotion of Mr. Reid's motion relative to medical officers of health was read, and adopted unanimously.

"1. That all medical officers of health within the East Kent District be elected honorary members of the District, under the title of 'Public Health Associates', and have the privilege of attending all the meetings of the District; but shall have no vote in its management.

"2. That, at the ordinary meetings of the District, a portion of the time allotted to scientific purposes (not exceeding half an hour) shall be available for the consideration of matters relating to Public Health. And it is hoped that the 'Public Health Associates' will contribute papers on the subject.

"3. That the cordial sympathy and support of the East Kent District be uniformly accorded to the medical officers of health in the conscientious discharge of their onerous duties."

These resolutions spring from an enlightened and generous sentiment, and afford an initiative which will, we hope, be fruitful in good results. The labour, time, and thought, which members of the Association of all classes and degrees of eminence have given to the subject of Public Health, and to the organisation of an effective system of preventive medicine by the State and on behalf of the people, will count hereafter among the most glorious records of a profession whose history is rich in examples of patriotic exertion, and will form a bright page in the history of the Association. To this Association, and to the Social Science Association, acting with us at the instance of Mr. George Hastings, belongs the credit of the institution of the Royal Sanitary Commission, and of the introduction of such modifications in the Public Health Act as will confer upon it its largest power of usefulness—those modifications by which, in Oxfordshire, Warwickshire, and Buckinghamshire, and we hope elsewhere, some approach to a county organisation will be secured. In any case, and to whatever extent our fullest aspirations may be gratified, the Association is fulfilling its highest functions in associating with itself all the medical officers of health, in assuring them beforehand of its sympathy and support in the great public work which lies before them, and in holding out to them the right hand of fel-

lowship. We commend the resolutions of this District meeting to the attention of all the Branches, believing that they will all desire to take a step of similar effect. There is no reason to believe that the local medical officers of health would object to join the Association *en masse* and in the usual way. In any case, they may be invited to share at once some of its advantages and to accept its gracious courtesies.

ASSOCIATION INTELLIGENCE.

EAST YORK AND NORTH LINCOLN BRANCH.

THE next quarterly meeting of this Branch will be held at the Hull Infirmary, on Wednesday, December 4th, at 3 P.M.; J. F. HOLDEN, Esq., President, in the Chair.

ROBERT H. B. NICHOLSON, *Honorary Secretary.*
21, Albion Street, Hull, November 25th, 1872.

BATH AND BRISTOL BRANCH.

THE next meeting of this Branch will be held at the York House, Bath, on Thursday, December 12th, at 7.30 P.M.; T. G. STOCKWELL, Esq., President, in the Chair.

R. S. FOWLER, E. C. BOARD, } *Honorary Secretaries.*
Bath, November 24th, 1872.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

AT a meeting of the Committee of Council, held at the Queen's Hotel, Birmingham, on Wednesday, the 13th day of November—present: G. Southam, Esq. (President of the Council) in the Chair; Alfred Baker, Esq. (President of the Association); Dr. Falconer (Treasurer); Dr. Bryan, Mr. Bartleet, Mr. Andrew Davies, Dr. B. Foster, Mr. Reginald Harrison, Mr. G. F. Hodgson, Mr. W. D. Husband, Mr. R. H. B. Nicholson, Dr. G. H. Philipson, Dr. W. Procter, Dr. Roberts, Dr. Rumsey, Dr. F. Sibson, F.R.S., Mr. Heckstall Smith, Dr. A. B. Steele, Dr. Stewart, Dr. Underhill, Dr. Wade, and Dr. Waters, Chester.

Mr. Cooke attended as a deputation from the profession of Scarborough and the neighbourhood, with an invitation to the Association to hold the annual meeting of 1873 at Scarborough.

Dr. Sibson, F.R.S., Mr. Heckstall Smith, and Dr. Stewart, attended as a deputation from the Members of the Association resident in the Metropolitan Counties District, with an invitation, signed by three hundred members, to hold the annual meeting of the Association in London in 1873.

Resolved—That the invitation of the Members of the Association in the Metropolitan Counties District be accepted, and that the annual meeting of 1873 be held in London.

Resolved—That the cordial thanks of the Committee of Council of the British Medical Association be presented to the medical profession and public of Scarborough, for their kind and unanimous invitation to meet at Scarborough in 1873, and to Mr. Cooke for his attendance, which invitation the Committee of Council greatly regret they are unable to accept for that year.

Resolved—That Sir William Fergusson, Bart., be, and he is hereby appointed, President-elect.

Resolved—That the annual meeting be held on the fifth, sixth, seventh, and eighth days of August 1873.

Resolved—That there be three addresses, viz., one in Medicine, one in Surgery, and one in Physiology.

Resolved—That Dr. Parkes be requested to give the Address in Medicine.

Resolved—That Mr. Erichsen be requested to give the Address in Surgery.

Resolved—That Dr. Burdon Sanderson be requested to give the Address in Physiology.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE annual meeting of the above Section was held on October 26th, 1872. Present: Dr. WADE in the Chair, and forty-two members. A telegram was received from Mr. J. H. Houghton (President), stating he was unable to be present.

Report.—The following report of the Secretaries was read and adopted. The Secretaries, in issuing their third report, are enabled to speak in terms of praise of the continued success of the proceedings of the Pathological and Clinical Section. The Section has stood the test of the wear and tear of three sessions, and it still maintains the headship with which it started; for at the present time, whether regarded from a numerical or a financial point of view, it is undoubtedly very flourishing. Its members now number 130, against 122 of last session, and 115 of the session before—the year of its birth. The Treasurer has a large balance in hand. In some respects the past session has been a more quiet one than its predecessors; but this is to be accounted for not, we feel sure, by any lack of interest in the work done in the Section, but rather by the subsidence of that outburst of excitement which the advent of this Society called forth, and to its having now settled down to that regular and steady work which is a much surer sign of lasting than the spurt of the first start. As regards the work of the year, the Secretaries believe that the specimens exhibited have been of as great general interest as formerly, evidencing that the zeal, industry, and energy of its working members have in no way been relaxed; and the discussions—a special feature, be it observed, of this Society—which have followed these exhibitions, have ever been well maintained and instructive. The Secretaries would ask the members not to let their pathological zeal induce them to forget that the Society is also a clinical one; and they appeal from this aspect of it generally to the whole body of the members, but especially to those of them who, not having that frequent opportunity which a hospital connection affords of obtaining *post mortem* rare and acceptable morbid specimens, yet must be enabled to bring from time to time living specimens illustrating some point in clinical medicine and surgery; and they feel sure that the trouble and expense will be well compensated for by the interest which they will excite, and the instruction which likewise they will afford. New instruments, mechanical contrivances and apparatus, might also be displayed at our gatherings. At the last meeting, Dr. Foster, one of the secretaries, tendered his resignation in consequence of his election to a similar office in the Branch. His fellow Secretary desires to acknowledge with thankfulness Dr. Foster's work, for he feels sure that the unbroken cordiality, oneness of labour, singleness of purpose, and unity of action which have always existed between the two Secretaries, have been greatly maintained by the pleasing cordiality and obliging manner of the late senior Secretary of the Pathological and Clinical Section; and what the Branch gains the Section loses.

The Treasurer's Report was read, audited, and adopted.

Officers.—On the motion of Dr. WADE, seconded by Mr. OLIVER PEMBERTON, Mr. Furneaux Jordan was elected President for the ensuing year. Dr. Russell was elected Treasurer; and Mr. Vincent Jackson (Wolverhampton) and Dr. Jolly were elected Secretaries for the ensuing year.

Communications.—1. Mr. Gilbert Smith exhibited a man who had been treated for Stricture of the Urethra by Mr. Furneaux Jordan, by passing a catheter from behind upwards.

2. Dr. Jolly exhibited a successful case of Ligature of the Superficial Femoral Artery at the apex of Scarpa's triangle (by the antiseptic system) for a wide spreading rapidly increasing traumatic aneurism of the size of a cocoa-nut, occurring in a young farmer, aged 27, and involving the vessel in Hunter's canal. The wound healed throughout by the first intention, and was quite solid within ten days. The aneurism slowly and gradually disappeared.

3. Mr. Lawson Tait showed a case of general Xanthelasma in a young woman suffering from amenorrhœa. Eight years previously, she had symptoms of acute ovarian metritis, followed by jaundice and great hepatic tenderness. She had never menstruated since, and the uterus and ovaries were much atrophied. The liver was still large and tender, the skin of a dark olive tint, and xanthelasmic patches nearly encircled both eyes, and followed in lines all the folds of the palmar and interdigital surfaces of the hands and the flexure of the elbows. They were very symmetrical.

4. Mr. Tait also showed a case which was at first believed to be one of Hernial Ovary undergoing cystic degeneration. Months afterwards, a piece of gut came down and became strangulated, necessitating an operation. For the first time in fourteen cases Mr. Tait had to open the sac. He removed a large mass of omentum, returned the gut, and the wound healed by first intention.

5. Mr. Vincent Jackson exhibited a young woman whose right Elbow-joint had been Excised some short while ago. When admitted into the Wolverhampton Hospital, she was suffering from carious disease of the bones of the left great toe, as well as of the right elbow-joint. The great toe was first amputated, and, upon convalescence from that operation, the right elbow-joint was cut out—the only incision required being a linear one along the back of the articulation. The result was perfect; the young woman being able, before the So-

ciety, to lift with ease a heavy oak chair. The case was one of a series of four upon which Mr. Jackson had operated successfully during the last medical session.

6. Mr. Vincent Jackson exhibited a young man who had suffered, for a smash of the leg, Disarticulation through the right Knee-joint. The peculiarity of the case was, that the patella had been removed. Mr. Jackson stated that he was led to do so by observing the result of the operation when that bone was left; and its absence added much to the appearance of the stump.

7. Dr. Russell exhibited a Sarcomatous Tumour removed from the Base of the Brain.

8. Mr. Bartleet showed a Fibrous Epulis growing into and filling the antrum, and springing from its floor and appearing in the mouth. The tumour consisted of white fibrous tissue, and exhibited no cells. It was removed, with the superior maxilla, by an incision through the upper lip only, from a patient at the General Hospital.

9. Dr. Balthazar Foster showed a specimen of Aneurism of the Thoracic Aorta, which had occurred in a young woman aged 28. The sac of the aneurism was as large as a fœtal head, and implicated the aorta from about one inch above its origin to the giving off of the left subclavian artery. The sac pressed backwards against the trachea at its bifurcation, and compressed both bronchi, but more especially the right. The superior vena cava and the pulmonary artery were also compressed. During life there had been great dyspnœa and pain, venous congestion of the face, dilatation of the veins of the right upper extremity and the right sides of the chest and neck, and dulness over the sternum extending outwards to the right mammary line and upwards nearly to the clavicle. The second right intercostal cartilage was made prominent by the pressure of the sac; and in this situation an indistinct pulsation could be detected, and the two sounds of the heart heard distinctly. The voice was feeble; the pupils were equal. Both radial pulses were weak in comparison with heart's impulse; but the sphygmograph showed the left radial to be more ample than the right. This evidence materially aided the diagnosis.

ABERDEEN, BANFF, AND KINCARDINE BRANCH: GENERAL MEETING.

A GENERAL meeting of the Aberdeen, Banff, and Kincardine Branch was held in the Music Hall Buildings, Aberdeen, on Wednesday, November 6th, 1872. Twenty gentlemen were present, and Dr. OGSTON was called to the chair. After the minutes of previous meetings and some other business had been discussed, the following papers were read.

Cancer of the Liver (primary).—Dr. Forbes (Aberdeen) detailed a case of cancer of the liver, apparently primary, which had involved the contiguous intestine, and where no disease elsewhere existed except in the mesenteric glands, some of which were in a suspicious state. The liver was exhibited, and a detail of the microscopic appearances confirmed the diagnosis of carcinoma; the disease, however, being limited to the interlobular tissue, and seemingly not affecting the lobules themselves.

Spontaneous Evolution.—A case of this, illustrated by two casts of the child and drawings, was read by Dr. Inglis, who advocated, in impacted shoulder-presentations, division of the dorsal spine or of the clavicle, in place of decapitation or evisceration, as being much more useful, and leaving a handle for the subsequent delivery of the head.

Small-pox.—Dr. Alexander Ogston detailed some of the results of the studies of this disease carried out in the Aberdeen Small-pox Hospital.

Change of Hour of Meeting.—On the motion of Drs. Burr and A. Reith (Aberdeen), it was resolved to hold the winter meetings at 9, instead of 8, P.M., for the convenience of town and country members.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE second meeting of the sixteenth session, 1872-73, was held at Maidstone on November 12th; WILLIAM HOAR, Esq., in the Chair.

Next Place of Meeting.—It was resolved to hold the next meeting at Gravesend in March 1873. John Christopher Armstrong, Esq., was chosen Chairman.

New Member.—Charles Sedgwick, Esq., of Hollingbourne, was elected.

Communications.—1. Dr. S. Monckton read a paper on the concurrence of Ascites with Ovarian Tumour. He also narrated a case of Sloughing of the Integuments eight or ten days after tapping for Ovarian Dropsy of great size.

2. Mr. Charles Hoar, M.B., exhibited photographs of Chronic Pemphigus occurring in a prisoner aged 24 (male), and made a few remarks on the case.

3. Dr. White exhibited some Bones supposed to be those of a partridge that were removed from an Abscess in the Ischio-rectal Fossa of an old man.

4. Mr. Cecil Smith related the case of a woman, employed in the hop-fields, who presented herself with a Fistula in Ano in which were lodged two and a half or three inches of hop-bine.

5. Mr. William Hoar exhibited a foot that had been amputated for Malignant Tumour springing from the Os Calcis. He also exhibited a large Calculus that had been removed by Lithotomy, and a Plum-stone that had escaped through the Glottis subsequently to tracheotomy.

Dinner.—The members and visitors dined together at the Mitre Hotel.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.

THE autumn meeting of the members of the above district was held on October 29th, at the Norfolk Hotel, Arundel; Dr. TYACKE of Chichester presiding. Nine members and two visitors were present.

Spring Meeting.—It was resolved unanimously that the spring meeting for 1873 should be held at Chichester; Dr. Tyacke to preside as Chairman.

Communications.—The following communications were submitted to the meeting.

1. Remarks on the Condition and Supply of Drinking-Water in the District.—Dr. TYACKE alluded especially to the nitrogenous contamination of much of the well-water in Chichester by soakage from cesspools. He also, by calculations founded on the results of a certain excess of rainfall beyond the annual average, pointed out the probable danger of introducing an artificial supply of water into that city, without at the same time adopting a system of drainage for removing the excess of moisture and refuse from the subsoil.

2. Case of Severe Neuralgia of the Tongue. By G. F. Hodgson, Esq., Brighton,

3. A Case of Ear-Cough.—Mr. HODGSON (Brighton) narrated the following case of ear-cough, in confirmation of the interesting paper on the subject which was read by Dr. Cornelius Fox at the Leeds meeting of the Association in 1869, and published in the JOURNAL of December 18th, 1869. A young gentleman, aged 15, had, in spite of all treatment, been annoyed, and also had annoyed those about him, by a dry and almost incessant cough for ten days and nights, and was also observed to be deaf. On examination, Mr. Hodgson found both ears crammed with wax as hard as clay; the right (the deafer) to a surprising extent. The softening and removal of the wax occupied several sittings during two days, and on each occasion the necessary manipulations in the meatuses excited the convulsive cough in a remarkable manner. The deafness in the right ear did not disappear with the removal of the wax; but the meatus was found in an unhealthy state, the membrana tympani much congested and too concave, and the Eustachian tube closed. Simple treatment, including inflation of the tympanum with Politzer's bag, relieved all those conditions in three more days; and coincidently the cough also disappeared.

4. On the Advantages of the Use of Smith's Clamp and Cautery in the Treatment of Hæmorrhoids and Prolapsus of the Rectum. By W. J. Harris, Esq., Worthing.—Mr. HODGSON exhibited an improved form of clamp for treatment of hæmorrhoids, as devised by Mr. Jardine Murray of Brighton.

5. Mr. W. J. HARRIS exhibited Casella's improved Portable Spirometer.

Three gentlemen were proposed as members of the Association and Branch.

Dinner.—The members and visitors afterwards dined together.

CUMBERLAND AND WESTMORLAND BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of the above Branch was held at the Green Dragon Hotel, Workington, on Friday, November 1st; Dr. CLOUSTON, the President of the Branch, took the Chair. Owing to some alterations in the trains which came into force that day, the attendance of members was smaller than usual.

New Members.—The following new members were elected: Herbert Page, M.B., Carlisle; T. S. Douglas, Esq., Workington.

Communications.—1. Case of Amputation of Thigh and Forearm. By D. McGregor, L.R.C.P.Ed., Penrith. The patient was seventy-

two years of age, and had for many years led a very irregular and intemperate life. On June 6th, while under the influence of drink, he was going home over a level railway crossing, and was so injured by a passing goods-train, that amputation of the thigh and forearm became necessary. These operations were performed at once in the patient's own house, a room measuring twelve feet by ten feet, with the light of a halfpenny candle. Chloroform was not administered, the patient being under the influence of intoxicating drinks. A month afterwards, the patient was sitting up in bed with the stumps all but quite healed.

2. Case of Subperiosteal Excision of the Head and part of the Shaft of the Humerus. By Roderick Maclaren, M.D., Carlisle. The case was that of a boy, aged 6, who had had disease of the shoulder-joint and upper portion of the humerus for about twelve months. Treatment failed to do any good; and, as the only alternative to amputation, three inches and a half of the humerus were removed subperiosteally. Ten months afterwards, the arm operated on was an inch shorter than the other, and the amount of motion was as follows. The elbow could be abducted three inches from the side; the shoulder could be extended so as to bring the wrist (the elbow being kept straight) to the level of the xiphoid cartilage; the arm could be carried back to the normal extent, and can be rotated through one-eighth of a circle; the hand could be readily raised to the forehead, and by a sort of climbing movement of the fingers placed on the vertex; the boy fed and dressed himself. In conclusion, the writer pointed out that it was only the prospect of the reproduction of bone that justified the removal of so large a portion of the humerus with the hope of an useful arm resulting.

3. Eclampsia Nutans. By Henry Barnes, M.D., Carlisle. After describing the history and leading symptoms of this disorder condensed from the accounts of different authors, the writer pointed out the close alliance between it and epilepsy, and other neuroses of a like character, such as chorea and paralysis agitans, and suggested that in its pathology it might resemble the first mentioned disorder in being due to morbid changes in the spinal cord near the deep origin of the spinal accessory nerve. A case was then related which had completely recovered under the prolonged use of the bromide of potassium.

4. Dr. Ablett, of Whitehaven, exhibited some drawings of surgical instruments at present in the Museo Borbonico at Naples, which were obtained from excavations of Herculaneum and Pompeii. Among the instruments represented were a three-valved vaginal speculum, a rectal speculum, and different varieties of forceps, probes, etc. The descriptive account, translated from the official Italian catalogue, was also read by Dr. Ablett.

Dinner.—At the conclusion of the proceedings, the members and their friends dined together as usual, the chair being taken by Dr. Clouston, and the vice-chair by Dr. Tiffen, President-elect.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

THE PUBLIC HEALTH ACT: CONJOINT ACTION OF BOARDS IN OXFORDSHIRE AND BUCKINGHAMSHIRE.

AN important meeting of the Local Board of Health has been held at Aylesbury to consider a communication from the Local Government Board with regard to the appointment of medical officers of health and inspectors of nuisances, under the new Public Health Act, for the urban sanitary authority of Aylesbury.

The Chairman, after having read the duties required to be performed by the medical officer of health and the terms upon which his appointment would be made, proceeded to lay before the Board a series of resolutions that had been passed at a conference of the sanitary authorities for Oxfordshire. He was anxious that the Aylesbury Board of Health should adopt a system similar to that set forth in these resolutions, and that Aylesbury should be made, by the neighbouring unions uniting to appoint one medical officer of health, a rural sanitary centre. The resolutions were as follows:—

1. That, with the view to secure the services of an efficient officer of health, it is desirable to form a group of sanitary authorities around a common centre.

2. That for the union and county of Oxford, the city of Oxford should be taken as the centre, and one officer of health, to reside at Oxford, should be appointed the common officer of health for all sanitary authorities in the county.

3. That the duties of the officer of health should be generally—(*a.*) To ascertain by personal inspection the sanitary requirements of his district. (*b.*) To suggest to each sanitary authority such measures of sanitary reform as he shall from time to time consider necessary. (*c.*) To advise the sanitary authorities with reference to any questions or suggestions to be submitted to him by such authorities. (*d.*) To report yearly to each authority as to the general sanitary condition of the district of such authority.

4. That the officer of health should be paid by salary to cover all expenses.

5. That, inasmuch as it is a matter of great importance to secure the co-operation of the district medical officers, it is desirable that such officers should be appointed to act as assistant-officers of health, each for his own district, and that in every case of such appointment a moderate addition should be made to the salary of the officer so appointed.

6. That the employment of relieving officers as inspectors of nuisances is not entirely satisfactory; but, having reference to the fact that the inspectorship is at the present time committed to the relieving officers by every union in the county, it is desirable that the question of appointing more efficient inspectors, or increasing the efficiency of the existing inspectors, should be left to the consideration of the meeting of delegates suggested by a subsequent resolution.

7. That the duties of an inspector of nuisances should be generally—(*a.*) To inspect his district and report to all meetings of the sanitary authority. (*b.*) To carry out the orders of the sanitary authority in all matters and proceedings connected with the abatement of nuisances and with sanitary improvement, and, subject to the orders of the sanitary authority, to give such assistance as he can to the officer of health.

8. That Mr. Henley be requested to forward a copy of these resolutions to each sanitary authority, whose district is wholly or partly within the county of Oxford, together with a suggestion that such sanitary authorities as are willing to concur in the appointment of a common officer of health, should appoint two members as delegates to meet the delegates of the other authorities for the purpose of framing a detailed scheme, and reporting the same to the authorities who shall be represented at such meetings.

9. That each sanitary authority be requested to send a reply, together with the names of any delegates who may be appointed, to Mr. Henley, 2, Parliament Street, London, and that Mr. Henley be requested, on receipt of such replies, to convene a meeting of the delegates at Oxford at such time as he shall think fit.

It was objected to this plan of operation being adopted, that one medical officer of health would find it impossible to attend adequately to so large an area; and also that the assistant medical officers, because of their private interests, would not be able to be relied upon for satisfactory information on matters affecting the public health.

The resolutions, however, met with general approbation, and it was resolved,—"That it is the opinion of this Board that, with the view of securing the services of an efficient officer of health, it is desirable that the urban authority should be united with one or more rural authorities in the county for the appointment of such medical officer of health."

Finally, to obtain a practical settlement of the question, it was resolved,—"That Mr. Henley, the Poor-law inspector of the district, be requested to convene a meeting, to be held at Aylesbury, of the various urban and rural authorities in the county, to discuss the whole question of a combination of districts for the purpose of the appointment of one or more medical officers of health."

The above proceedings will be read with great interest. They are dictated by sound and enlightened principles, and we earnestly call the attention to them of medical men throughout the country, and of all our branches, in order that they may promote a similar course of action in their own districts.

THE PUBLIC HEALTH ACT IN NORTH WALES.

ON Tuesday, the 19th instant, a large number of the Poor-law medical officers of North Wales met at Bangor, to consider what steps should be taken to carry out the Public Health Act. Mr. Andrew Doyle, Poor-law inspector, attended by invitation. After a few words from Mr. Kent Jones convening the meeting, and a short speech from the chairman, Mr. Doyle spoke at some length, and said that, in his endeavours to have the intentions of the Public Health Act carried out, he had brought the Act under the notice of every board of guardians in his district, had attended every board throughout North and South Wales and Monmouthshire, and had submitted to them a scheme for the better fulfilling of the Act. In almost every case the boards had appointed sanitary committees. He had suggested to the guardians

that the medical officer of every district in North Wales should be appointed officer of health of his own district. He did that for reasons not necessary to explain more fully beyond saying that he had perfect confidence in the work being well done in this way. He considered these duties, however, not to be very formidable ; but he thought that by this time and the close of the year the medical officers of Health should, by the aid of the inspectors, make a complete report of the sanitary condition of the various parts of their districts. As to the question of emolument he could give no decided answer, as it would greatly depend on the amount of work to be done. He thought the medical gentlemen could very safely leave the question of remuneration to be determined at the close of the half year, for their spirit of liberality in accepting appointments upon such indefinite terms would not be lost upon the boards of guardians, and certainly not upon the Local Government Board.

A long conversation followed on Mr. Doyle's speech. In reply to a fear expressed that the duties of the medical officers would be "disagreeable", Mr. Doyle said that, as the treatment of the question had been altogether somewhat exceptional in Wales, he had asked the permission of the Local Government Board to recommend the guardians to treat the matter professionally, and to ask them to appoint inspectors of such a character as would be enabled to take upon their shoulders the most invidious part of the proceedings.

Dr. Hughes (Denbigh) said it appeared to him the medical officer of health would have to take the initiative quite as much as the inspector of nuisances. Unless this initiative were taken, and unless the medical officer acted independently, he did not know how, in the St. Asaph union, a full report could be obtained by the end of the parochial year.

Mr. Doyle said this duty was not prescribed, but if the medical officer would undertake and discharge that duty, the sanitary authority of the district, the public of the whole union, and the public of a much wider district, must be very grateful for that service ; and he could not conceive any reward too high for a medical officer who did that.

Mr. Kent Jones referred to the meeting of chairmen of boards of guardians in Oxfordshire, and recommended to them the scheme which the British Medical Association had advocated, the appointment of a superior medical officer, debarred of private practice, with district officers appointed under him. That was the scheme which the joint committee of the British Medical Association and the Social Science Association had pressed upon Mr. Stansfeld and Government with all their might and force ; and the members of the British Medical Association thought that ultimately it would be adopted.

Mr. Doyle said he would be happy, if adopted by the meeting, to recommend such a plan to the Local Government Board, but he thought it quite unnecessary.

The scheme was not supported energetically by any other member, and thus the opportunity for enforcing it was lost.

Mr. Wolstenholme moved—"That, in the opinion of this meeting, the scheme as proposed by the Local Government Board should be adopted, and that the union officers of districts be appointed health-officers in their respective districts."

In seconding the resolution, Dr. Hughes (Amlwch) thought it quite unnecessary and uncalled for that a superior central medical officer should be appointed.

The resolution was agreed to unanimously.

After further discussion, Dr. Hughes (Denbigh) moved—"That this meeting is of opinion that the office of officer of health should be accepted in the first instance to the close of the current parochial year, and that the remuneration be left to be determined at the end of such time."—This also was carried.

WARWICKSHIRE.

Mr. Henley, one of the Local Government Board Sanitary Inspectors, attended a special meeting of the Warwick Board of Guardians on Saturday last, to confer with the rural sanitary authorities of the union as to the adoption of the new Public Health Act. The Rev. T. B. Whitehurst presided. Several members of the Warwick Town Council and the Leamington Local Board were present, and also a number of *ex-officio* Guardians, including Lord Leigh, the Hon. and Rev. J. W. Leigh, Lieutenant-Colonel Machen, and Mr. J. O. Bacchus. Mr. Henley directed attention to the three salient features of the Act—the appointment of officers, the constitution of committees, and the expenses the Act would entail. He said he was glad to find the appointment of medical officer of health was not desired by union medical officers. They felt, as everyone who had considered the subject must do, that it would be extremely difficult for them to take an independent course in discharging their duties, because they would necessarily be brought into collision with neighbours, friends, and private patients if they accepted the office. Another objection to the appointment of union medical officers, would be the inconvenient number of medical officers of health. Nor would it be judicious to select one union medical officer for a district, as he would be sent into the districts of his colleagues, which would necessarily cause a good deal of heartburning and jealousy. He believed efficiency and economy would result from medical officers of health being appointed for extensive districts, with some common centre. As to inspectors of nuisances, except in peculiar cases, the Local Government Board would discourage the appointment of relieving officers, because, as they were generally registrars of births and deaths, and frequently vaccination officers, there would be danger, if they were appointed inspectors of nuisances also, that they might neglect the equally important duty of attending to the poor. He gave a special caution that, if parochial committees were appointed, their powers should be very closely defined, because, if they became involved in litigation, or incurred expenses which were not made special by the Act, the rural sanitary authority would be liable. He maintained that the additional expenses cast upon the country would be insignificant when spread over large areas, and that an equivalent advantage would be reaped in the increased healthiness of the community. He concluded by observing that, if boards of guardians did not fairly administer the present Act, the high sanitary party throughout the country would raise such an agitation and bring such pressure to bear upon Parliament, that a much more stringent measure would be sought, and probably obtained. It was decided that the question of administering the Act by the whole of the rural guardians or by a committee similar to the Union Assessment Committees should be considered at a special meeting next week.

THE BEDMINSTER UNION.

The Bedminster Union sanitary authorities have had a meeting to consider the means of carrying out the provisions of the Public Health Act. There was a large attendance of guardians. After a long discussion, in which Sir Arthur Elton advocated the appointment of "officers for a limited time over small areas and without large salaries", it was finally decided by a majority that as "there was was no likelihood of an epidemic breaking out", no steps should be taken for a month. It was still urged that an inspector of nuisances should be immediately appointed, to investigate sewage-works going on in the neighbourhood, and which could not otherwise be proceeded with. But it was overruled by the argument, "that they were already overburdened with expenditure in the Bedminster Union, and money was not so flush as to be paid away for services".

We venture to advise Sir Arthur Elton not to despise "what other boards are doing", and to examine the wise course of action pursued by the Oxford and Aylesbury Boards, and, by bringing his influence to bear on his fellow guardians, to induce them to accept a similar system of sanitary work.

THE POOR-LAW MEDICAL OFFICERS' ASSOCIATION AND THE PUBLIC HEALTH ACT.

At a meeting of the Council of the Poor-law Medical Officers' Association, held at the Medical Club, Spring Gardens, on Tuesday, at which the following parishes were represented, viz., Marylebone, St. Pancras, Bermondsey, Bethnal Green, Hackney, St. Ann and St. James, Westminster, Camberwell, Sydenham, and Shoreditch, the following resolutions in relation to Mr. Stansfeld's Public Health Act were unanimously adopted, the chairman's vote excepted :—"1. That, as the sanitary condition of any locality depends upon the condition of the houses which it contains, and especially those inhabited by the poorer classes, it is desirable that sanitary districts should not be too large or too unwieldly to be regularly and personally supervised by the health-officer. 2. That, as the poor-law medical officers are, by the sphere and nature of their duties, in a position to obtain the earliest and best information with regard to sickness in general, and the existence of epidemic disease in particular, as well as all conditions among the poor affecting the public health, such as the sanitary state of houses, the existence of nuisances, overcrowding, etc., the Council are of opinion that the appointment of Poor-law medical officers as health-officers affords the best prospect of the Public Health Act being carried out with success. 3. That the Council, having noticed with great regret the observations put forth upon various occasions of late to the effect that Poor-law medical officers are not competent to perform the duties of health-officers, and are unwilling to take such appointments for fear of offending influential persons who may have a pecuniary interest in the non-removal of nuisances, deem it necessary to repudiate both imputations. They desire, at the same time, to point out that

while the Act does not compel the appointment of the medical officers as health-officers (and no medical officer could be appointed against his will) it is much to be desired that the medical officers should be ready to fulfil the new and important duties prescribed in the recent orders of the Local Government Board if called upon to do so—a step that could not fail to raise the service in public estimation. 4. That, it appearing from recent speeches of the President of the Local Government Board that he does not share the views of those who deem the medical officers incompetent to perform the duties of health-officers, and repudiates the imputations of others that the medical officers would require protection in the discharge of their duties, the Council desire to place on record their grateful sense of the justice of the President's sentiments, which they believe to fairly represent the general feelings of the service. 5. That a copy of the foregoing resolutions be forwarded to the President of the Local Government Board and to the press."

SIR,—As President of the Poor-law Medical Officers' Association, the report of whose Council meeting held last evening you will in all probability publish in this week's issue, I trust you will permit me to explain why I was compelled to differ from the resolutions which were brought forward. It will be noted that not a single member of our provincial Councils was present, and, therefore, no one competent to appreciate and explain their position, which from actual experience and much correspondence I know to be absolutely and entirely different from that enjoyed by the metropolitan district medical officers in common with those of all large towns. The district medical officer in the metropolis and his *confrères* in provincial cities and populous places may fearlessly report the existence of overcrowding, and generally the neglect of sanitary requirements; because, if he affront the owner or occupier of such property, such owner is but an unit among, it may be, thousands in his locality. In rural districts and small provincial towns, the district medical officer lives among and by the very classes some of whose property he will have to condemn. Now it is competent for a provincial officer to report that such and such causes of disease exist in his locality if his functions end there, and he be not called on to determine what shall be done, with its consequent pecuniary outlay and certain resentment thereat.

Though thus compelled to differ from my friends of the London Council, I can understand and fully appreciate their sense of the injustice which has been done them since the passing of Sir B. Hall's Act, by their being the unremunerated medium through whose agency our several metropolitan medical officers of health have obtained reputation and emolument for their apparently painstaking earnestness in publishing information as to the unsanitary condition of their respective districts. On the other points referred to in the resolution I do not consider it necessary to touch, however much I may object to the conclusions. I am, etc., JOSEPH ROGERS.

33, Dean Street, Soho, November 27th, 1872.

*** Dr. Rogers shows by this letter, and in the wise, independent, and thoughtful course which he has taken throughout in this matter, a much greater political sagacity than the few gentlemen who show so very unwise a desire to swallow a barbed bait. The half-dozen gentlemen who met on the occasion were exclusively metropolitan. Placed in the centre of a great population, and able to appeal at once to a great central press of unmeasured influence, they were under circumstances altogether different from those of their provincial brethren. The Public Health Act does not apply to them at all, and we regret to find them playing so shallow and mischievous a part in a great question which deeply concerns others than themselves. The mass of professional opinion has shown itself decidedly opposed to them.

APPOINTMENTS OF MEDICAL OFFICERS OF HEALTH.

THE following appointments have been certified to us. We shall be glad to hear of others as they are made.

HEATON, Frederick L., M.B., appointed Medical Officer of Health for No. 1 District, Wrexham Union. Population, 15,493. Acres, 12,010. Salary, £35 *per annum*.

DAVIES, EDWARD, M.D., appointed Medical Officer of Health for No. 2 District, Wrexham Union. Population, 24,776. Acres, 45,864. Salary, £65 *per annum*. Dr. Heaton is not a Poor-law medical officer; Dr. Davies is.

The Rural Sanitary Committee of the Neath Union have appointed Mr. Haydon, of Ystalyfera, Swansea, their medical officer of health for the rural district for the parochial year ending March 25th, 1873, over an area of 157,103 acres. The salary will be fixed in March: the whole time of the medical officer will be devoted to the duties of the office. He will be required to live in the town of Neath.

The Chatham Local Board of Health have resolved unanimously not to avail themselves of a partial payment of their medical officer and inspector of nuisances from the Consolidated Fund, preferring to retain full control over the appointment, pay, and dismissal of their officers, which they would cease to have if they accepted payment of part of their salaries, which would give great controlling power to the Local Government Board.

At the usual monthly meeting, the Town Council of Bradford have agreed to appoint a public officer of health for the borough, at a salary of £500 a year, it being a condition that the gentleman appointed should resign his private practice, although he might hold another public office.

OBITUARY.

ARCHIBALD SIMPSON, M.D.

DR. ARCHIBALD SIMPSON was born in 1829, and was educated at the Grammar School of Aberdeen and at Marischal College, where he gained the highest mathematical and classical honours. He graduated in Arts in 1847, became a Member of the Royal College of Surgeons of Edinburgh in 1851, and M.D. Aberdeen in 1852. He afterwards spent three years in Egypt, as assistant to Dr. Ogilvie of Alexandria; and in 1825 went to Jerusalem as surgeon to the hospital established by the Society for Propagating Christianity amongst the Jews. This post he relinquished in a few months, on account of the bad health of his wife, and returned to this country. He settled in Islington as a general practitioner in 1857. His health began to fail about a year ago; and symptoms of thoracic tumour appeared, which rapidly increased. He died on November 11, at the early age of forty-two.

R. M. HICKMAN, M.R.C.S., NEWPORT, SHROPSHIRE.

THE death of Mr. Hickman took place on the 12th instant. On the previous day, while he was driving to see his patients, his mare had run away; and, in attempting to jump from the gig, he fell on the back of his head, and so fractured his skull. Consciousness departed at once, and never returned.

Mr. Hickman was twenty-nine years of age, and his death is greatly regretted in the neighbourhood. He was educated at Shrewsbury School, and he pursued his medical studies at King's College, London. Six years ago, the late Dr. Baddeley began to feel the need of assistance in his extensive practice, and Mr. Hickman came to help him. Dr. Baddeley's health failed rapidly, and the whole burden of the practice fell upon Mr. Hickman by the time he was twenty-four years of age. He was soon recognised as not only a promising practitioner, but a most estimable man—intelligent, honourable, good, and eminently amiable.

JOHN DAVIES, M.D., PHYSICIAN EXTRAORDINARY TO THE GENERAL INFIRMARY, HERTFORD.

JOHN DAVIES EDWARDS was born in November 1796, at Llanbadarnfawr, near Aberystwith. He was the son of Mr. John Edwards, a respectable farmer. He was articled to Mr. Evans, surgeon, Aberystwith, and at the end of his apprenticeship he entered as a student of St. Bartholomew's Hospital in 1819, and subsequently engaged himself as assistant to Mr. W. Thomas, of Bishop's Hatfield, whose sister he married. A few years afterwards he settled in practice in Somers Town. He had been commonly called John Davies by all at school, and on entering his profession he dropped the name of Edwards.

His residence in Somers Town was but short; and about forty years ago he settled in Hertford, where he remained till his death. He was a Doctor in Medicine of the University of Aberdeen, a Member of the Royal College of Surgeons, a Fellow of the Royal Medical and Chirurgical Society, and a Director of the Philomathic Institution. He was for some years principal editor of the *London Medical and Surgical Journal*. He translated a *Manual of Materia Medica and Pharmacy*, from the French of Edwards and Vavasour in 1831; published *Selections in Pathology and Surgery*, 1842; *Use of Iodine Locally Applied*, 1843; *Exposition of the Laws which relate to the Medical Profession*, 1844; and was a contributor to the medical journals.

Dr. Davies was Physician Extraordinary to the Hertford General Infirmary. For many years he was Surgeon to the Herts Militia, and to the County Prison and House of Correction; Medical Visitor to Hadham Lunatic Asylum; Surgeon to the Herts Reformatory; and for several years Inspector of Recruits. Dr. Davies was Mayor of Hertford during 1835, when the new municipal act came into force. He was an Alderman in the new corporation, and was Mayor for the

second time on November 9th, 1841. For more than twenty years he has been a Justice of the Peace. His death took place at the age of 76 after a day's illness, characterised by a succession of epileptic attacks.

ROBERT TANNER, M.R.C.S.Eng.

MR. TANNER, who died at Painswick, near Stroud, on October 15th, was born in Wiltshire in 1800. After receiving his preliminary education at Andover, he served as a pupil under the late Mr. Corfe, of Southampton, and afterwards studied at St. Bartholomew's Hospital under Abernethy. He passed the College of Surgeons in 1824, and commenced practice in Vere Street, Oxford Street, whence he removed a few years later to Manchester Street. Here he remained till 1856, when his health failing, by the advice of his medical friends he retired from active practice. His death took place after a fortnight's illness from pericarditis and pneumonia.

DAVID LESLIE, M.D.

DAVID LESLIE was born in 1809 at Amagh. He received his medical education at Glasgow and Edinburgh, and obtained his diploma as Licentiate of the Royal College of Surgeons in Edinburgh at the age of 16 in 1825. For several years he studied in Paris. In 1861 he obtained the degree of M.D. at Glasgow, and five years afterwards he became a Licentiate of the Society of Apothecaries of London. He was a Fellow of the London Medical Society, a Member of the Hunterian Society of Edinburgh, and a Member of the Archæological Society of Ireland. He died in London on October 19th. He contributed articles to the *Edinburgh Medical Journal* in 1861-3 on "Vital Selection," etc.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners, on November 13th.

Anderson, Richard John, M.D. Queen's Univer., Irel., Newry
Branfoot, Henry Seymour, King's Lynn
Davis, Arthur Percy, Fowey, Cornwall
Evans, John, L.S.A., Dowlais
Fenn, Ernest Harold, Grafton Street
Hall, Frank Algernon, Newmarket
Haslam, William Doidge, Little Missenden, Bucks
Hewett, Frederick C. C., L.S.A., Twickenham
Hudson, John, Horsforth, near Leeds
Humphreys, Henry, L.S.A., Hackney
Jacobson, Walter H. A., Chester
Jepson, Edward, Durham
Jewesbury, Charles Frederick, Gloucester
Lidbetter, Thomas George, L.S.A., Framfield, Sussex
M'Monagle, Joseph, M.D. New York, St. John's, New Brunswick
Odell, William, L.S.A., Hertford
Piers, Charles Edward, Cape of Good Hope
Runcorn, Henry, L.S.A., Manchester
Vaughan, D. W. Jones, Narberth
Winterbottom, Augustus, Sloane Street
Wright, Frederick Wade, Leeds

The following gentlemen were admitted members on November 14th.

Bower, Reginald, Knowle, near Birmingham
Bowes, John Ireland, L.S.A., Elham, Canterbury
Buck, William Elgar, M.B. Cantab., Leicester
Cornelius, Walter Barnard, Canonbury
Crookshank, Harry M., L.K.Q.C.P.I., Shepherd's Bush
Davies, Hugh Walter, Dorset Street, Portman Square
Dixon, Thomas James, L.S.A., Graaf-Reinet, Central Africa
Edwards, Alfred, L.S.A., Scilly Islands
Fisher, John, Little Massingham, Norfolk
Henderson, William, M.D. Edin., Exeter
Horner, Arthur Claypon, Everton, Beds
James, Arthur Culver, L.S.A., Kennington Park Road
Marlott, Charles William, M.B. Toronto, Ontario, Canada
Penny, George Town, Bridgefield, Lancashire
Randall, Wyndham, Bridgend, Glamorgan
Scobell, Henry, Plympton St. Mary, Devon
Spencer, Edward Richard, L.R.C.P.Ed., Keystone, Hunts
Underwood, Thomas F. K., Gower Street
Wagstaff, Thomas Henry, L.S.A., Ilchester, Somerset
Warden, Charles J. H., Bayswater
Watson, Charles R., Sydney, New South Wales
Whitfield, William J. C., Bristol
Young, John, Narborough, Leicestershire

Of the eighty candidates examined on the 12th, 13th, and 14th inst., thirteen failed to satisfy the Court of Examiners, and were referred for a period of six months to further professional study.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 21st, 1872.

Brown, Frederick Warren, Uppingham
Hill, Thomas Wood, South Kensington
Measures, John William, Holloway
Wilson, Samuel, Newcastle-upon-Tyne

The following gentlemen also on the same day passed their primary professional examination.

Burchell, Edward, Leeds School of Medicine
Tomlin, Robert Francis, Guy's Hospital
Trevor, Frank Wollaston, Guy's Hospital

[In the list published in the JOURNAL of November 16th, "Cowfield, Thomas", should be "Comfield, Thomas."]

MEDICAL VACANCIES.

THE following vacancies are announced:—

ADDENBROOKE'S HOSPITAL, Cambridge—House-Physician.
BANBURY UNION, Oxfordshire—Medical Officer and Public Vaccinator for the Banbury District: £102:16 per annum, and vaccination fees.
BOARD OF TRADE—Medical Inspector of Emigrants: £300 per annum.
CHARING CROSS HOSPITAL—Chloroformist.—Demonstrator of Anatomy.
COVENTRY AND WARWICK HOSPITAL—House-Surgeon: £80 per annum, board and lodging.
HALIFAX UNION—Medical Officer for the Ripponden District; £25 per annum.
HUNTINGDON COUNTY HOSPITAL—House-Surgeon; £60 per annum, board and lodging.
INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
KILKENNY UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Gowran Dispensary District: £100 per annum, and fees.—Medical Officer for the Gowran Fever Hospital: £30 per annum.
LEITH HOSPITAL—Assistant-Surgeon.
MEATH INFIRMARY, Navan—Apothecary, Secretary, and Registrar: £52:13:8 per annum, furnished apartments, coal, and gas.
MITCHELSTOWN UNION, co. Cork—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kildorrery Dispensary District: £100 per annum, and fees.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, Bloomsbury—Assistant Physician.—Surgeon.
NAVAL MEDICAL SERVICE—Assistant-Surgeons.
NORTH AYLESFORD UNION, Kent—Medical Officer for the Strood District and the Workhouse: £175 per annum.
OWENS COLLEGE, Manchester—Assistant Lecturer in Chemistry and Junior Demonstrator in Chemical Laboratory: minimum income, £250 per annum.
ROYAL FREE HOSPITAL, Gray's Inn Road—Junior House-Surgeon.
ST. GEORGE (Hanover Square) DISPENSARY—Temporary Resident Medical Officer.
ST. THOMAS'S HOSPITAL—Medical Registrar.—Surgical Registrar.
SCARIFF UNION, co. Clare—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Feakle Dispensary District: £100 per annum, and fees.
SHEFFIELD GENERAL INFIRMARY—Assistant House-Surgeon; £65 per annum, board, lodging, and washing.
SLIGO UNION—Apothecary to the Sligo Dispensary: £100 per annum.
SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth—House-Surgeon.
TIVERTON UNION, Devon—Medical Officer for the Workhouse: £30 per annum.—Medical Officers for the Eastern, Cadbury, and Washfield Districts: £70, £27, and £15 per annum, and fees respectively.
WOODBRIDGE UNION, Suffolk—Medical Officer and Public Vaccinator for District No. 4: £78 per annum, and extra fees.
WORCESTER GENERAL INFIRMARY—House-Surgeon: £100 per annum, board, and lodging.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

COLBOURNE, Louis, M.B., C.M., appointed House-Surgeon to the British Hospital, Buenos Ayres.
PHILPOT, J. H., M.B., appointed House-Physician to King's College Hospital.
RAE, W., Esq., appointed House-Surgeon to King's College Hospital.
SPENCER, Lawrence W., Esq., appointed Resident Accoucheur to King's College Hospital.
*WRIGHT, J. Frederick, Esq., appointed Assistant Medical Officer to the Hanwell Lunatic Asylum.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

DEW, John W., Esq., Surgeon, at Holmo, Spalding Moor, Yorkshire, on Nov. 8th.
GRIFFITHS, Griffith H., M.D., at Cheltenham, aged 49, on November 19th.
HAY, Richard C., Esq., Surgeon, at Leeds, aged 79, on November 22nd.
*MAUGHAM, William, M.D., at Carnarvon, aged 40, on November 23rd.
*POWNALL, John, Esq., Surgeon, at Altrincham, aged 63, on November 18th.

SANDRINGHAM HOUSE.—During the recent absence of His Royal Highness the Prince of Wales from Sandringham, the London and General Water Purifying Company received orders to apply their system of filtration throughout the establishment, and they completed the operation on Saturday last. It may, therefore, be considered that the danger arising from the former impurity of the water is now removed.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. E. S. Thompson. "A Case of Pneumothorax with Empyema, necessitating Operation"; Dr. Sansom, "A Case of Infantile Paralysis treated by the Continuous Current"; Dr. Douglas Powell, "A Case of Mediastinal Tumour"; Mr. Thomas Bryant, "Fracture of the Neck of Thigh-bone".

TUESDAY.—Pathological Society of London, 8 P.M. The following specimens will be exhibited. Mr. Butlin: Molluscum Fibrosum—a living subject. Dr. Julius Pollock: Obstructed Circulation in the Left Arm, with Wasting—a living subject. Dr. C. T. Williams: Mediastinal Tumour, and Dilatation of the Bronchi. Mr. Nunn: Cast of the Lower Extremity, showing Curvature of the Femur. Mr. Arnott: Epithelioma of the Labium Pudendi in a girl aged 20. Dr. Robert King: Extreme Aortic Stenosis. Dr. Robert King: Stomach from a Case of Poisoning by Hydrofluoric Acid. Dr. Goodhart: Cancer of the Tonsil. Dr. Silver: Fatty Degeneration, with Calcification of the Pancreas, from a Case of Diabetes. Mr. Spencer Watson: Five Recurrent Fibroid Tumours—the sequel of a case previously reported to the Society.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Dr. Edis, "On the Systematic Examination of the Abdomen, with a view to the Rectifying of Malpositions"; Dr. Squarey, "On Flexions of the Uterus"; and other papers. —Royal Microscopical Society, 8 P.M.

THURSDAY.—Hunterian Society. 8 P.M.: Open Meeting. 7.40 P.M.: Council Meeting.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. SLEMAN (Tavistock).—We really have no knowlege of the subject; it is a purely legal query.

DR. PALEMON BEST.—Unsigned articles, correspondence, reports, etc., are paid for by weekly medical journals; but not signed articles.

MR. HAWORTH (Filey).—We think that, under the circumstances described, a visit from the gentleman named would have been a very small recognition of an act of great kindness.

DR. WESLEY (Wetherby).—The paragraph is in bad taste; but we do not think that any proceedings could be instituted with respect to it.

DR. ATTHILL (Dublin).—The paper on dilatation of the cervix uteri shall appear next week.

GREEKLAND (Halifax) should communicate with the President or Registrar of the Royal College of Physicians.

DR. THOMPSON (Leamington).—The letter has arrived as we are going to press (Thursday evening). A second report on the water supply and on typhoid fever in Leamington is in hand, and will appear next week. If Dr. Thompson be then of opinion that any further statement is necessary to do full justice to all the aspects of the case, our columns shall be open to him.

OWING to the great pressure on our space for the publication of matter relating to current proceedings having reference to the Public Health Act, we are compelled to postpone the publication of the second part of the review of works on Modern Surgery, and letters and papers from Mr. Greenway, Mr. Jeaffreson, Mr. G. E. Norton, Dr. Thompson, and others.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

DR. EMBLETON'S paper will have early insertion.

IT is much to be regretted that Dr. Charles Kidd thinks so poorly of the judgment and knowledge in respect to anæsthetics of Dr. Jones, Dr. Morgan, Dr. Wynter, Dr. Poore, Mr. Lister, and "all the journals". We do not understand from his book, or from his letters, what prize he has received, when or where it was presented to him, what was the amount of it, or by whom awarded, or for what. As, however, "he has been connected with every medical journal in London and Dublin", he can hardly have lacked opportunities of making known his own views.

MR. SUTCLIFFE (West Bromwich).—We do not see how, in the private transfer of a practice, public appointments can be so included as to make it wrong for others to apply for a death vacancy.

CASES OF MEDICAL ETIQUETTE.

MR. KEMPTHORNE (Callington); Mr. LEEDS (Sheffield).—Acting upon what we conceive to be the spirit of a recent resolution of the Committee of Council, we would suggest to our correspondents to lay the subject of their letters before the Councils of their respective Branches, before bringing it under the notice of the Editor.

EXTRAORDINARY FECUNDITY.—The following is a copy of a newspaper paragraph, cut out some time ago. "The *Northern Ensign* states that a shepherd in the parish of Latheron, named Cameron, who has reached the patriarchal age of seventy-six, has just become the happy father of his fourth child since he passed his seventieth year. When seventy years old, he was married for the second time; and the produce of the second marriage has been four thriving 'coasters'."—S. H.

ANDREWS *v.* STYRAP.

SIR,—The reproduction of the decision reported in the *Law Times* (before Martin, Bramwell, and Pigott, B.B.) in the case of Andrews *v.* Styrap, as given in the BRITISH MEDICAL JOURNAL of November 16th, is very satisfactory, because it brings the whole of the proceedings in this important case before the eyes of the profession, who seldom or never read the law reports. I hope, too, it may be the means of inducing our representatives to introduce a Bill into Parliament, making Clause 40 of the Medical Act simpler and more effective. For instance, "practising without having a registerable title", or not being on the list of the Registrar, should be liable to the penalties "as enacted in Clause 40." There is one main point omitted from the account; and that is, the *cost* of the proceedings in this case. A considerable sum was contributed by the profession, specially for this prosecution; and it would now be satisfactory to the subscribers to know how the money has been expended. Besides, it would enable others, before entering into a similar prosecution, to count the cost thereof. The prosecution of quacks should not be thrown upon private individuals. We pay for our licence to practise, and for being placed upon the *Register;* and those who take our money ought to protect us in the legitimate use of our diplomata. I am, etc.,

November 1872. D.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Nov. 23rd; The Manchester Guardian, Nov. 27th; The Ulster General Advertiser, Nov. 23rd; The Bath Express, Nov. 23rd; The Scotsman, Nov. 25th; The Pembrokeshire Advertiser; The Lincolnshire Chronicle; The Norwich Argus; The Orkney Herald; The Yorkshire Post, Nov. 25th; The Western Daily Times; The Lincoln Journal; The Oldham Evening Express; The Oldham Standard; The Western Daily Press; The Birmingham Daily Post, Nov. 23rd; The Leeds Mercury; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. George Johnson, London; Dr. Cheadle, London; Mr. Callender, London; Mr. J. F. Wright, Hanwell; Mr. H. Smith, London; Dr. Warburton Begbie, Edinburgh; Mr. Sutcliffe, West Bromwich; Dr. C. Kidd, London; Dr. Thomas Jones, London; Mr. L. Armstrong, Newcastle-upon-Tyne; Mr. R. M. Mann, Manchester; Dr. B. Foster, Birmingham; Mr. Kempthorne, Callington; Mr. Lawson Tait, Birmingham; Dr. Little, London; Dr. Dickinson, London; The Secretary of the Hunterian Society; Mr. Leeds, Sheffield; The Secretary of the Obstetrical Society; Mr. George Lawson, London; Dr. Schliep, London; The Secretary of the Royal Microscopical Society; Mr. R. H. B. Nicholson, Hull; An Associate; Dr. Radcliffe, London; Mr. Jeaffreson, Newcastle-upon-Tyne; The Secretary of the Clinical Society; Mr. Blandford, Ferry Hill; Mr. Manson, Howden; Dr. Playfair, London; Mr. Waley, London; Mr. Haydon, Ystalyfera; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. Wanklyn, London; Dr. Finlay, Helensburgh; Mr. Colbourne, London; Mr. J. R. James, Aberayron; Dr. Pryce, Bournemouth; Mr. D. Kent Jones, Beaumaris; Mr. Birt, Leamington; The Secretary of the Pathological Society; Mr, Jessop, Leeds; Mr. P. H. Holland, London; Dr. Embleton, Newcastle-on-Tyne; Dr. Haussmann, Berlin; Mr. S. J. Smith, Enfield; Dr. Chevallier, Ipswich; Dr. Thompson, Leamington; Dr. Rendle, London; Dr. Lombe Atthill, Dublin; Mr. Greenway, Plymouth; Mr. Dunkley, Stoke-on-Trent; Mr. E. J. Hay, Leeds; Dr. McSwiney, Liverpool; Mr. Adams, Maidstone; Mr. Comfield, Chigwell; Dr. Trollope, St. Leonards; Dr. Parsons, Dover; Mr. C. Roberts, London; Mr. W. James, Smitterfield; Mr. Sleman, Tavistock; Mr. G. E. Norton, London; Mr. G. Gregson, Sandon; Mr. Haworth, Filey; Mr. V. Jackson, Wolverhampton; Mr. Haynes Walton, London; Mr. Dew, Holme; Dr. Palemon Best, Louth; Dr. O'Sullivan, Cork; Mr. G. W. Knight, Northampton; Mr. Tallach, Norwich; Dr. Joyce, Rolvenden; Mr. Hodgson, Brighton; Mr. Groves, London; Mr. Kealy, Gosport; Mr. Liddell, Newcastle-on-Tyne; etc.

CLINICAL LECTURES

DELIVERED IN

THE OUT-PATIENT DEPARTMENT OF THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

By W. B. CHEADLE, M.D., F.R.C.P.,
Assistant-Physician to the Hospital; Senior Assistant-Physician to St. Mary's Hospital; etc.

III.—Meningitis.

Case.—*Constipation,—Vomiting.—Retraction of the Neck.—Insensibility of Pupils.—Hydrocephalic Cry.—Convulsions.—Squinting.—Insensibility.—Blindness.—Treatment by Iodide of Potassium.—Complete Recovery.*—Instances of recovery after symptoms of cerebral inflammation in children, of so serious a character as those which have occurred in the case of this little girl, Charlotte B., are extremely rare. In drawing your attention to her condition from time to time during the past six months, I have been careful to warn you that the improvement which appeared so marvellous might be unreal and delusive after all, and that some sudden access of convulsions, paralysis, and coma, might put an end to all the hopes excited by the seeming success of the treatment which had been adopted. But it has not been so; there has been no relapse. With the exception of some imperfection of vision still remaining, the child is now—more than six months since the first onset of the disease—to all appearance perfectly well. The improvement has been so uninterrupted and steadily progressive for so long a time, that I believe it is real and substantial, and that this will prove one of those rare instances of complete recovery from the meningitis of infancy.*

Before I say more upon this subject, however, let me briefly relate the history of this case for the benefit of those who have not been able to follow it closely throughout its course. Some of you will remember the condition of the child when she was first brought here on the 5th February. She was at that time seven months old, and at the breast, a plump and well nourished child. She lay taking no notice, with her head drawn rigidly back towards the spine. The pupils were somewhat dilated, oscillating slightly only under the stimulus of strong light. Although but half conscious to ordinary impressions, she screamed on being touched, and resisted all attempts to feel the pulse or listen to the heart. These symptoms had lasted several days, and had been preceded by constipation and severe vomiting. There had been no convulsions; there were no signs of teething; the abdomen was not sunken; the tongue was thickly coated, and the stools were reported to be very dark and offensive. The child could with difficulty be persuaded to take the breast. She was in a state closely corresponding to what is described as the second stage of acute hydrocephalus, when effusion has commenced as a result of the cerebral inflammation.

With a view of increasing the action of the bowels and relieving vomiting, rather than of obtaining any specific effect of mercury, a grain of grey powder was ordered three times a day. Four days afterwards, there seemed some small change for the better; the neck appeared less rigid, the bowels were more open, and the child took food with less difficulty; otherwise the condition remained unchanged. The grey powder was continued in doses of from half a grain to one grain three times a day for ten days, at the end of which time the condition of the patient was highly unsatisfactory. The head was still rigidly retracted, the pupils dilated and insensible, the vomiting constant. The bowels were indeed more regular, but against this gain was to be counted the supervention of another grave and significant symptom—the child, which lay perfectly quiet and half unconscious when still, uttered violent piercing screams when it was moved. The prognosis was extremely unfavourable. Two grains of iodide of potassium were now ordered to be given every six hours in two teaspoonfuls of carraway water; and this was continued for a week, the medicine being generally retained, although vomiting continued after food, and on being moved. No change was noted, however, until another week had elapsed, when the case seemed still more hopeless. The mother stated that the vomiting had become more incessant; for the last two days the medicine had been rejected as well as food, and squinting and convulsions had occurred the day before. The child was paler, and insensible to all external impressions. In the hope that the medicine might be retained if the quantity of fluid given at a time were reduced, a grain and a half of iodide of potassium in a drachm of carraway water was ordered to be given every two hours. This treatment was, I believe, faithfully carried out by the mother, who is a very respectable, intelligent woman, willing to do anything which might save her child, and duly impressed by my urgent exhortations that the strict observance of my directions afforded the only possible chance of success.

When the child was again brought in the course of four days, there appeared for the first time some decided improvement; the vomiting had ceased, and the dilated pupils showed some slight contraction under strong light: the neck was still, however, rigidly drawn back. The improvement thus set in continued steadily, the medicine being still regularly administered every two hours. The child began to take food more readily; the stiff retracted neck gradually relaxed, and at the end of a fortnight she was able to sit up, became very restless and irritable, began to take notice of noises, and of her mother's coaxing and endearments. On careful examination by repeated experiments, it was ascertained that she was completely blind. The pupils remained only very slightly sensitive to light. The pulse, which was examined for the first time, was found to be about 100.

The iodide of potassium was continued in the same doses and with the same frequency for nearly three months, without any signs of iodism, except a certain amount of running at the eyes and nose. The patient progressed favourably, grew fat, began to utter intelligible sounds, and was in fact by this time perfectly well, with the exception of being absolutely blind. Gradually after this, however, sight began to return; the child would catch vaguely and unsuccessfully at any bright object waved before its eyes; and this improvement has gone on until she now sees with tolerable clearness, and can lay hold of things put before her with accuracy and certainty. As soon as it was discovered that the loss of perception through the eyes was something more than a passing manifestation of the general insensibility to external impressions—that since, as the sensorium regained its powers, the sense of sight did not return, while the senses of hearing and of touch returned, the fault must be in the eye itself or its special nerve, not in the brain—an examination was made with the ophthalmoscope. Mr. Walton, who was kind enough to conduct this for me, ascertained that the optic discs were exceedingly vascular and the veins large, as in optic neuritis in the stage of recovery. There was no sign of retinitis, no deposit in the choroid. The ophthalmic examination was not, however, satisfactorily effected until sight had in great measure been restored; several previous attempts having failed, owing to the extreme restlessness and irritability of the young patient when under manipulation.

You will perhaps have observed that I have restricted myself to the general term "meningitis" in speaking of this case; and I have done so purposely, because I am unable to offer any positive opinion that the cerebral inflammation which certainly existed was associated with tubercle. The terms tubercular meningitis and acute hydrocephalus are used somewhat loosely; and I wish to point out to you that not only are there several distinct affections exhibiting very similar symptoms, but in which there is no organic affection of the brain, which are constantly mistaken during life for cases of acute hydrocephalus, but also that the term is made to include several distinct morbid conditions of the brain and its membranes—that is, there are several diseases which simulate acute hydrocephalus, and acute hydrocephalus comprises distinct morbid conditions of the encephalon. By many, the designation of acute hydrocephalus or tubercular meningitis is applied to any case accompanied by cerebral symptoms in children, while by a few authorities these terms have been more carefully restricted to inflammation of the cerebral membranes, associated with the deposit of tubercle. The result of this discrepancy has been a wide difference of opinion as to the fatality of the disease. Some statistics, collected by Sir Thomas Watson from various sources, show an average mortality of one in four only. Dr. West, on the other hand, declares that he has never met with a single instance of recovery from advanced acute hydrocephalus (using the term clearly as synonymous with tubercular meningitis); that he has known but one in which the child got well after the second stage had commenced; and that he has seen but very few which ended favourably, even though they came under treatment in the very earliest stage. M. Guersant of Paris, whose experience was very large, regarded the prognosis of tubercular meningitis as equally serious, and affirms, in a passage quoted by Dr. West, that "tubercular meningitis may sometimes recover in the first stage, though the nature of such cases is always more or less doubtful. In the second stage, I have not seen one recover out of a hundred. As to patients in whom the disease has reached the third stage, I have never seen them improve even for a moment". Bouchut, who has studied the subject of tubercular meningitis with minute care, agrees that the majority of the recoveries which take place are from the first stage, rarely from the second, yet that some have been recorded in the third. Niemeyer mentions only

* This prediction has been verified. The child remained completely well when last seen (February 1872), twelve months from the commencement of the attack.

two cases of recovery from undoubted tubercular meningitis; and Trousseau declared he had seen but two instances in his extensive experience, in one of which the diagnosis was subsequently verified by *post mortem* examination, the child having died of some other disease a few months afterwards.

Now, the writers who take so desponding a view are speaking of the tubercular disease only, while the more sanguine are those who have been less precise in their definition, and have probably included under the term hydrocephalus various forms of cerebral disturbance which closely resemble tubercular meningitis in symptoms. And then most of the recoveries have been in the first stage; and, as Guersant remarks, the nature of such cases must always be to a certain extent doubtful. Sir Thomas Watson shrewdly guesses that, in many of the so-called recoveries from acute hydrocephalus, the disease has been what he terms simple encephalitis—not dependent on tubercle; and I think we might go further, and say that in many there has been no inflammation of the brain or its membranes at all. Trousseau, indeed, accounts for the apparent success of certain practitioners in dealing with this disease, by the supposition that they have mistaken for it typhoid with cerebral symptoms. The more strict observers are unquestionably right according to my experience: true tubercular meningitis is almost always fatal. I have seen one case only in which the disease had advanced so far that the diagnosis could not be mistaken, in which apparent recovery took place for a time; but the patient eventually fell a victim to the same disease, which shortly returned with fatal severity. And yet it seems absolutely certain that complete recovery has resulted in a few rare and exceptional cases. Whether the one before us must be ranked as one of true tubercular meningitis is an interesting problem, but one which we shall not find it easy to solve with certainty. That there was meningitis there can, I think, be no reasonable doubt; but, then, was this set up or accompanied by tuberculosis?

Let me explain to you first why I believe the case to have been one of acute hydrocephalus—not some form of disorder simulating it—and then we may attempt to determine with which form of that disease it may be classed.

There is such a vast difference in the danger involved in the several diseases simulating acute hydrocephalus, and that disease itself, that it becomes a matter of extreme importance to distinguish one from the other during life. The diagnosis is often difficult in the earlier stages; yet I think it can generally be made. With regard, however, to the recognition during life of the different forms of acute hydrocephalus itself, the difficulties are extreme; but they have been separated in the *post mortem* room, and the task will become easier now. The diseases which simulate acute hydrocephalus are three—viz., the simple convulsions of childhood, typhoid fever (the infantile remittent of the old authors), and what is usually called false hydrocephalus—that condition of insensibility accompanied by convulsion which occasionally supervenes upon protracted vomiting, diarrhœa, or starvation.

Now, if we compare the case which I have made the text of this lecture with each of these, and examine the evidence carefully, we shall be able to see at once that it presents essential points of difference from all of them. First, then, the case was not one of simple infantile convulsions, due to reflex irritation, without any primary lesion of the encephalon. The age of the patient, when the irritation of teething or intestinal disorder readily stirs up excited action of the cerebro-spinal centres, alone favours such a view: but there were no signs of teething, and, indeed, the child did not cut a tooth until five months afterwards. Then, again, in infantile convulsions, the attack comes on suddenly, and is not preceded by a long train of previous symptoms. The convulsion is the first, or one of the first, symptoms. This is followed by a period of insensibility of short duration only; unless, as sometimes happens, the convulsive seizures succeed each other at short intervals, when consciousness may not return for a considerable time. Yet this insensibility is not in itself of a persistent kind; its continuance is due to the constant renewal of the comatose state by successive attacks of convulsion. The stupor is due to the convulsion; it follows it and passes off shortly afterwards, unless reinduced by a recurrence of the exciting cause—viz., by a fresh convulsion. Since, then, in the simple convulsions of childhood the cerebral symptoms are not indicative of any primary lesion of the encephalon, but depend solely upon the condition of the brain, produced by the epileptiform attack—and in the case before us, as you will remember, no convulsion occurred until three weeks after the child was first observed in a semi-comatose condition—it is clear that the cerebral symptoms could not be due to this cause, but to some primary affection of the brain or its membranes. As additional proof, if any were needed, I may point out to you that persistent, rigid retraction of the neck, incessant vomiting, and intolerance of movement, are not met with in simple convulsions. It is equally clear that the disease was not typhoid fever. The symptoms of this disease are often greatly modified in children, and at the outset closely simulate the invasive stage of acute hydrocephalus. There is often little or no purging at first, or indeed throughout; and the characteristic spots are not uncommonly entirely absent. The disease is usually less severe, and runs a shorter course. The absence of diarrhœa and of rose spots would not, then, be sufficient in themselves to prove this case was not one of abortive typhoid; but the dark offensive scanty stools, the moist, thickly coated tongue, the continued vomiting, the retraction of the neck, the blindness, and the duration of the attack, are in striking contrast to the light watery motions, the dried tongue, the transitory sickness, the muscular relaxation, and the definite shorter course of the enteric fever: and then typhoid is, as far as I know, never met with in the first year of infancy.

The remaining disorder, which might be supposed to have deceived us, is that state of convulsion and semi-consciousness which sometimes follows diarrhœa, or other exhaustive drain upon the system. It is due, no doubt, to anæmia of the brain and cord, and is closely allied to the convulsions and paralysis which result from excessive bleeding or extreme starvation. That such was not the condition in this case, is at once shown by the well-nourished state of the patient, and by the history. Neither anæmia nor wasting existed, nor had there been any antecedent flux or malnutrition to produce them, for the vomiting was not sufficiently constant and was of too short duration to have given rise to any serious results of this kind.

[*To be continued.*]

REMARKS ON THE MECHANICAL DILATATION OF THE CERVIX UTERI.

By LOMBE ATTHILL, M.D.Dubl.,
Fellow and Examiner in Midwifery in the King and Queen's College of Physicians of Ireland; Obstetric Physician to the Adelaide Hospital, Dublin.

THE practice of dilating the cervix uteri, in the treatment of certain affections of that organ, is now so common, that too great importance can hardly be attached to the consideration of the best method of accomplishing it. Dr. Matthews Duncan has, therefore, done good service in publishing his scientific researches thereon; but from the conclusions which he deduces from them I must most emphatically dissent on two grounds—namely, the results of his own experiments and of experience. I think I may assume that, the more nearly we can imitate the action of Nature in the production of any artificial process for the cure of disease, the more safe and satisfactory will be the result.

Dr. Matthews Duncan, in the able article which has just appeared from his pen on the subject under consideration, says that the uterus during pregnancy expands, by what he in a few lines before terms "a vital action", "so as to remove the smallest active pressure on its contents". To this "vital action" he attributes the effect produced by the sea-tangle tents. To quote his own words: "In ordinary cases the tangle does not expand by exerting force, but, a length of time—at least some hours—being allowed, through some vital change in the tissues touched. The superiority, then, as an expander in ordinary cases of a tangle over a metallic tent lies chiefly in this—that, while the metallic tent cannot enlarge, the tangle-tent does enlarge, and follows the expanding tissues and produces a further expansion in the same, but now also continuous, manner as the limited amount of expansion produced by a metallic tent is effected." To allow the metallic tent to arouse this vital action, "hours at least" must, by Dr. Duncan's own showing, be allowed. But Dr. Duncan in a preceding paragraph says, in speaking of the bougie, "here the shortness of time used excludes vital relaxation or yielding, or nearly so". Therefore Dr. Duncan, in recommending the use of the bougie in gynæcological practice, deliberately recommends that process which, by his own showing, directly violates the laws which Nature follows in dilating the cervix.

In this city, the practice of dilating the cervix uteri by means of tangle-tents has been adopted almost universally for several years past. In my own practice no unpleasant symptom has followed their use, nor have I yet met with a case which resisted their action. I do not mean to say that serious consequences may not follow their use, because, where predisposition to disease exists, the most trifling interference may be followed by such; but in a tolerably extensive practice such have not occurred to me, and I think I may safely infer that such cases are rare. In America, however, where dilatation of the cervix by graduated metallic bougies is extensively practised, serious and even fatal consequences are not uncommon; nor can that be a matter of wonder when it is borne in mind that, "the vital action" being disregarded, a rigid unyielding muscle is forcibly expanded in a few moments. That rupture of some of the muscular fibres takes place, we may assume as most probable; that the peritoneal covering of the uterus is injured in some cases,

seems certain. Thus Dr. Thomas of New York some time since published the particulars of a case in which, after the introduction of three of Peaslee's dilators, fatal peritonitis followed.

One other point in Dr. Duncan's paper demands notice. I have ever taught that no actual force should ever be used in attempting to introduce the uterine sound; and I believe the most serious consequences will ensue if, following the practice of Dr. Matthews Duncan, practitioners unskilled in the use of the instrument exert a force capable of bending it. I introduce the uterine sound daily, and have done so for years, but never yet perceived the most trifling bending. I would repeat here what I have already said in my published *Lectures* (p. 11): "If any obstruction occur, it should be overcome by gentle continuous pressure; force must not on any account be used, lest injury be done to the uterine walls. Better far that you should never introduce it, than that you should run the risk of injuring the uterus, and perhaps cause a fatal result by doing by force what should only be accomplished by tact."

ILLUSTRATIONS OF THE SURGICAL USES OF THE PNEUMATIC ASPIRATOR.*

By T. R. JESSOP, F.R.C.S.,

Surgeon to the Leeds General Infirmary, and Lecturer on Surgery at the Leeds School of Medicine.

AMONGST the many valuable additions which have been made within recent years to the means whereby the physician or surgeon is enabled to diagnose and treat disease—some of which, indeed, such as the stethoscope, the ophthalmoscope, the laryngoscope, and the thermometer, have become indispensable—I know of none which, in my own hands, has proved more useful—the loss of which I should feel a greater deprivation—than the instrument which I have selected as the subject of my communication; viz., Dr. Georges Dieulafoy's Pneumatic Aspirator. Invaluable, however, as it has proved in the hands of many, and widely as it is now known, at least amongst hospital surgeons, it is my daily experience to find that medical practitioners in general have not as yet been made fully alive to the great disadvantages which they labour under from the want of a thorough appreciation of the many and varied purposes which the aspirator has been found to fulfil.

It is with the twofold object of exciting the interest of such of my brethren of this Branch as have not yet had an opportunity of seeing for themselves, or of hearing from others, the very satisfactory results achieved by means of the aspirator, which are daily to be witnessed in the wards of our hospitals, and of eliciting a discussion on the part of those experienced in the use of the instrument, that I have determined to recount a few examples showing various conditions in which aspiration has been resorted to with more or less success. But before proceeding with the relation of my cases, I must occupy a few moments, first, upon the general subject of aspiration; and, secondly, upon a brief description of the instrument which we now employ.

Every medical man well knows how extremely difficult it is, under some circumstances, to decide upon the presence or absence of fluid; and, again, upon the nature of a fluid which is clearly proved to exist. How many anxious hours I myself have spent in vainly trying to solve these two questions! We have been in the habit of relying, in such cases, partly upon probabilities, partly upon that *tactus eruditus* which every surgeon strives to acquire, but which can only be acquired through long and patient practice; and occasionally upon evidence obtained from the introduction of small or, as they are termed, exploring trocars —instruments which are, to use Dr. Dieulafoy's words, at once too large and too small: too small to permit the passage through them of viscid or flaky fluids, and too large to allow their safe introduction into vascular or sensitive organs.

Having repeatedly observed how unimportant a lesion is produced by the insertion of the fine nozzle of the hypodermic syringe, and also the impunity attending the introduction of acupuncture needles, even deeply, into the substance of important and highly organised structures, Dr. Dieulafoy conceived the idea of creating a vacuum in connection with an extremely fine tubular needle, so as to exercise a powerful suction upon any fluid into which the needle should be introduced. This principle he embodied in his instrument, the pneumatic aspirator. And it became clear that not only could an amount of fluid be removed by this means sufficient for diagnostic purposes, but that, by a continuance of the process, the cavity might be entirely emptied of its contents, and so, in cases where the presence of the fluid constituted the sum of disease, a permanent and ready cure might be effected.

As is the case with all inventions, many improvements have been made upon the original instrument. The one which I now show you is the latest issued by Messrs. Weiss and Son, of the Strand, London; and, in my judgment, it possesses decided advantages over all others which I have seen.* It consists of a brass syringe, capable of holding five ounces of fluid, fitted with an air-tight screw-piston, and having its nozzle guarded by a tap. Attaching the nozzle to the bottom of the syringe is a short tube of glass, which enables the surgeon to ascertain the quality of the fluid as it passes into the body of the instrument. To one side of the instrument, in its whole length, is applied a fine hollow glass tube, which communicates at its lower extremity with the interior of the syringe, and is shut off from the external atmosphere, at its upper end, by means of a tap. This glass tube is marked at regular intervals in half ounces, for the purpose of demonstrating the quantity of fluid contained in the syringe at any given time; and forms, besides, a means of exit, whereby the syringe can be emptied of its contents when, during an operation, it is desirable not to disengage the nozzle. Several tubular needles and trocars, some of which are of extremely fine calibre, made accurately to fit the nozzle of the syringe, either directly or through the medium of an elastic tube, complete the instrument.

In describing how to work the aspirator, I cannot do better than make use of Dr. Dieulafoy's own words, altered only so as to apply to the improved instrument. He says: "In order to produce a vacuum within the pump, it is necessary first to close the two taps, and then to screw up the piston. The vacuum is thus obtained as a preliminary measure, and the operator is in possession of a powerful aspirator, ready to be used when the proper time arrives." "Let it be supposed that we wish to examine an effusion into the cavity of the pleura. The tubular needle No. 1 or No. 2 must first be introduced into an intercostal space; and, when it has penetrated the tissues for about a third of an inch, it must be connected with the pump in which the vacuum has been established, either directly or through the medium of a caoutchouc tube. This done—and to this point I desire to call special attention—the tap must be opened between the needle and the vacuum, and the needle pushed gently forward. We may thus slowly traverse the tissues, so to speak, with the vacuum in hand, until we discover the effusion. The eye of the operator should be directed to the short glass tube between the needle and the pump; and, at the moment when the needle enters the liquid, the latter rushes forcibly into the instrument. The diagnosis is at once complete, the manœuvre is absolutely harmless, and the desired object is attained."

Such is the method of employing the aspirator which I have myself usually adopted; and the directions here given apply to all cases, medical and surgical, in which its use is indicated, equally with the example selected by Dr. Dieulafoy for his description. As a precaution against the introduction of septic materials, I always take care that the needle or trocar has been dipped overhead in carbolised oil. I have said that in the aspirator we possess a valuable aid both to diagnosis and to treatment. I will now go on to make a few selections from the numerous cases in which I have resorted to its employment.

And first, I will speak of its use for purposes of diagnosis. There are few groups of diseases which present greater difficulties, or which tax the skill of the surgeon in a higher degree, than *abdominal tumours*. Not many of us can look back upon our experiences without calling to mind numerous instances in which grave mistakes have been made, leading to pernicious treatment, and destroying the confidence of our patients both in ourselves and in our science. That in the aspirator we possess a powerful means of elucidating some at least of these cases, is sufficiently shown by the following examples.

CASE I.—On August 30th last, a woman, aged 46, was admitted under my care into the Leeds General Infirmary with an abdominal tumour of twelve months' growth, and equal in size to a seven months' pregnancy. The tumour was somewhat fixed towards the pelvis; several hard movable nodules could be distinguished through the abdominal walls; it was doubtful whether fluctuation existed or not. The pelvis was found, on vaginal examination, to be filled posteriorly by a firm mass, and the os uteri could not be felt, being apparently pushed up above the pubes, high out of reach of the finger. Menstruation had for some years been very irregular. My colleagues examined the case with me, and we all felt doubtful as to its nature. On September 21st, aspiration was made through the abdominal walls with the result of extracting four ounces of a thick glutinous brown-coloured fluid, such as is found only in ovarian cysts. The nature of the disease having been thus established beyond doubt, a fortnight later I performed upon her the operation of ovariotomy.

* Read before the Yorkshire Branch.

* I have received a note from Messrs. Weiss and Son within the last few days, informing me of a still further improvement which they have been able to effect in the mechanism of the instrument; by which they avoid all contact of the aspirated fluid with the syringe, and are at the same time better able to regulate the amount of vacuum created.

CASE II.—One day last week it was intimated to me that Dr. Allbutt wished me, as his surgical colleague, to examine a patient in his ward, a married woman, aged 34, with a view to decide upon the propriety of recommending the operation of ovariotomy. The enlargement was first suspected early this year, and was attributed for some months to natural causes. I found the abdomen distended to about the size of a full pregnancy, by a round, centrally placed, smooth tumour, in which a not very distinct fluctuation could be felt. On vaginal examination, the os uteri was felt high up posteriorly, small, and round; the cervix had disappeared; no movement of the os could be detected by displacing the tumour from side to side; and a Simpson's sound introduced into the uterus showed the cavity of that organ to measure an inch and three-quarters only in depth. The central position, the shape, and the general character of the tumour, the absence of cervix uteri, the duration of the symptoms, taken together, were sufficient to throw a little doubt upon the true nature of the case. On appealing to the aspirator, however, the ovarian character of the tumour and the correctness of Dr. Allbutt's diagnosis were at once determined, by the extraction of a syringe-full of thick stringy gelatinous fluid.

CASE III.—In July of this year, I was asked by Mr. Booth, of Mirfield, to see, with him, an elderly female, the right half of whose abdomen was filled with a prominent mass, the origin of which she attributed to her daughter having accidentally trodden upon her in getting out of bed a few months before. The increase in size had been gradual, and had been attended by considerable pain and some febrile disturbance. On percussion, the tumour was dull, and on handling, an indistinct fluctuation was made out. A few days afterwards, I withdrew by means of the aspirator several ounces of pus, and was thus enabled confidently to pronounce the case one of cellular abscess, and to confirm the patient's own opinion as to the origin of the disease.

CASE IV.—Not many months ago, a man, aged about 40, of weak intellect, and therefore unable to give any reliable history of himself, was sent from Tadcaster and admitted into the Leeds Infirmary under Mr. S. Hey, with complete retention of urine, and his bladder distended so as to reach above the umbilicus. Our resident medical officer, Mr. M'Gill, at once passed a No. 8 silver catheter, and drew off forty ounces of fetid urine—as much as would flow. And yet the distension was not wholly removed; above the pubes, a round fluctuating swelling remained, which, from the rectum, was found to communicate with a soft elastic bulging there distinctly felt. The aspirator was applied from the rectum, and by it twenty-five ounces of fluid were quickly pumped out, whereupon all tumour was found to have disappeared. The fluid was clear, had a specific gravity of 1004, and, besides large quantities of common salt, contained numerous hooklets and undamaged echinococci. The retention ceased, but the patient died a week afterwards from the inflammatory changes induced by the long continuance of the obstruction. At the *post mortem* examination, the hydatid disease was thought to have occupied the prostate itself, and similar disease was found both in the liver and omentum.

I will finish my illustrations of the diagnostic value of the aspirator by briefly relating a very important and not less interesting case which occurred recently in the hospital practice of my colleague, Mr. Wheelhouse, and which I had the opportunity of seeing in consultation with that gentleman.

CASE V.—J. M., aged 30, a striker by occupation, had been the subject of a right inguinal hernia for four months, and had never worn a truss. The bowel had frequently from time to time descended, and had always been returned without difficulty. About breakfast-time, on October 2nd, 1872, whilst he was at work, the hernia suddenly protruded with pain. Finding himself unable to reduce it as usual, he went home. Symptoms of strangulation soon supervened, and his sufferings became greatly increased. It was not, however, until the evening of the 4th that he sent for his medical attendant, who ordered his immediate removal to the infirmary. When seen on admission, he was vomiting frequently; his abdomen was highly distended, tympanitic, and tender on pressure; his countenance betrayed anxiety, and his pulse was small and thready. The right inguinal region was occupied by a swelling of the size of a hen's egg, not very tense, but upon which taxis produced not the least impression. Opium was administered, and taxis again failed. He was then placed under the influence of chloroform, and an attempt was once more made to reduce the rupture, but in vain. The finest of the needles of the aspirator was now introduced and attached to the syringe, whereupon two ounces of bloody serum were removed, and the swelling vanished altogether. The finger could now be passed without obstruction through the inguinal canal as far as the internal ring. Under these circumstances, it was decided to postpone any further proceedings until the following morning. Vomiting occurred at intervals during the night; but at the morning visit, the patient stated that the rupture had again descended, and that he had been able to reduce it himself. It was not until the morning of the 6th that all vomiting ceased; but from the first there was a gradual and steady amelioration of his symptoms, and, finally, he has made a perfect recovery.

It is by no means an easy matter to state, with any degree of certainty, the actual order of events in this most fortunate case. It may be safely concluded, however, that the use of the aspirator precluded the necessity of following that good old rule—"when in doubt, operate."

I will now go on to mention a few instances in which aspiration has been resorted to as a means of treatment. Two of the earliest occasions upon which I made use of the instrument were in cases of advanced chronic hydrocephalus.

CASE VI.—In the first, a child, fifteen months old, I removed on May 18th, 1871, by means of the finest needle passed through the anterior fontanelle, six ounces of fluid; and on the 22nd, twelve ounces. The child died on the 23rd in convulsions.

CASE VII.—The second child was only three months old when first brought under notice. On July 22nd, 1871, I removed five ounces of fluid; on the 25th, three ounces; on August 1st, an ounce and a half; and subsequently, on seven occasions, at intervals of a few days, one ounce of fluid was removed. This case terminated fatally, also by convulsions, on September 13th.

A careful *post mortem* examination was made in each of the two instances, with the special view of discovering the immediate effects of the introduction of the needle, but no trace whatever could be detected either in the membranes or in the brain-substance.

Soon after I became familiar with the aspirator, it occurred to me that it was not unlikely to prove useful as an aid, under certain circumstances, to the reduction of strangulated hernia. I thought that, if the sac, for instance, contained a large amount of fluid, the withdrawal of the fluid might enable the surgeon to apply his reducing force more directly, and, therefore, more efficiently, upon the solid constituents of the hernia. And, again, if the strangled intestine were emptied of its fluid and gaseous contents, its reduction by taxis might be facilitated. In five examples of this affection, all presenting conditions apparently favourable to the proceeding, and in all of which taxis under chloroform first proved insufficient, I have practised the use of the aspirator, in the full hope of being able to avoid the major operation; but, hitherto, my efforts have not met with success. In all the five, herniotomy was finally resorted to; and it is interesting to observe that, in none was there any sign to show where the needle had penetrated. Cases have lately been referred to in the journals in which success has been achieved by operators abroad. I am still hoping that a further trial may lead to more satisfactory results in my own hands.

Some few months ago, several gentlemen showed great anxiety to obtain the credit for themselves, or for their friends, of having been the first to tap the intestines in cases of great flatulent distension. I remember the late Mr. Teale, in 1860, whilst introducing an acupuncture-needle twenty or thirty times through the abdominal walls in a case of excessive tympany following herniotomy, remarking to the students around him that, in his early days, he had been accustomed, under similar circumstances, to use the trocar after the manner of veterinary surgeons; but that, of late years, he had preferred the acupuncture-needle, as being at the same time less dangerous and equally efficient. Calling to mind this advice, I employed the aspirator on several occasions in May 1871, to the great relief of an elderly man, whose leg I had amputated by the supracondyloid method, and who in his last two or three weeks suffered in an unusual degree from excessive flatulent distension. On *post mortem* examination, a few red points, on both the parietal and visceral peritoneum, were thought to indicate the spots at which the needle had entered.

The instances are now numerous in which I have employed the aspirator, with decided advantage, in the emptying of chronic abscess. I will content myself with relating one example, by no means a solitary one of its kind.

CASE VIII.—In May 1871, I was consulted by Mr. T., aged 40, who for nearly six years had been suffering from excessive pain in the lumbar and lower dorsal spine, and at the top of whose right thigh a swelling had for nine months been gradually increasing. The case, as it presented itself to me, was, in short, one of marked angular curvature at the junction of the dorsal and lumbar vertebræ, accompanied with a psoas abscess, which, when he stood erect, was about as large as an orange. On June 10th, I removed seven ounces and a half of pus by aspiration, draining the abscess as completely as possible. In a few days fluctuation returned, and the swelling gradually increased. On June 28th, the aspirator was again applied, and three ounces and a half of pus removed. From this time the abscess may be said to have been cured; for although, on February 7th this year, I was induced once again to introduce the needle, from a feeling of suspicion that matter

had reformed, I was unable to procure a single drop. At the present time, no difference whatever can be detected between the two sides, and he is quite free from all pain. The curve, of course, still remains; and, as a matter of precaution, I am continuing to enjoin a large amount of rest in the recumbent position, and an entire freedom at other times from such movements as would be likely to affect injuriously a spine which has undoubtedly been extensively diseased.

There are few conditions which more frequently call for the attention of the surgeon than the various forms of joint-effusion; and, whilst some of these are of a transient character, or readily yield to appropriate treatment, there are others, the nature of which it is to be obstinately persistent; or, again, in which the effusion is but the precursor, if not indeed a chief factor, in the production of those processes which, if constructive in their tendency, end in ankylosis; but, if destructive, lead only to excision, amputation, or death.

It is within my own recollection—nay, I believe the practice still lingers in the dark corners of our profession—that surgeons were in the habit of spending month after month—aye, and in some instances, year after year—in leeching, blistering, burning, compressing, mercurialising, and drugging their patients, with the sole object of procuring absorption by a membrane, which, it may be, had ceased to be capable of absorbing, and which, at all events, obstinately refused to take the desired turn; or perhaps, goaded by the constant irritation from without, openly rebelled, as it were, in the form of suppuration and destruction.

Whilst no means were too severe to be applied to the exterior, it was a cardinal doctrine that to interfere with the interior of a joint—except in cases of acute suppuration—was an unsurgical and unwarrantable proceeding. The sacred character of synovial membranes, like many other phantoms, has vanished before advancing science. Dropsical joints are now treated by tapping, just as are the peritoneum, the pleura, or the pericardium. A couple of years ago, I published in our JOURNAL the history of a series of knee-joints which I had successfully treated, when in an early condition of inflammation, by *free incisions*, made under the protection of an antiseptic spray. And now that we possess the aspirator, we shall hardly be disposed, I imagine, to consume as many days as we formerly did months, in the endeavour to disperse a fluid whose presence is not seldom the sum total of disease.

The following are selected from a considerable number of cases which have been similarly treated.

CASE IX.—A gentleman, aged 21, in falling from his bicycle, struck his left knee a violent blow against the corner of a wall. Faint, and in great pain, he limped, as best he could, to his home, where I saw him on the following day, June 8th this year. The joint was distended from effusion within. He suffered but little, and could bear manipulation well. Rest in bed, an evaporating lotion, and an occasional purgative were prescribed. This treatment was duly persevered in for a month, without producing any perceptible change in the condition of the joint.

On July 5th, I applied the aspirator, making use of the smallest trocar, and drew off seven ounces of fluid, which consisted of little else than blood. It was the first time I had met with blood in a joint under similar circumstances, and I felt somewhat anxious as to the result. The knee, although emptied of fluid, looked decidedly thicker than the sound one, but was neither painful nor tender. The limb was placed upon a straight splint, and the evaporating lotion was continued. There was no return of fluid, and, indeed, nothing of an untoward nature at any time arose. On August 6th, he was allowed to get up, with the joint supported by a plaister of Paris bandage. In six weeks the bandage was removed; and at the end of September he could walk well—a little stiffness and a slight thickening of the joint alone remaining.

The following is a somewhat similar case.

CASE X.—F. M., aged 40, a dyer by occupation, was admitted into the Leeds Infirmary on September 16th, 1872. On August 31st, whilst attempting to climb over a high wall, he fell upon his left knee. Although in very great pain, he walked home—a distance of about two hundred yards—and on arriving there, he found that his knee was much swollen. Nevertheless, for three days he continued at his work, and only then desisted because of extreme suffering. After a few days' rest the pain ceased, but the swelling remained as before. Lotions and poultices were applied, and during two days the joint was painted with tincture of iodine. On admission, there was decided, though not excessive, swelling of the knee, and fluctuation was distinct. On September 18th, by means of the aspirator, I withdrew three ounces of a fluid deeply tinged with blood. The limb was placed upon a straight splint, until September 28th, when a plaister of Paris bandage was substituted, and he was made an out-patient. On October 14th, the bandage was removed at his urgent request, and, as recovery was apparently complete, he was permitted to return to his employment.

Satisfactory as were the results in the two cases just related, I think I am justified in attaching more importance to the two following; for, if my belief in the pyæmic origin of each be well founded, it would hardly be possible to exaggerate the value of a means whereby an issue so successful was accomplished.

CASE XI.—Joseph J., aged 21, a coal-miner, was admitted into the Leeds General Infirmary on September 19th, 1871, on account of acute periostitis with suppuration affecting the right humerus, of four months' duration. Incisions were made for the evacuation of pus. On October 14th, after several chills, not amounting to actual rigors, followed by feverish symptoms, and a rapid rise of temperature, he complained of great pain in the left hip-joint, which was intensified on the slightest movement. The application of the long splint afforded some relief; but the surgical fever continued without abatement, and the uniformly great difference between the morning and evening temperatures indicated the presence of acute suppuration. On October 27th, the left knee became suddenly swollen and acutely painful. On November 1st, this joint was aspirated, and two ounces of a clear fluid withdrawn—an operation, so far as that particular joint was concerned, which gave immediate and permanent relief. The general condition of the patient, however, was unimproved; and, as the affected hip continued still the source of sleepless nights and weary days, the aspirator was applied to this joint also on December 10th, with the result of extracting nine drachms of thick pus. The operation acted like a charm; his suffering was at once removed, and soon the balance of healthy action returned. On January 12th, 1872, he was discharged able to walk well, and with free movement in both hip and knee.

CASE XII.—The second case may be related in few words. A man, aged 52, was in the Leeds Infirmary suffering from old stricture of the urethra with many perineal fistulæ. I had admitted him for the purpose of his undergoing the operation of perineal section. When he had been in the ward a few days he was seized with rigors, which were followed by inflammatory fever, and pain with some swelling of the left knee-joint. On the day after his seizure, fluctuation being decided, I removed by the aspirator an ounce and a half of turbid synovia. The pain at once ceased; and a week afterwards, he was sent home for awhile to recruit his health, lest an operation then performed should be followed by more serious consequences.

One case more, and I have done. It was the second of four I have had of its kind, and is selected now chiefly on account of its brevity.

CASE XIII.—On December 26th, 1870, a man, aged 38, was admitted under my care into the Leeds Infirmary with his bladder fully distended, and totally unable to pass a drop of urine. The retention had lasted for fifty-four hours, and several efforts had been fruitlessly made to enter his bladder. On my visit, he had already been placed by our resident medical officer in a hot bath, and opium had been freely given. A gentle attempt at catheterism sufficed to demonstrate a closure of the urethra a little beyond the bulb, and was followed only by the escape of a few drops of blood. Without further delay, I plunged the finest needle of the aspirator straight through the abdominal walls into the bladder, and, attaching the syringe, drew off thirty-eight ounces of urine. In about six hours, dribbling by the natural passage began, and, after a few days, I was able to commence the treatment of his stricture under circumstances not less favourable than if retention had never occurred.

EPITHELIOMA OF THE UPPER JAW.

IN the JOURNAL of Nov. 23, there is a short notice of a case of epithelioma of the upper jaw, exhibited by Mr. Lawson at the Clinical Society; and, in the general discussion which followed, I see it reported that Mr. Hulke "thought it doubtful if the epithelioma originated in the antrum, as the antrum did not exhibit any bulging out of its anterior wall, or other symptoms which would have been expected. Probably the disease originated in the alveolus, and invaded the antrum."

I have recently operated on a case of epithelioma involving both superior maxillary and palate bones, with a large part of the soft palate. In my case, the alveolar portion seemed, so far as I could discover, primarily and chiefly affected; but here also there was a large mass as big as a hen's egg filling the right antrum, without any bulging of its anterior walls; and I have no doubt that the mass grew from the alveolar portion into the antrum, in the way which Mr. Hulke thinks probable in Mr. Lawson's case. In my case, I did not discover the mass in the antrum until after I had removed it, together with the greater part of both superior maxillary and palate bones and soft palate.

As I hope presently to furnish the details of this interesting case, I refrain from further comment, and only call attention to it at this moment because of its similarity in some respects to Mr. Lawson's case.

NELSON C. DOBSON, F.R.C.S., Clifton.

ON DEATH FROM CHLOROFORM.

By THOMAS GREEN, F.R.C.S., M.D.Edin.,
Consulting Surgeon and late Senior Surgeon to the Bristol Royal Infirmary.

Deaths from chloroform have lately been more frequent than at any former period. If this death-rate continue, the public and the profession may consider this agent, with all its benefits, to be, after all, a fatal boon.

When inquests have been held in such cases, the public are informed that "all the usual means were tried, and failed"; and with this information they must rest satisfied. But there are others deeply concerned, who require more than this—namely, the profession at large, who may be called on any day to administer this deadly agent. They have a right to have before them a full and precise account of everything that happened—the manner in which the anæsthetic was given, the symptoms which preceded death, and the way in which death occurred; a precise account of the remedies used, and when and how they were used. The profession ought to know what was done and what was not done, not from mere scientific curiosity, but as a guide to enable them to be prepared beforehand to use at once those means which experience has found successful in similar cases, so as to avoid the panic and confusion which prevail when those around are not prepared for the fatal event, and thus not to lose precious moments at a time when life literally hangs on seconds. The remarks which have been made in the British Medical Journal (October 5th), state most truly what is required from those who have to do with a fatal case of chloroform: "We hold it to be the serious duty of every practitioner, in whose practice a case of death under the influence of chloroform occurs, to place on record all the details." Recent events imperatively call on the profession most carefully and impartially to receive everything in the way of prevention, and to strain every thought, so as to lessen, if possible, this heavy mortality from chloroform. This is the more necessary, as there is reason to fear the existence of a feeling in the minds of some that a given proportion of deaths must follow the use of chloroform (say 1 in 2,500, as stated by Dr. Richardson). This feeling may extend so far as to lead to the conclusion that a death *must* now and then occur; and, the proportion being so small, and the benefit so great, that no heavy calamity happens in an occasional death. Some may so think; but I feel assured that they constitute a minority in the profession, and that the majority look upon these so-called accidents as calamities which ought to be by all possible means averted. It cannot also fail to be observed that some change has taken place in the manner of reporting these cases in the medical journals. Formerly, when a fatal case was recorded, attention was directed to it in the table of contents at the beginning of each number; now we see nothing of the kind. The cases are mentioned *en passant* in the proceedings of the week. If we happen not to look through these, we may know nothing about them. This *laissez faire* way of dealing with a most serious matter, if general, could only paralyse every attempt to lessen the evil. To admit that a certain proportion of deaths from railway accidents must occur, would be a deplorable error, and could only prevent everything from being done to obviate them. Equally deplorable would it be in dealing with accidents from chloroform, and attended with the same results.

I have recently published (British Medical Journal, May 25th, 1872) some cases which occurred in the Bristol Royal Infirmary, where instant faradisation was remarkably successful in restoring animation when suspended by chloroform, and under circumstances similar to those of recent occurrence. I have to add to them another case since recorded by my friend Mr. Morgan, which also occurred at the Bristol Royal Infirmary, and at which I was present. (British Medical Journal, June 1st, 1872.) In this case, the success of the electric current was as marked as it could possibly be. Mr. Morgan writes as follows. "His pulse stopped, and he seemed *in articulo mortis*. Instant recourse was had to the electro-magnetic battery, and almost as instantly the pulse returned, and the man was safe." This case, added to those which I have reported, makes seven, in each of which the heart suddenly stopped after the administration of chloroform, the patient appearing dead; and, with only one exception (Case 11), its motions were as instantly restored by faradisation, and life saved in each of them.

It may be asserted with confidence that there is not, in all that is recorded concerniug chloroform, so sfrong a body of evidence in favour of any other means to save life after its use, as there is in favour of instant faradisation. I might have felt less confident as to the value of this evidence, were it not that I have had assurances from competent judges in the profession, both in these countries and in America, that the cases I have recorded amount to a demonstration that the electric current, so applied, is the most powerful agent known to restore animation when suspended by chloroform. If this be true, it may be asked, is it right, in cases where the heart suddenly stops, to waste precious moments with such frivolities as drawing out the tongue, etc.? The facts related are in themselves sufficient to carry conviction; but that conviction becomes more certain when we consider what electricity can do—that it is "the most powerful agent with which we are acquainted for exciting muscular motion even after death". The heart being a muscular organ, what better means do we possess of restoring its motion, when entirely suspended, than the most powerful excitant to muscular motion that we know? When the natural vital motions of the heart suddenly cease, what better than the best artificial vital excitor we know to restore them as suddenly? Can anything else in Nature do it as surely and as quickly? The question must cross the mind, Is it right persistently to ignore evidence of this kind? Those who do so may incur a heavy responsibility. It is little better than rejecting the most important evidence in a trial where life is at stake. When inquests have been held in any of the recent cases, the public are simply told that "the usual means were tried and failed"; they ought to be informed what those means were. Without this information, there is little or nothing to be learnt from such statements.

Amongst the most recent deaths, we find that, in the last week but one of August, two happened in London. One was in the Great Northern Hospital, and a short account of this case is given in the journals. We are told that the "efforts of all were unavailing to restore consciousness". Do these last words mean to save life? because consciousness may be gone and yet life remain. Further details will of course be published. When they are, the public will know what those means were. The day before, a death occurred in the private house of an eminent surgeon in London. I have not seen any notice of this case in the weekly journals; no details are as yet published. About the same time, a death from methylene occurred in the Bath Hospital (British Medical Journal, August 31st, 1872). An inquest was held. The remedies used were the following. "The tongue was drawn forward, ammonia was given, and the galvanic battery was used for three-quarters of an hour, but without any effect." Three fatal cases in one week from anæsthetics is a heavy death-rate.

Since that time, a death has happened at Brighton. An old lady, aged 70, "died suddenly when very little chloroform had been given." (British Medical Journal, October 3rd, 1872.) As yet, there is no further report.

About the same time, a death occurred in the London Hospital, and is reported by Mr. Mackenzie (Journal, October 5th.) Three drachms had been administered. The gentleman in charge of the pulse said, "He has lost his pulse." "Artificial respiration (Silvester's method), galvanism to the heart, frictions, and brandy enemata, were in immediate use, all without effect."

Soon afterwards, a death occurred in the South London Ophthalmic Hospital from chloroform (British Medical Journal, September 18th, 1872). The report tells us "it soon became manifest that the heart had ceased its action. Means were taken to restore animation, but without avail."

Next, we find a death from methylene at the Middlesex Hospital. Two drachms were given, when it was noticed that the breathing had ceased. Silvester's method of keeping up respiration was at once resorted to, and the patient gasped once or twice; galvanism was employed, but without any effect.

Next, a fatal case is reported from the Nottingham Hospital by Dr. Marshall (Journal, October 12th). Three drachms had been employed; "suddenly his face became pale, his teeth firmly fixed, and respiration ceased entirely; galvanism and artificial respiration were resorted to for thirty-five minutes, but with no effect."

About the same time, another fatal case is reported by Dr. Bird of York; two drachms of chloroform had been administered; "within a minute after this the pulse suddenly stopped," "cold water was dashed on the face and chest, the tongue drawn out by forceps, and artificial respiration (Silvester's method) adopted," "but the case was hopeless." The last three cases are reported in the British Medical Journal, October 12th, 1872. The profession is much indebted to the British Medical Journal for recording those cases, and thus bringing them under the notice of the public; this is the more necessary, there being reason to fear that too many fatal cases are never made known to the public. Deaths so frequent from an agent which we employ demand, and must receive, the most serious attention that can be given. There may be some who think that so many fatal cases in so short a time merely signify that the average number of deaths is concentrated in a shorter period than usual; but sure am I that a ma-

jority of the profession thinks that human life is a thing too sacred to be lost, because those who administer a deadly drug underrate its danger, or think that a certain number must die from its use, or that, when the heart suddenly stops, the case is hopeless ; and hence are unprepared by prompt and energetic action to save life. A review of these cases, together with a large amount of former experience, can lead to but one conclusion, that Professor Lister's teaching, to "disregard altogether" the pulse, is a fatal error. It appears, from a recent clinical lecture of Mr. Erichsen, that he thinks, when the pulse suddenly fails, the case is all but hopeless ; that, in "cardiac syncope," the patient dies. He is right to a certain extent. Death too surely follows, unless means very different from those hitherto used be instantly resorted to. It is probable that Mr. Erichsen had not seen the account of those cases which I have published when he gave his lecture ; if he had, he would have known that life has several times been saved under circumstances which he thinks all but hopeless, and by a remedy which he does not even mention by name.

From the reports of all the recent cases, it is evident that a sudden stoppage of the heart's action was followed by death ; and that the "usual means" were not sufficient to prevent a fatal occurrence. It may be said that electricity was employed and failed, as well as other means ; but the all important question arises, Was that powerful agent used in the manner in which it has been attended with such marked success in similar cases? When suspension of the heart's action is sudden and complete, death can only be prevented by the most rapid and energetic action, and for these two qualities we must look to electricity; no other agent, no other mode of employing any other agent, approaches electricity in these two essential qualities. In addition to its direct effect on the heart, it may be that electricity excites and brings into play the respiratory muscles ; this action materially assists that of the heart, and may perhaps enable it to act where in some cases, without this aid, it would be unable to expel its blood.

To give full effect to this potent agent, it is necessary to be prepared for immediate action; the battery should be in the operation-room, ready for use at a moment's notice ; and the moment the heart ceases to beat, the battery should be instantly employed, and as instantly the heart begins to beat again. This is the experience derived from six cases at the Bristol Infirmary ; and the facts cannot be disputed. No disbelief, no want of confidence in the remedy, no prejudice, nor obstinacy can alter these facts. To attempt to save life, when the pulse is suddenly and entirely gone, by such frivolous proceedings as drawing out the tongue, etc., is only to lose precious time. The tide of life is ebbing too fast to be arrested in its course by such means.

If fatal cases from chloroform continue to occur as lately, some other anæsthetic less dangerous must be sought for. There is abundant evidence to prove that ether is far less hazardous to life than chloroform : the evidence from America is strong in its favour. An American physician, Dr. Jeffries, in a recent visit to England, endeavoured to prove this to the profession in this country, and has given his experience in England in the *Boston Medical and Surgical Journal* for October 1872. From France, Dr. Diday of Lyons, in strong and earnest language, enforces the same opinion. In a pamphlet lately published in Dublin by Dr. Morgan, the facts and opinions collected by him are conclusive as to the dangers of chloroform and the safety of ether; they must remove all doubts from the mind ; and, for myself, I feel so convinced as to its superiority, that nothing shall ever again induce me to give chloroform. One death in 23,000 from ether against one in 2,500 from chloroform (if there be anything in statistics) is a startling difference, and may to some extent be accounted for when we know that chloroform depresses the heart's action, while ether stimulates it. This is all-important when we are told, on high authority, that "cardiac syncope" is mostly followed by immediate death. Ether produces a deep sleep, chloroform a deeper still ; but too often it is the sleep of death.

To those who will still give chloroform, a word of caution as to the preparatory means which should be employed previous to its use may not be entirely useless. All those who have seen semi-solid food gurgling in the pharynx, during the administration of chloroform, must have felt in dread of its passing into the trachea and so causing death ; hence, all agree that food should not be taken for some hours previously ; but, with such a depressing agent, is it well to encounter vital power depressed by the absence of all nutriment? I have thought not, and for some years have always given about half-a-pint of strong beef-tea and three or four ounces of brandy about two hours before the operation. If given in this way, nutriment and stimulant have passed into the system before the time of operating ; little, if any, remains in the stomach to be rejected. In private houses, beef-tea may not be always ready, but eggs and brandy are ; these answer the purpose equally well. I have occasionally found that this preparation makes chloroform unnecessary ; the patient, when on the table, has left it to me to give it or not, as I wished ; I need not say that, having seen two deaths from its use, and wishing not to see a third, I decided not to give it ; the operations were borne without much pain.

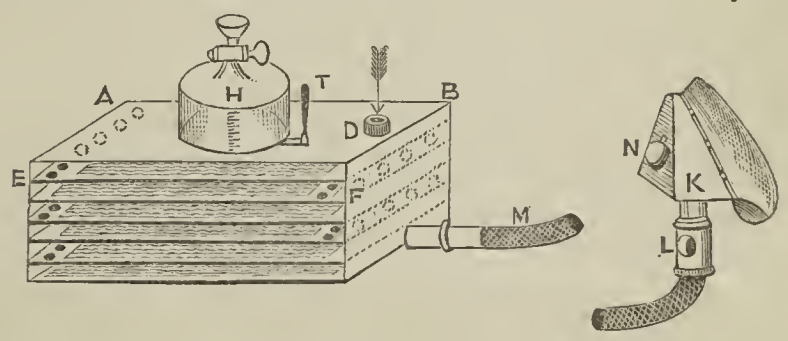
In a future paper I may attempt to show that from four to six ounces of brandy, given before an operation, are an efficient anæsthetic. I have taken off the limb of a drunken man, injured beyond all chance of recovery, and he hardly knew what was being done.

THE ADMINISTRATION OF ETHER.

By G. EVERITT NORTON, M.R.C.S., Chloroformist to the Middlesex Hospital.

In accordance with a wish expressed by the Editor of the BRITISH MEDICAL JOURNAL, I have for the last month administered ether in hospital and private practice, in place of chloroform, in all those cases in which it has been possible. I do not, however, quite see my way to administering it in operations when the mouth or nose is involved, as in administering ether it is necessary to keep the mouth-piece closely applied—not so with chloroform. I commenced administering ether according to Dr. Joy Jeffries's plan (a towel in the form of a cone and a sponge) ; but, before the operations were completed, the theatre became full of ether, and the amount used very large. I now use an inhaler made for me by Hawksley of Blenheim Street, of which the following is a rough diagram and description.

The apparatus consists of an application of one of the principles employed in Dr. Smith's carbonic acid apparatus (*Philosophical Transactions*, 1859-61), by which a current of air is made to travel over the largest amount of surface in the smallest compass. A metal box (A B), measuring 7 × 4 × 3 inches, is divided into six compartments by means



of five metal shelves (the side of the box is represented as removed in the diagram to show this arrangement). Each shelf has a perforation in the middle two inches in diamater ; and the shelves at alternate ends of the box are so perforated that each compartment has a free air-communication with the other, and the last one with the outlet-pipe (M). Each shelf and the floor of the box are covered with thick flannel, excepting at the alternate ends of the shelves, where the holes are left uncovered. The box is surmounted by the glass reservoir (H), having a capacity of six ounces, and graduated to drachms, etc., at its side. This reservoir has two stopcocks—one beneath the glass-funnel for receiving the ether, and the other governed by the short lever (T) for admitting ether into the metal box, either in quantity instantly, or slowly and sufficiently for the purpose of the administrator: D is the valve admitting air into the compartments of the metal box ; M is the outlet-pipe, communicating by a long elastic tube with the face-piece (K). This latter is after the usual model called "Snow's," and has an expiratory valve at N, and a revolving shutter (L). The latter allows the patient to inhale air without removing the face-piece.

The action of this apparatus is as follows. The two stopcocks of the reservoir (H) are opened, and, say, two ounces of ether are allowed to flow into the box. The fluid, on passing through the top of the box, falls on a round metal plate, an inch and a half in diameter, fixed exactly over the large middle perforations of each shelf. The use of the plate is to at once distribute the ether over a larger surface than could be done were it to fall direct upon the flannel from its pipe. Whilst the top shelf is being saturated, the ether has penetrated the flannel through the middle of the shelf and fallen upon the next shelf, and so on, until in about five seconds the two ounces of ether have been distributed over the six surfaces of flannel contained in the box. Here it will remain without escaping until the inhalation commences. On making an inspiration, the valve (D) falls ; air follows along the surface of the shelf as far as the row of perforations, shown at E. Passing through these, it returns beneath the first shelf and down

through the row of perforations at F, into the next shelf, and so on until it escapes at M. The size of the holes at the alternate ends of the shelves is such, that no three of them will admit sufficient air for a single respiration; therefore the air passes through all and over the whole of the superficies charged with ether.

The following are some notes of cases in which ether was administered.

CASE I.—(In this and the four following cases ether was given on a towel.)—A man with a sinus in the region of the hip was brought under the influence of the ether in eight minutes. There was no struggling nor lividity. He was under its influence altogether a quarter of an hour, during which time he took six ounces. He was very sick directly after the operation, and continued so for a short time, but passed a good night and felt quite himself the following morning.

CASE II.—A little girl aged 11, with a sinus over the lower jaw, was brought under the influence of ether in six minutes. There was no struggling nor sickness. She took about three ounces.

CASE III.—A woman aged 30, with cancer of the breast, was brought under the influence of ether in a little over four minutes. There was no struggling. The operation lasted twenty minutes, during which time she took six ounces. She was not sick till the following morning, then twice.

CASE IV.—A woman aged 19, with sinuses around the ankle-joint, was brought under its influenee in three minutes. The operation lasted three minutes more, and she took three ounces. There was no struggling nor sickness.

CASE V.—A man aged 40 was brought into the theatre for extirpation of the eyeball. He struggled a good deal, but was brought under the influence of ether in four minutes. The operation lasted four minutes more, during which time he took five ounces. He was very sick.

CASE VI.—(In this and the following cases the inhaler above described was used.)—A child, with abscess of the thigh and supposed necrosis, required three minutes to be brought under the influence of ether, and was kept under for eight minutes longer. She took three ounces; but the mouth-piece was too large for the face, so that a good deal of ether was wasted. She had no sickness.

CASE VII.—A man was operated on for necrosis of the tibia. He had been a soldier, and drank rather freely. He was brought under the influence of ether in five minutes, after a good deal of struggling. He was kept in a state of anæsthesia for six minutes, and took during that time about three ounces. His pulse, during the administration, went up to 140, and once he became rather livid. He had no sickness.

CASE VIII was one of recurrent cancer in the breast and axilla of a medical man. He had been operated upon twice before, each time having had chloroform, which nearly proved fatal the last time. He went off very quietly, without any struggling, and was under the influence of ether in four minutes. The operation lasted thirty-five minutes, during which time he took three and a half ounces. He was slightly sick on the return of consciousness.

CASE IX.—A man with necrosis of the elbow-joint was brought under the influence of ether in four minutes. The operation lasted twenty minutes, during which time he took about three ounces. The pulse, before inhalation, was 96; during it, 114; after it, 104. There was no lividity nor rigidity; but he was sick before he recovered consciousness.

CASE X.—A man with necrosed bone in the stump of the thigh was brought under the influence of ether in four minutes. Before he was quite unconscious there was great rigidity, and twice he became very livid. The operation lasted eighteen minutes, and he took about three ounces. He was very sick. His pulse before, during, and after the operation was 142. He was a very nervous subject.

CASE XI.—A lady on whom iridectomy was performed for glaucoma was brought under the influence of the ether in three minutes. There was neither rigidity, lividity, nor sickness. She took about an ounce for double iridectomy.

CASE XII was one of a man with a large tumour in the axilla. His pulse before operation was 96. He was brought under the influence of ether in five minutes. The operation lasted thirty minutes, the ether being kept up nearly all the time. Towards the end of the operation his pulse became very weak—almost imperceptible—but he soon rallied after an enema of brandy. He had no sickness.

The sickness after ether occurs just about as often as after chloroform, and it is more violent while it lasts, but it does not continue nearly so long. In some cases with ether there is a marked increase in the flow of saliva, but not in all. Cases IX and X had had chloroform in previous operations, and both preferred it to ether. They said that chloroform was less suffocating, and more pleasant to breathe. The pupil under ether is generally dilated. Having given chloroform for more than two years without a fatal case, I think it rather too soon to give an opinion of the superiority of ether.

In Case I, ether was administered a second time by means of the inhaler, with greater comfort than by the towel. The patient was sick immediately afterwards, but this did not continue.

DEATH FROM CHLOROFORM.

By CHRISTOPHER S. JEAFFRESON, Esq.,
Surgeon to the Newcastle Eye Infirmary; to the Children's Hospital; and Assistant-Surgeon to the General Infirmary.

I HAVE read with great interest the highly practical and interesting remarks of Dr. Jones upon the administration of chloroform; and although I fully concur with him that the dangerous symptoms produced by anæsthetics, especially chloroform, may come on suddenly or gradually, I cannot admit that therefore the deaths from these agents should be classified as avoidable and unavoidable. I say this, because I firmly believe that, in many of the cases where the most sudden and death-like symptoms are instantaneously developed, actual death is avoidable, and may still be averted, provided no time is lost in (at that time) the useless pantomimics of dashing water upon the face, applying ammonia to the nostrils, and various other efforts which are usually resorted to. In these cases, the tongue having been drawn forward, immediate recourse should be had to artificial respiration, and, in spite of all appearances of death, this should be continued for at least three quarters of an hour.

During a large hospital practice, I have administered and assisted in the administration of chloroform several thousands of times; and happy am I to say that I have never witnessed a death, although on two occasions, if I had listened to the advice of bystanders, I fear I should have done so. In each of these cases, the heart's action failed suddenly, and respiration became imperceptible. The bystanders supposed the patient dead, as did I also myself; nevertheless, in one case, after thirty minutes, in the second case, after twenty minutes, of artificial respiration persistently and energetically carried on, symptoms of animation returned, and the patients perfectly recovered. I think many cases are lost in the two or three minutes' delay which generally elapses between the appearance of the dangerous symptoms and the adoption of artificial respiration, a complete stasis occurring in the pulmonary circulation, which cannot afterwards be overcome; and I would direct the attention of the profession to this point.

ETHER AS AN ANÆSTHETIC.

By HENRY GREENWAY, Esq., Plymouth.

A FEW years since, owing to the numerous accidents in the administration of chloroform, a compound of ether, chloroform, and rectified spirit, was brought before the notice of the profession (by whom I now forget) as a safe and reliable anæsthetic. Although apparently safe, its action, when I employed it, was slow, and at times imperfect. It shortly afterwards occurred to me that the ether would be of greater value if administered separately for producing the first stage of anæsthesia, the anæsthesia being then completed with chloroform. In the few cases where I adopted this plan, and then only because I thought, from the aspect of the patient, the administration of chloroform simply would prove unsafe, the results were satisfactory. By following this precaution in every case requiring an anæsthetic, and by interposing with ether (as practised by Dr. Jones of St. George's Hospital) whenever chloroform is seriously affecting the respiration or pulse, I believe we may still regard the agent, so long relied on by Sir James Simpson, as a "good servant", and one possessing advantages over ether simply. That chloroform, even thus employed, or any other anæsthetic, may never or very seldom prove a "bad master", it must be properly administered, and we must be able to say, with some degree of certainty, what cases are unsuitable for its administration. To this end I think the attention of investigators should be chiefly directed.

ACUTE INVERSION OF THE UTERUS.

By THOMAS JOYCE, M.D., Rolvenden.

M. B., aged 27, a slim, delicate looking woman, was in labour with her third child. In each previous labour flooding to a dangerous extent had occurred. The present labour progressed naturally but slowly, and a dose of ergot was given. After the birth, I requested the nurse in attendance to tie the cord and remove the child whilst I devoted my

attention exclusively to the womb and endeavoured to prevent another flooding. I accordingly kept up firm pressure on the abdomen with my left hand; and, the parietes being very thin, I was enabled to grasp the womb, which contracted fairly. After waiting a few minutes, I requested the nurse to put the cord gently on the stretch, whilst I ran my right hand up it and removed the placenta, still keeping the left hand on the abdomen. The placenta was a very large one, and during its extraction I was conscious that a considerable amount of suction power was exerted by it in its descent, the edges being closely applied to the vaginal walls. Immediately after its extraction I missed the womb from the abdomen, and hæmorrhage commenced. Believing it due to relaxation of the womb, I employed the usual means—*i.e*, cold, pressure, etc.; but, as it continued, and the woman was rapidly blanching, I prepared to inject some solution of perchloride of iron. On passing my left hand into the vagina to remove the clots and guide the injecting tube, I came on a firm round tumour, filling the vagina and almost presenting at the vulva. This proved to be the uterus completely inverted. It was grasped by the fingers of the right hand and steadily pressed upwards, when it quickly resumed its proper position, the tips of the fingers being drawn into the cervix during the last stage of the process. The hæmorrhage ceased at once. A pad and binder were adjusted, and a dose of ergot and opium given. Convalescence progressed naturally.

In this case I have no doubt the inversion was produced by the suction power exerted by the placenta in its descent, aided by manipulation of the fundus through the attenuated abdominal walls.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. BARTHOLOMEW'S HOSPITAL.

Operations, Saturday, November 30th, 1872.

Lithotomy in a Boy.—Mr. Callender extracted a large calculus from the bladder of a boy about 12 years of age, whose health seemed to be very indifferent. His legs were much bent from rickets, and the pubic arch was very small. The stone was about an inch and a half long, three-quarters of an inch wide, and flattened very like an ordinary pebble. There was considerable difficulty in bringing the stone through the wound in consequence of the smallness of the ischio-rectal fossa, otherwise the operation had nothing peculiar.

Cancer of the Breast.—Mr. Callender also removed the greater portion of the right breast of a woman, the cancer beginning to degenerate actively. It involved the subcutaneous areolar tissue over the gland, and the skin was adherent to it, though not also involved. The glands in the axilla were quite free also from any trace of the disease, and the patient has every chance of a good recovery.

GUY'S HOSPITAL.

Operations, Tuesday, December 4th, 1872.

Exostoses into Orbit and from Frontal Sinus.—The patient, a young man aged 24, an ostler, first observed some slight protrusion of the right eyeball five years ago, and the protrusion had increased slowly, but surely, since then. He had it painted with iodine some years ago, but without any beneficial result. The right eyeball was now very much protruded, and he saw double in consequence of the prolongation of the visual axis only on one side. The left orbit was perfectly healthy; but there was a large exostosis over the nose, growing from the frontal sinus. Mr. Bryant first removed the growths from the orbit by turning down the eyeball and its appendages, and then chiselling and sawing them away piecemeal. Their aggregate size in the orbit was that of a small orange. He then removed the exostosis from the frontal sinus in the same way. These growths seemed to arise from pedicles, which were carefully cut through and removed as far as possible. They involved only the outer plate of the frontal bone, which had been absorbed to a mere shell to make room for the growths. The inner plate of bone was left untouched, and the brain, consequently, was not exposed. The wound made was very large, but was wholly external, so that little danger was apprehended from it, so far as the brain was concerned. Mr. Bryant was not sure that vision would remain in the right eye; but, as he had not seen the optic nerve, nor done much damage to its appendages, he hoped that the eyeball would remain as useful as ever, or even improve. The eyeball would retract again, and become normal in course of time, and the man's appearance be vastly improved. After stitching up the wound, a pad of cotton-wool was placed over the eye and bandaged on. This operation occupied upwards of an hour.

Excision of the Hip-Joint.—Mr. Durham, who was to have had two cases of this sort, said that one of the patients had declined to undergo operation. He had been operated on twenty years ago for hip-disease at another hospital, when he was five years of age. Disease soon, however, reappeared in the same locality, and had continued. His limb was now shortened, wasted, and drawn up. There were three or four large sinuses leading to necrosed bone. The end of the femur was diseased, as was the pelvis to some extent. He was wasted, wan, and apparently fast sinking, and had no chance whatever without the removal of the source of irritation and exhaustion; but, as he had refused to undergo operation, nothing further could be done. Mr. Durham then removed the head of the femur in a similar case, a child six years of age. The child had been a year in another hospital without benefit, and was now in such a wretched state that little good was hoped for as the result of operation: but as this was the only possible chance of life, it was done. The leg was œdematous throughout, as was the scrotum, and the child was extremely emaciated.

REVIEWS AND NOTICES.

MODERN SURGERY.*

[*Concluded from page 582 of number for Nov. 23rd.*]

"They be the best chirurgeons which, being learned, incline to the traditions of experience, or, being empirics, incline to the methods of learning." If the wise words of the great Chancellor, which Mr. Erichsen prefixes to his treatise on the *Science and Art of Surgery*, and which are the key to the principles of its composition, were always as clearly present to the minds of other authors as they have been to his, there would be better reason to be content with the general tone and character of the surgical literature of the day. There are two important sections of Mr. Erichsen's treatise which will always claim attention and respect, as examples of a happy combination of fulness of learning with well weighed clinical experience; they are those which deal with Injuries of the Head and with Surgical Aneurisms. Accepted doctrines are stated with a perceptible reference to their mode of growth and to their historic as well as their modern and temporary relations. Mr. Erichsen is not of opinion "that the theories of one man are of no more importance than those of another". He is familiar with the work, and not merely with the names, of Anel, of Guattani, of Desault, Brasdor, and Deschamps; and nowhere can the surgeon find a clearer guide to the latest results of science and practice in this still progressive branch of surgery, than in Erichsen's excellent chapters; nor, indeed, could any better example be found of the way in which a liberal study of the labours of the great men of the past throws a more perfect light upon the results of modern labourers. Broca's doctrine of active (laminated) and passive (or merely coagulated) clots will be found lamentably misstated in Bryant's manual, adopted unwisely in Hamilton's treatise, tediously catalogued in Gross's *System of Surgery*, and occupying its true place in the history of our art in Erichsen. In one of those marvellous sentences in which he characteristically darkens wisdom, Mr. Bryant writes: "Broca has described the laminated coagulum lining the sac as 'active clot', and the soft coagulum in the centre 'passive clot', from the idea that this latter is a mere *post mortem* deposit, and not a vital one. This view can hardly be correct, as there can be little doubt that, in all cases of aneurism that are rapidly cured by pressure, digital or otherwise, the consolidation of the sac must be due to the simple coagulation of the blood in the sac and its subsequent induration and contraction; for a few hours are clearly too short a time for the laminated coagulum to form in any other way." So extraordinary a travesty of a doctrine, and so singular a correction of it, have rarely been presented as traps for the unwary student. If any candidate for the diploma of the College of Surgeons were to depend upon this manual for his knowledge of the theory of the cure of aneurism by

* The Principles and Practice of Surgery. By Frank Hastings Hamilton. New York: William Wood. 1872.
The Science and Art of Surgery. By John E. Erichsen. Sixth Edition. London: Longmans. 1872.
Cooper's Surgical Dictionary. New Edition. By Samuel A. Lane. Vol. i, 1861; vol. ii, 1872. London: Longmans.
The Practice of Surgery: a Manual. By Thomas Bryant. London: Churchills. 1872.
A System of Surgery. By Samuel D. Gross, M.D. Fifth Edition. Philadelphia: H. C. Lea. 1872.

compression, he would be most certainly and most deservedly plucked. Mr. Bryant has a reasonable and laudable practice of quoting authorities, which in many parts of his manual, however, degenerates into the easy and unsatisfactory practice of merely cataloguing opinions. It is curious to note that, in the subject of the treatment of aneurism by galvano-puncture, which he dismisses in five lines, he seems to know of only one authority, Dr. Althaus. The paragraph is short, and so characteristic of the author's looseness of thought and expression, that it may be quoted here by way of illustration, though certainly not for the information which it affords. "The treatment by galvano-puncture is one of the most promising in theory, but in practice *it has not made its place;* it consists in the introduction of the two needles of a battery into the sac *around which clot is to form*. Dr. Althaus advises only the introduction of one, the negative. The practice is one that can only be entertained in exceptional and otherwise hopeless cases." How "exceptional", and how "otherwise hopeless"? What Mr. Bryant probably means is, "that it is chiefly applicable, if at all, in internal aneurisms, or in those cases in which the disease is so situated at the root of the neck, that the artery can neither be ligatured with safety nor compressed." That is the current doctrine of British surgeons, which, we are compelled to conjecture, Mr. Bryant may have had in his mind, and which Mr. Erichsen clearly expresses in the two lines we have quoted. We are disposed to take a rather more favourable view of the extended applicability of galvano-puncture to such aneurisms than Mr. Erichsen; and Ciniselli's latest results, of which Mr. Erichsen does not seem to be aware, since he relies chiefly on Bonnet's tables published in 1851, warrant the belief that the therapeutical value of galvano-puncture deserves further attention. The section on galvano-puncture in Hamilton's book, although short, more accurately represents the present state of knowledge on this subject than that of Erichsen.

The surgery of women is one of the subjects in which modern British surgeons are most interested, as including some of the greatest triumphs of modern skill. It is one to which Mr. Bryant is known to have given a great deal of attention. Turning to the chapter in his book which deals with this subject, we find a good deal of useful matter awkwardly expressed. Of clitoridectomy he has rightly but little to say. In the four lines in which he speaks of it, he twice manages to spell it wrongly as clitor*o*dectomy. In the index—probably drawn up by another hand, who knows how to make Greek derivations—it is spelt rightly. Imperforate hymen is dismissed in a few lines. There is no mention of other forms of atresia vaginæ; and the whole section is utterly useless to student or to practitioner for the purposes of information, or as a guide for operation. The section on vesico- and recto-vaginal fistulæ is practical and useful, though not without its vulgar errors and drolleries of style. Thus we learn, on page 658, that a "good strong pair of forceps *are* required"; and, a little lower down on the same page, "that Dr. Meadows allows his patients to pass *their own urine* after the operation; and *I have done this in some cases without any bad result.*" His account of ovariotomy is interesting, and contains some judicious reflections, couched in rather less confused language than is found in other chapters; but it omits many essential details, and signally fails as a guide to the intending operator.

We notice that throughout the book the author makes the most surprising distinction between the "actual" cautery and the "galvanic" cautery, as though the actual cautery could only be produced by putting a piece of iron into the fire, and as though he considered the white heat produced in metal or porcelain by galvanic action to be potential. "Gas-fire" also is distinguished from actual cautery. It is, however, quite possible for a house to be burnt down by the potential cautery of gas; and, in the case of such a calamity, the author no doubt would feel as much aggrieved as any one else if the insurance-offices should say that the house was not "actually" burnt down. In completing this chapter, Mr. Bryant says, under the head of Extirpation of the Uterus for Fibro-cystic Tumours filling the Abdominal Cavity, "that these tumours have often been mistaken for ovarian, and operated upon as such; the mistake in diagnosis having been discovered only during the operation." He adds: "They are usually low down in their pelvic position; they usually also attack women at a later period of life than ovarian tumours." Both these propositions are contrary to the fact in respect to those cases which simulate ovarian tumours.

It is to be remembered that, taking a somewhat narrow view as to the duty of the author of a manual, Mr. Bryant rather piques himself on making this his book a reflection of what he considers to be the practice of surgery at Guy's, than of the practice of surgery illustrated from a wider field. Some of his colleagues would probably take a different view from himself as to the success with which he has attained his declared object; and it is extremely doubtful whether they would be content to be represented abroad or in after years by this work. This declaration, however, and the early history of the author's surgical opinions, sufficiently explain the unsatisfactory character of the chapters on excision of the joints. It is curious to compare the judicious and judicial chapters of Erichsen with the tedious special pleading of Bryant.

Of Mr. HAMILTON'S *Surgery* we cannot say very much that is favourable. It professes to be a discussion of the principles as well as of the practice of surgery; the principles, however, are for the most part left wholly out of sight throughout the book. It is clearly written, and interesting to British surgeons in its sections on fracture and dislocation, as containing a good account of American practice, and illustrations of apparatus not generally used in this country, but sufficiently simple and effective to deserve attention. Among them are Hodgson's wire suspension splint, and N. H. Smith's anterior splint for fractures of the thigh. The illustrations are very poor; a large proportion of them are bad copies of old and well known plates. We do not know on what ground such a book can be considered to be necessary, or to whom it is likely to render any service. In so far as it diverts surgical readers from either Holmes, Erichsen, or Druitt, it wili render them a disservice. It is not necessary to the reputation of a surgeon that he should write a work on the principles and practice of his art. The ambition to do so is only laudable, when it is stimulated by the conviction that he has gauged the merits and learnt to remedy the defects of existing manuals. It is not the call of a publisher or the satisfaction of a personal ambition which can justify a writer in undertaking the great and serious responsibility of presenting to young minds a book which is to furnish the basis of their knowledge and the groundwork of their practice; which is to supply them with principles by which their future course shall be guided, and with rules of practice accurately expressive of the best knowledge of the day, and fitted to enable them to fulfil their varied and responsible functions. A manual of surgery is, and ought to be, considered a work of the greatest importance. The author is bound to bring to it a mature experience, ample reading, a clear and critical judgment, a just sense of proportion, a well-balanced faculty of arrangement. He should possess that high and clear sense of justice to his subject, to his readers, and to himself, which would prohibit him from founding his work upon any narrow basis; from limiting himself to the resources of any one school; or from descending to the reprehensible carelessness shown in loose and inelegant diction, confused and obscure statement, and the substitution of strings of quotations for thoughtful and impartial judgment. As the honour and the usefulness of the task are great, if it be well executed, so it behoves every man to weigh well his qualifications before he undertakes it, and to spare himself in no wise in the effort to rise to the height of his self-imposed duty. It is right that such undertakings should be tried by a high standard, and that they should be judged with the severity which is kind to those whose wants such books profess to supply. So tested, neither Mr. Hamilton's nor Mr. Bryant's books ought, we think, to receive a favourable verdict. There is, however, no doubt that from many hands they will.

SELECTIONS FROM JOURNALS.

PATHOLOGY.

DISEASE OF THE SPINAL CORD IN SMALL-POX.—Dr. Westphal lately brought before the Berlin Medical Society an account of the *post mortem* appearances in two cases of small-pox attended with hemiplegia. The patients were adult males; and in both the amount of eruption was moderate—in one, indeed, very slight. In one case, the paralysis appeared a week after the first premonitory symptoms of small-pox were noticed; in the other, on the eleventh day from the appearance of the eruption. One of the patients was regaining motor power in his legs when he died of perityphlitis; the other died of cystitis and bed-sores. In both, there was paralysis of motion of the lower limbs and of the bladder; sensation was unimpaired in one case, greatly reduced in the other. The membranes of the cord presented no unusual appearance; but in the lumbar region the grey matter presented on section a remarkable difference in colour; the right half having a simple grey appearance, while the left half (both anteriorly and posteriorly) had a dark brownish red colour. Higher up, both sides of the cord presented the last described aspect; but this gradually disappeared in proceeding upwards, and was entirely lost in the cervical region. The roots of the nerves were healthy; and no disease was found in the brain or its membranes. On making a further examination of the cord after hardening it in bichromate of potash, it was found that the disease was very irregularly distributed. In some parts of the cord, both the white and

the grey substances were affected on both sides; in others, one side alone was affected, or was more diseased than the other; in other sections, again, the white and grey substances were diseased in patches of unequal size and irregularly distributed. Between these diseased parts, lay portions of cord in a healthy state. The grey substance of the cord in the upper dorsal region, to the extent of about a *centimètre*, contained whitish purulent deposits about as large as pins'-heads. A very large number of fatty nuclei were found in the diseased portions of the cord, both grey and white, as well as in the walls of the minute abscesses; there was also marked hyperæmia, limited to the diseased parts, but no trace of hæmorrhage. Dr. Westphal attributed the morbid appearances described to "disseminated myelitis"; and remarked that it was a question for further investigation, whether the paralysis and paresis following other acute and infectious diseases (including syphilis) were referable to the same cause. Dr. Oestel had apparently found a similar condition of the cord in paralysis following diphtheria; but here hæmorrhage had occurred at several points.

SYPHILITIC DISEASE OF THE ARTERIES.—At the last meeting of the Society of German Naturalists and Physicians, Dr. Heubner exhibited some preparations, illustrative of syphilitic disease of the arteries. The preparations were taken from a man who died in the Leipzig hospital, after having been under observation during a year. He had been syphilitic nine years when, in 1869, he had a sudden attack of loss of consciousness, which lasted five days, with occasional convulsions. After this, his vision gradually failed, first in the left eye, and then in the right; so that, when he was admitted into hospital in February, 1870, he was nearly blind. During his stay in hospital, he had several attacks of unconsciousness, sometimes attended with epileptiform convulsions. At the necropsy, there was found to be syphilitic infiltration at the base of the brain. One deposit corresponded to the anterior part of the pons; another was seated at the posterior part of the chiasma, and extended along the optic nerves; and a third was at the base of the anterior part of the left frontal lobe. The basilar and left carotid arteries were closely adherent to the deposits. Their external coat was thickly infiltrated with small nuclei. Unconnected with this, there was a deposit on the inner coat, closely resembling, but, as far as could be ascertained, not identical with, atheroma, reducing the calibre of the vessels; and a few nuclei like those on the outer tunic and in the deposits lay here and there in the muscular coat. Similar changes in the lining membrane were found also in much smaller arteries than the basilar and carotid; the arteria centralis retinæ was found affected in this way.

MIDWIFERY.

PREGNANCY WITH IMPERFORATE HYMEN.—Several cases have been at various times recorded, in which impregnation has taken place, although the hymen presented only a small opening. Dr. Karl Braun adds a remarkable instance. A married woman, aged 20, was sent to him from Galicia, to have the Cæsarean section performed, as she was pregnant, and the vulva was completely closed. On examination, there was found to be a membrane extending from the rectum to the urethral orifice, and presenting not the slightest trace of an opening. On introducing a catheter when the bladder was full, the result sometimes was the evacuation of a large quantity of urine, while, on other occasions, only some white acid mucus, apparently vaginal, escaped. It was also found that a fine sound could be introduced into this opening and felt through the rectum, while, at the same time, the bladder was emptied by the catheter; and it became evident that the vagina opened with the urethral canal into a common outlet. Dr. Braun divided the membrane from the urethra to the rectum. The patient was in due course delivered of a healthy child, and returned home a month afterwards. Dr. Braun also adds an account of another case lately under his care, in which the opening in the hymen was only two lines wide. —*Wiener Medizin. Wochenschr.*, November 9th.

DISEASES OF THE URINARY ORGANS IN PREGNANCY.—R. Kaltenbach comments in the *Archiv für Gynækologie* (III, 1-83) on the albuminuria of pregnancy and parturition, and illustrates his remarks by a number of cases in the clinic at Freiburg. In childbed, albuminuria is closely connected with catarrh of the bladder. This rarely arises from traumatic causes, such as the long continued pressure of the fœtal head; more frequently from diseases of neighbouring organs. Perimetritis may lead to stagnation of the urine and vesical catarrh by inducing paralysis of the wall of the bladder, parametritis by producing swelling of the neck of the bladder; and both may also act by direct communication of the inflammation to the bladder. A third cause of vesical catarrh is the use of the catheter; by which, as Althausen has already pointed out, lochial secretion may be conveyed into the bladder. The secretion of endometritis, blennorrhœa, or diphtheritic inflammation, may also be conveyed in the same way. And even when, as is the case at Freiburg, great care is taken to cleanse the urethral orifice, catarrh still follows catheterism, and in this case can only be ascribed to mechanical irritation. The course of simple vesical catarrh was found always to be rapid and mild. Albuminuria may also attend general catarrh of the urinary passages, with pyelitis. In rare cases, this is idiopathic; but generally it arises from extension of the vesical disease through the ureters or through the retroperitoneal areolar tissue. The cases of pyelitis, characterised by rapidly supervening fever, pain in the loins, and the presence in the urine of epithelium from the renal pelves, all ended favourably in a few days. In a third class of cases, albuminuria may arise from disturbances of the circulation; and fourthly, diseases of the parenchyma of the kidneys in childbearing women may be masked, when present, by vesical catarrh; or they may be produced through extension from the bladder, or may arise from stasis of the urine or from pyæmia. During pregnancy, albuminuria may have the same anatomical origin.—*Centralblatt für die Med. Wissensch.*, 1872, No. 20.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

LAROZE'S SYRUPS.

LAROZE'S syrup of Seville orange with bromide of potassium is a preparation which is well worth notice. It is an extremely well prepared syrup, in which the active properties of bromide of potassium in the treatment of hyperæsthesia, neuralgia, epilepsy, sleeplessness, and nervous irritation, are attained under an agreeable and well devised form. The volatile oil and bitter principle of the orange make this syrup of bitter orange a very useful tonic and stomachic; and both the iodide and bromide of potassium are particularly well supported, and may be very conveniently administered in this form. Other preparations of M. Laroze, which are well known and much in use by French physicians, are the ferruginous syrup (syrup of orange-pecl and quassia with protiodide of iron), and purgative capsules (an improved black draught). The London agents for Laroze's pharmaceutical products are—Messrs. Barclay and Sons, Farringdon Street; Wilcox, 336, Oxford Street; and Jozeau, 49, Haymarket.

NIGHTINGALE'S INVISIBLE RESPIRATOR AND MOUTH-PROTECTOR.

THIS is a very simple, and yet, we think, an effective little invention, which is rather a substitute for respirators than itself a respirator. Every one knows that the air which has been warmed and moistened by passing over the mucous lining of the nostrils before it reaches the air-passages, is robbed of some of its most dangerous qualities. Cold air is adequately warmed; dry air is moistened; heavy and foggy air is filtered; a biting east wind is mollified. Practically, therefore, if we could all undertake to keep our mouths shut, we should get into much less trouble in going out into rough weather, and should "make fair weather", as the sailors have it, in spite of storms. But the habit of opening our mouths instinctively is too strong upon all of us to allow us to count with safety upon the strongest resolves; and so, for those who have to face cold air and sharp winds, for invalids with tender air-passages or susceptible lungs, Mr. Nightingale supplies a little shaped and valvular plate, which may be slipped between the lips and the teeth, and is provided with oblique slits, which prohibit inspiration by the mouth if it be properly used. We are inclined to think it a very useful, although a very simple little contrivance. It is free from a great many of the objections to respirators: it is very light, invisible, easily worn, slips into the waistcoat-pocket, and may prove useful to a great many who are compelled to face sudden gusts of cold air, and find that their air-passages resent the change on passing from warm rooms to cold streets or commons.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 7TH, 1872.

EFFECT PRODUCED ON THE CIRCULATION BY INJECTING PUTRID FLUIDS.

PROFESSOR C. HUETER and Candidatus Medicinæ Grevcler of Greifswald describe, in the *Centralblatt* for November 16th, the result of researches which they have made on the effects produced on the circulation by the injection of putrid fluid.

Healthy blood and pus were subjected to putrefaction until they contained vast numbers of monads, with energetic movements. Of this putrid fluid, about a cubic centimètre (sometimes, in larger animals, one and a half or two cubic centimètres) was injected into the muscular structure of the thighs of frogs, or, in a few cases, into the dorsal lymph-sac. At the end of periods varying from four to eight hours—and in some cases not until the end of twenty-four hours—the frogs were curarised, and the mesentery was examined. To the naked eye, a remarkable redness and dilatation of the vessels were evident; and, even with a low power of the microscope, the white corpuscles were seen adhering in large numbers to the inner wall of the blood-vessels, especially the smaller veins and the capillaries; after a longer time (*c. g.*, twenty-four hours), they were also found adhering to the arteries. Few only of the white corpuscles were seen to have passed through the walls of the vessels a few hours after the injection; and it was not until one or two days had elapsed, that some of the vessels were found surrounded by masses of migrated leucocytes.

Another appearance observed was, that a remarkably large number of the capillaries became shut off from the circulation; sometimes, at the end of twenty-four hours, half of them were in this condition. These capillaries were either filled with red blood-corpuscles, or appeared as canals merely containing plasma. In the latter case, they often could scarcely be recognised as capillary vessels, until one or more red corpuscles were seen to pass along them, or, as sometimes occurred, the circulation through them became re-established. In other capillaries, again, the current of blood was very slow and irregular.

The shutting off of a capillary was observed to be often produced through the obstruction of the vessel from which it sprang, by the adhesion of one or two white corpuscles near the point of origin of the capillary. In this case, the red corpuscles were flattened against the wall of the vessels by the white, in such a way as to obstruct the entrance to the capillary. There were also observed what might be called thrombi formed of one or more white corpuscles, blocking up the vessels and preventing the passage of the red corpuscles. In the capillaries where a slow stream of blood still flowed on, white corpuscles were seen adhering at various points, and partially obstructing the vessels.

Sometimes the red corpuscles were seen to pass by an apparently empty capillary tube, while at the same time no adherent white corpuscles could be seen. But, on examination, there would be found a large monad or a mass of monadic germs adhering to the vessel at the origin of the capillary, and acting towards the red corpuscles in the same way as an adherent white corpuscle. Although single small monads cannot obstruct a vessel, they yet influence the course of the red corpuscles in such a way as to prevent them from entering into a capillary. Sometimes a red corpuscle remains resting on a monadic germ, and surrounding it, until at last the corpuscle becomes free, rendering the monad visible. Sometimes a red corpuscle tears away the monadic germ, and the entrance to the obstructed capillary becomes all at once free, and normal circulation through it is re-established.

This affection of the mesentery cannot be considered as a mere local symptom of infection by putrid fluid. The tongue and the web of the foot of frogs also presented the same appearances—viz., adhesion of white corpuscles to the walls of the vessels, shutting off of many of the capillaries from the circulation, retarded circulation in others. The more minute mechanism of the obstruction was, however, less readily observed in the tongue and web, on account of the greater thickness and opacity of these parts.

The phenomena which have just been described cannot be attributed to a general retardation of the circulation arising from weakened action of the heart. Along with the affected vessels, there are others in which the circulation goes on in a normal manner. If it be supposed that the white corpuscles at the part where the injection is made take up a large number of the monads, it may also be supposed that to them is attributable the adhesive tendency of the white corpuscles throughout the body. For, although many free monads are seen to circulate in the blood, they are also often seen adherent, and it is probable that the adhesive tendency of the white corpuscles is increased by the presence of the monads which they have taken in. The adhering white corpuscles are much larger than normal, and contain nuclei with a dark contour. On applying potash and ammonia, Dr. Hüter and Herr Greveler found numerous monadic nuclei lying in the vessels, while the protoplasmic nuclei had all disappeared.

These researches of Dr. Hüter and Herr Greveler point, in their opinion, to the probability of arriving at an explanation of the disturbances produced in the circulation by infection, including the phenomena of fever. They intend to continue their researches on warm-blooded animals, and to publish the results. In the meantime, they think that their observations, as far as they have gone, may explain the increased frequency of the heart's action (which they sometimes observed in the frogs), the occurrence of rigors, the disturbancss of nutrition, the dryness of the tongue, the disposition to metastatic deposits, and the lethal action, which are attendant on fever.

THE MORBID EFFECTS OF ALCOHOL.

DR. DICKINSON'S rejoinder to our criticism of his papers on the morbid effects of alcohol suggests that our comments overstepped the limits of the inquiry. Of that, every one who has read his papers and our remarks can judge for himself, and we may direct our attention to a more momentous question. He believes that the influence of alcohol in the causation of renal disease has been greatly over-estimated; and he considers that his comparison of the *post mortem* records in two series of cases is confirmatory of his opinion. He finds the kidneys diseased with about equal frequency in the alcoholic and in what he calls the non-alcoholic series of *post mortem* examinations. From this he infers that the kidneys suffer less from alcoholic excess than is generally supposed. We, on the other hand, suspect that the consumption of alcohol may have been about equal in the two classes of cases. The assumption that, amongst hospital patients, those who are not engaged in the liquor trade, and who are "not known to be drunkards", may be registered in a non-alcoholic series, is not warranted by the ordinary experience of the habits and diseases prevalent amongst hospital patients; and we therefore consider such data untrustworthy and fallacious. Dr. Dickinson asks how it happens that "cirrhosis of the liver is more than twice as frequent with the drink-traders as with the contrasted class." He should ask himself how it happens that in his non-alcoholic series there is any cirrhosis. Is not this cirrhosis conclusive evidence that drunkards have got admission into his "non-alcoholic" class? The morbific effects of alcohol are greatly influenced

by the kind of liquor which is taken. Strong spirit more commonly causes cirrhosis of the liver; wines and malt liquors are more frequently associated with gout and kidney-disease. It may be that dealers in liquors, as a rule, consume more ardent spirit, while men of other trades and occupations are relatively more addicted to excess of wine and beer; but all this is matter of speculation. And in this inquiry there is no necessity nor any good excuse for having recourse to untrustworthy assumption, since in the presence or absence of albuminuria we have, for all practical purposes, conclusive evidence of the existence or absence of serious disease of the kidney.

In reply to the suggestion that he should pursue his inquiry amongst the living, rather than waste valuable time in supplementing imperfect *post mortem* records by unwarrantable assumptions as to the habits of life which have left their marks on the dead body, Dr. Dickinson intimates that we are among the prophets, and that we are declaring the results of an investigation not yet begun. Here he is in error. We are cognisant of a long investigation of the kind, and have more than prophetic grounds for recommending him to adopt a course of inquiry which is based upon facts, in preference to one which rests upon hypothesis. His industry and ability will, we are persuaded, be then rewarded by more secure results. In declaring what would be the result of a comparison of the amount of albuminuria amongst drunkards and teetotallers, neither more nor less of prophecy is involved than there would be in the statement that nitric acid dropped into albuminous urine will cause a white precipitate. The influence of intemperance in causing albuminuria is as much a matter of daily experience amongst those who have large opportunities of clinically investigating this class of diseases, as is the effect of any other well known morbific cause.

Dr. Dickinson denies the importation of theoretical considerations into his statement that "the organs are damaged by alcohol much as they stand in the line of absorption"; yet it is manifest that he has been so influenced by the theory that remoteness from the point at which the poison enters the circulation has a protective influence that, finding the kidneys, as he believes, less frequently injured than the small arteries, he erroneously assumes that "they are more remotely exposed"; whereas it is obvious that the kidneys are nearer to the part of the vascular system where alcohol enters the circulation, than most of the terminal systemic arteries can possibly be.

As to the question of proximity, an error is involved in the apparent assumption that, when alcohol has once reached the systemic capillaries, it ceases to exist as alcohol. It may be looked upon as certain that a large portion of the alcohol which has been taken up from the stomach passes the round of the circulation again and again, until it gradually disappears, partly, perhaps, by being decomposed, and partly by elimination. If this doctrine be true, then it follows that the amount of alcohol which reaches the tissues of a given organ—the kidney, for instance—and the amount of injury inflicted, depend, not upon nearness to or remoteness from the portal vessels, but upon the degree of affinity which exists between alcohol and the secreting cells of the gland.

Obviously, then, the interesting question which we have been discussing is one which is inseparably bound up with physiological considerations, and one not to be solved by mensuration. The problem is one of great interest. We are all deeply interested in studying the morbid effects of alcohol clinically and by *post mortem* records; but the inquiry needs to be rigorous and free from fallacies. It is a great mistake to suppose that, by massing unauthenticated data, authentic conclusions can be obtained.

DR. C. MEYMOTT TIDY, joint Lecturer on Chemistry and on Medical Jurisprudence at the London Hospital, commenced on Monday last the Cantor Lectures, at the Society of Arts, for 1872-73. The subject of the lectures is the Practical Applications of Optics to the Arts, Manufactures, and to Medicine. They will be continued on five successive Mondays at 8 P.M., and will include a notice of the applications of lenses to medical purposes, and of spectrum-analysis applied to the detection of blood.

WE hear that Mr. Sidney Chater, a member of the Association, has received the necessary authorisation to practise in Boulogne.

MISS S. M. HARDING has been appointed dispenser to the Birmingham and Midland Hospital for Women.

DR. VOISIN, honorary physician to the Bicêtre, died on November 23rd, at the age of seventy-eight.

THE Royal Hospital for Diseases of the Chest, City Road, has received from an unknown benefactor a fourth donation of £1000.

AT the recent examinations for the Doctorate of Medicine at the University of London, forty gentlemen presented themselves, and of these eighteen, or forty per cent., failed to satisfy the examiners.

THE twenty-first anniversary festival of the Hospital for Sick Children will be held on Wednesday, February 19th; His Grace the Duke of Argyll in the chair.

THE *Tribune Médicale* of Nov. 3 relates two additional cases of strangulated hernia in which pneumatic aspiration enabled reduction to be effected. The cases occurred in the practice of Dr. Chauveau of Courtalen.

THE Academy of Medicine in Paris is engaged in discussing the question, whether midwives ought to be allowed to administer ergot. This drug is one of those which *pharmaciens* are forbidden to sell except under the order of a medical man. The matter has been brought before the Academy by the prefect of police, in consequence of the refusal of a *pharmacien* to supply ergot to a midwife.

A SOMEWHAT abridged translation of the able address delivered by Dr. Maudsley to the section of Physiological Medicine at the annual meeting of the Association in Birmingham, has commenced to appear in the *Gazeta Medica da Bahia*. The translator, however, in paying this well merited compliment to Dr. Maudsley, makes a rather curious error in the title of the paper, which he styles "Discurso proferido na Sociedade de Psychologia de Birmingham"—*i. e.*, "An Address delivered to the Birmingham Psychological Society."

A MELANCHOLY statement as to the condition of the poor of the Canton of Bern has (the *Swiss Times* says) been compiled from the reports of the Statistical Society and data furnished by sixty local physicians. At the end of last year, out of a total population of 506,475, there were 1,512 idiots and cretins, and 1,292 persons suffering from mental aberration—of whom, by the way, scarcely a third could be received into the asylums. These figures show that in the Canton the ratio of idiots and insane to the population is as 1 to 180, while in England the proportion is 1 to 300.

THE CROWN PRINCE OF PRUSSIA.

OUR readers will be glad to learn that the Prince Imperial of Germany is now recovering satisfactorily from his troublesome and painful illness. The Prince has been suffering from inflammation of the large intestine, an affection which is painful and tedious. It has not involved any danger to life, but the progress towards cure in colitis is always slow, and attended with so much of the risk of relapse as to make a good deal of care necessary. The Prince's usual medical attendant, Inspector-General (General-Arzt) Wegner, is with him. The Prince's illness has interrupted the stay of the Crown Princess at Bex in Switzerland. When convalescence is established, it is probable that Carlsbad will be selected as winter-quarters.

RAIN AND HEALTH.

WITHOUT doubt it is not conducive to health to be rained upon and to suffer the chillings which the wearing of moist clothing entails. Without doubt a swampy condition of the ground is not conducive to health; and notwithstanding, as the returns of the Registrar-General show, the present rainy season in London is a season of almost unparalleled healthiness. The reason appears to be, that the purification of the atmosphere, which is brought about by the rain, far outweighs in sanitary effect the disasters due to damp clothing and damp

dwellings, whilst the very perfect drainage of London insures it against being converted into a swamp even in the most rainy of seasons. When Tyndall horrified a West-end audience by persuading it that the fluff off its clothes, which was floating in the theatre of the Royal Institution, and which he illuminated by the electric light, consisted mainly of organic germs, he drew a moral lesson of doubtful utility in recommending the use of cotton-wool as a shield against the germs of disease. The proper purifier of the atmosphere is the rain. This is patent enough to the chemist, who, by dint of washing a gas with water, is able to rid it of every trace of solid and liquid particles, and even of vapours, which it may happen to contain; and, indeed, to every one who has observed the freshness and clearness of the atmosphere after a shower of rain, the importance of this purifying action of the rain ought to be suggestive.

POISONING BY VANILLA.

A PHYSICIAN in Worcester County, Massachusetts (*Boston Medical and Surgical Journal*, August 1st, 1872), in speaking of cases of poisoning by vanilla flavouring on the continent of Europe, to which attention has been directed in our columns, stated that in his own family evident and violent poisoning from a similar cause recently took place. Five members of the family were affected, all of whom had partaken of custard flavoured with vanilla, while two who had not eaten escaped. The symptoms were severe diarrhœa, with violent pain in the lower abdomen, without much gastric disturbance.

THE "SNAPPING DOCTOR".

AN eccentric character died recently in St. Louis, Missouri, who is described by a correspondent of the *Philadelphia Medical Times* as follows. "There died in this city, yesterday, of small-pox, an eccentric old man, named Hotchkiss, generally known as the 'Snapping Doctor', the 'Rag Doctor', and the 'Dirty Doctor'. Hotchkiss was an illiterate man, who claimed to have supernatural powers of healing the sick through the agency of animal magnetism; and extraordinary stories of miraculous cures of chronic diseases by him are in circulation among the ignorant people who believed in him. He was a very old man, and claimed to be one hundred and forty years of age, with an expressed determination to live until the second coming of Christ. He was not only a very old, but he was also a very dirty man. It is said that for twenty years he had not washed himself, and his apartments reeked with filth. Dr. Hotchkiss was a queer-looking old fellow. He wore a long gown and a red fez cap. His sharp, haggard features, begrimed with the accumulated dirt of years; his brilliant black eyes, restless with the fires of insanity; and his long, matted, snow-white beard, gave him a weird, unearthly look. His extreme age cannot be doubted, though it is hardly probable that he was one hundred and forty."

THE PREVENTION AND CURE OF HYDROPHOBIA.

ANY well authenticated statement of success in curing or preventing hydrophobia, by a person capable of weighing the evidence and testing the primary facts, claims our earnest attention; for, up to the present time, neither our own nor the veterinary profession has succeeded in finding anything like a cure for this terrible disease, or any other preventive worthy of attention than the immediate and complete cauterisation of the infected wound. In an inaugural thesis presented to the Faculty at Berne, Dr. Ernest Guisan describes a successful prophylactic treatment of the disease by means of arsenic, and gives the following clinical observations (*Correspondenz-Blatt*, August 1st, 1871).

"A man was bitten on the 24th of June by a mad dog, in the hand; a girl was bitten at the same time, and shortly after died from hydrophobia. Two days after the accident, the man applied to Dr. Guisan's father, who cauterised the wound deeply with potash, and kept the wound open with cantharides. Minute doses of belladonna were given morning and evening up to the 18th of July, when the patient had rigors and pains in the body. From this time up to the 26th of July, the symptoms of hydrophobia became gradually more and more expressed, in spite of repeated venesections and the use of calomel and opium. At this date, however, small doses of arseniate of soda were prescribed every four hours (0.003 of a *gramme*). On the 27th, marked amelioration of the symptoms was observed, which continued till, on the 30th, all danger had passed. and complete recovery took place."

Dr. Guisan gives another case, in which a rabid dog, between the 7th and 9th of June, bit thirteen persons in various towns of the canton of Freiburg. All were recommended to be treated with one-twentieth of a grain of arsenic morning and evening, as a prophylactic measure. Eight submitted to this prophylactic measure, and none were affected. Four declined, or were not allowed, to take the arsenic. Of these four, two remained unaffected, and two died. One began the arsenic treatment, but speedily left it off; she was attacked, but at a much later period, and died. Dr. Guisan recommends not only the internal employment of the arsenic, but that the wound should be dressed with it. Until, however, the preventive virtues of arsenic are much more established than by these few observations, it would be very unwise in any one bitten by an animal believed to be affected with rabies, to omit the tried and effective precaution of thoroughly cauterising the wound.

BRIGHT'S DISEASE AT THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

AT the next meeting of the Royal Medical and Chirurgical Society, on Tuesday, December 10th, Dr. George Johnson will read a paper on "The Pathology of Chronic Bright's Disease with Contracted Kidney, with special reference to the theory of Arterio-Capillary Fibrosis." We are requested to say that, since in the course of Dr. Johnson's paper frequent and particular reference is made to the recent paper by Sir William Gull and Dr. Sutton, and to their illustrations, those who intend to join in the discussion, or even to follow the reading of his paper, will find it convenient to bring with them the volume of the *Medico-Chirurgical Transactions* just issued, which contains the paper referred to.

PREVENTABLE HOMICIDES.

A VERY serious public lesson may be learnt from the following brief announcement taken from a corner of the *Pharmaceutical Journal*, and there printed in small type. On the 6th of November, Dr. Hardwicke, coroner, held an inquest at 13, Devonshire Terrace, Paddington, touching the death of a lady named Scott, aged 74. From the evidence, it appeared that Mr. Dickenson, a druggist, of Queen's Gardens, Bayswater, prepared a prescription for the deceased without the help of an assistant, and, being hurried, he used solution of morphia in mistake for water. The jury, after long deliberation, returned a verdict of "Death by misadventure".—Such occurrences have, unfortunately, been only too common in the history of recent years; and some very valuable lives have been lost owing to accidents of this kind. We need not again recall, as we have done before, the long and painful list of lives sacrificed to the obstinate refusal of druggists to adopt simple mechanical precautions in the shape of the bottles employed for storing and dispensing medicines of a lethal character. It is quite obvious that, had the solution of morphia been stored in a fluted bottle or in a bottle with any of the numerous varieties of safety-stopper, this accident could not have occurred, any more than the many others of the same class which we have recorded. Last year, Mr. Simon, on behalf of the Privy Council, intimated that, unless the Council of the Pharmaceutical Society carried out the obligations imposed upon it by the Pharmacy Act, and by the undertakings given in its name on the passing of that Act, by framing regulations making compulsory such mechanical precautions as we have often described and urged, steps would be taken to oblige them to do so. The Council were willing to fulfil their duties, and proposed regulations to protect the public from such accidents as that to which this poor lady fell a victim; but the trade were unwilling to submit to restrictions, and overawed the Council, whose fear of their constituents was stronger than their sense of good faith to the Government, or than their interest in the lives of their customers. Coming so soon after that dereliction of duty on the part of the Council of the Pharmaceutical Society and of the whole

body of registered chemists, this death from preventable misadventure deserves much more serious consideration than has yet been given to it; and we cannot but wish that the whole of these facts had been presented to the jury.

A HEALTHY HOSPITAL.

MR. CALLENDER publishes in the *St. Bartholomew's Hospital Reports*, vol. viii, a report of twenty-five consecutive amputations (twenty-one of which were at the thigh or leg) without a death. They are all the cases which have been under the care of Sir James Paget or himself since May, 1869, the date of his last report. Mr. Callender observes that, if amputation statistics are to be relied on, no stronger evidence could be desired of the healthy condition of the hospital wards during the three years to which the above figures refer.

THE ROYAL SOCIETY.

AT the anniversary meeting of the Royal Society on November 30th, Dr. Sharpey resigned the office of Secretary, which he had filled since 1853. The following officers were elected: *President*, Sir G. B. Airy, K.C.B., Astronomer Royal; *Treasurer*, W. Spottiswoode; *Secretaries*, Professors G. G. Stokes and Huxley; *Foreign Secretary*, Professor W. H. Miller. *Other Members of Council:* G. J. Allman, M.D.; Sir B. C. Brodie, Bart.; George Busk, Esq.; R. B. Clifton; J. Fergusson; T. A. Hirst, Ph.D.; J. D. Hooker, M.D.; J. Prestwich; Rear-Admiral Richards; H. E. Roscoe; P. C. Slater; W. Sharpey, M.D.; F. Sibson, M.D.; Major-General Strachey; J. Todhunter; and Sir C. Wheatstone, D.C.L. The Copley Medal was awarded to Professor Wohler of Göttingen for his contributions to chemical science; the Royal medals to Dr. Thomas Anderson for his chemical and physical researches, and to Mr. H. J. Carter for his researches in zoology; and the Rumford medal to Andreas J. Angstrom of Upsala, for his researches on spectrum-analysis.

THE WATER-SUPPLY OF MAIDSTONE.

ACCORDING to a recent report made by Mr. M. A. Adams to the Chairman of the Maidstone Local Board, the water-supply of that place is in a wretched condition. The water delivered to the Kent County Ophthalmic Hospital (Maidstone) has been examined by Mr. Adams, who finds 0.10 parts of free ammonia and 0.18 parts of albuminoid ammonia per litre of water. We need hardly inform our readers of the significance of these figures: suffice it to say, that they indicate fresh sewage and putrescible matter in alarming quantities. The worst feature of the case is that the water in question is not water from a well, but from a water-company; and that, therefore, it is not an isolated family or institution that is drinking a dangerous liquid, but it is a whole township that is doing so. The Maidstone Water-Company deserves a niche beside the notorious Southwark and Vauxhall and the Lambeth Companies.

SMALL-POX IN BERLIN AND LEIPZIG.

THE *Deutsche Klinik* (No. 38, 39, 1872) contains the report, by Lothar Meyer, of the Royal Sanitary Commission on the cases of cholera admitted into the Berlin Small-pox Hospital during the epidemic of 1871-2. Meyer regards varicella as a distinct disease, arising from a different contagion from that of small-pox; but, on account of the difficulty of diagnosis, the same precautions were adopted in cases of varicella as in those of variola. All the varicella cases were vaccinated, if this had not been already done; of seven vaccinations, four were successful. Vaccination during the incubation-stage of small-pox always rendered the course of the disease milder. Of twelve cases so treated, the vaccine pustules were accompanied in four by small-pox, and in eight by varioloid; none of the twelve died. Of 44 patients who had not been vaccinated, one-half died; in 1,510 who had been vaccinated once, the mortality was 13 per cent.; and in 19 who had been vaccinated twice, there were no deaths. Seven patients (all between 60 and 70 years of age) had already had small-pox once; of these, three died. The hæmorrhagic form of the disease occurred in 10 per cent. of the female patients, and in 6 per cent. of the male; the percentage mortality (in the total cases) from this form was 9.3 for the females and 5.5 for the males. Tincture of sarracenia was given in 60 cases without result; and xylol was used in a smaller number, equally without benefit. Quinine was given in 300 cases; but, though its use was followed by some reduction of temperature (except in the premonitory stage), the results were not encouraging. Cold baths were used in 237 cases, the patients being kept in water at 57 deg. as long as the temperature of the body exceeded 103 deg. As many as six baths were sometimes used in a single case. Except in the premonitory stage, there was a reduction of temperature varying from 0.9 to 2.7 deg. The mortality among patients treated by quinine, and among those treated by the bath, was 16 per cent.; among those subjected to expectant treatment, it was 15.2 per cent. To prevent pitting and promote healing of the cicatrices, tincture of iodine, applied early, was found to be the best application. Strict attention to the cleanliness of patients and of the wards was considered indispensable.—In a report on the small-pox in Leipzig in 1871, Dr. Thomas says that, in consequence of the agitation against vaccination which has prevailed in late years, a large number of children were unvaccinated and consequently fell victims to the disease. The total number of deaths from small-pox during the epidemic was 1027; of which 680 occurred in children under five years of age. After this, there was a rapid increase in the mortality; so that, between the ages of 10 and 15, only six died—all of whom were unvaccinated. In subsequent decades, where the protective power of vaccination had become reduced and revaccination had not been successfully performed, the deaths gradually increased, but never to so great a ratio as in the young children. Of 23,892 children under 15 years of age, 715, or 2.98 per cent. died; but in 65,434 grown persons, the deaths were only 312, or 0.48 per cent.

A DICTIONARY OF STATE MEDICINE.

DRS. G. KRAUS and W. PICHLER of Vienna have lately published the first part of an *Encyclopædic Dictionary of State Medicine*. The work is intended to give information on forensic medicine, sanitary and veterinary police, and public, private, and military hygiene. The first part consists of 615 large octavo pages, and contains articles in alphabetical order as far as the letter D inclusive.

ABNORMAL OVARIOTOMY.

AMERICAN surgeons have been much remarked for their boldness, and hardly less for their skill in operating. Sometimes the legitimate limit of boldness seems to be overpassed. A new name is required to characterise such an operation as that performed by Dr. Robert Battey, and mentioned in the *Philadelphia Medical Journal*. The author removed from a young lady, aged twenty-three years, both ovaries, which *were normal in condition*, with a view to establish at once "the change of life." It is impossible to read of such a feat without a thrill of horror; one is at a loss whether to blame most severely the patient who endured, or the surgeon who perpetrated, the mutilation. He describes the operation as one of normal ovariotomy; we have chosen another heading.

COSSACK VACCINATORS.

A RATHER curious piece of intelligence from Central Asia, relates to the outbreak of a mutiny at Chodshent. The cause of this *émeute* was no other than a somewhat summary proceeding of the authorities in endeavouring to protect people against the ravages of small-pox, one of the scourges of the region. Accompanied by Cossacks, the Government surgeons would enter village after village, and pouncing upon the inhabitants, man, woman, or child, wherever they may find them, insert the beneficent virus. At Chodshent the terror which preceded and followed the medical cavalcade led to open resistance. Fancying the enigmatical punctures intended to mark those sought out for transportation to Russia, the people rose against the Cossacks, killed a couple of them, and also massacred one of their own elders pressed into assisting at the hateful ceremony. A Russian force having entered the city two

of the rioters were executed, nine sent to the Siberian mines, ten others banished, and several thousand fined. Of those banished two were killed by their escort before they were well over the borders of Turkistan.

SCOTLAND.

ON the occasion of his installation as Lord Rector of the University of Glasgow, the Corporation have decided to entertain Mr. Disraeli at a banquet.

ROYAL MEDICAL SOCIETY OF EDINBURGH.

AT a meeting of the Society on November 29th, the following gentlemen were elected Annual Presidents : J. Crauford Renton, L.R.C.S.E. ; H. Macdonald Church, B.Sc.M.B., C.M.; John E. Shaw, M.B. and C.M.; Alfred C. E. Harris, M.B., L.R.C.S.E.

CLUB PRACTICE AT BONESS.

OUR brethren at Boness have, it would appear, been publicly branded by the working men of the town as "uncivil, ungentlemanly, and inattentive." The cause of this somewhat unparliamentary language appears to be "the exorbitant demand" made by the medical practitioners for an advance from twopence to threepence in the present rate of attendance on the workmen.

THE EDINBURGH ROYAL SOCIETY.

THE session of the Royal Society was opened on Monday by an address delivered by the President, Sir Robert Christison. The address included biographical sketches of the members of the society who had died during the past year. The Brisbane prize has been awarded by the Council to Professor Allman.

GLASGOW SANITARY MEDICAL ARRANGEMENTS.

OUR Glasgow correspondent writes :—The Glasgow sanitary medical arrangements seem at last to have attained to some degree of permanency, and we hope that we shall not require to report any further changes for a long time to come. Dr. Russell was, as already intimated in these pages, unanimously appointed medical officer of health for the city ; and now Dr. Gairdner, who was offered the appointment of consulting medical officer, at a salary of £100 a year, has declined the offer, and Dr. Russell is left as the sole representative of the medical staff. Dr. Gairdner's letter is brief, and couched in felicitous terms. He thinks it undesirable, as do Dr. Russell's friends, that he should retain a position of divided and not well-defined responsibility.

THE SANITARY CONDITION OF MONTROSE.

THE local authority of Montrose appears to be a very eccentric and obstinate body, and their peculiarities of temper have carried them very properly, and, we trust, very much to their benefit, into the second division of the Court of Session. On Tuesday, the Board of Supervision brought before the notice of the Court that at Montrose there was no system of under-drainage, and in parts of that somewhat ancient burgh no drainage at all. For several years the inhabitants have protested against this state of matters, have obtained skilled evidence and engineers' reports to show that a complete system of drainage can be carried into effect without difficulty ; but the local authority have failed most signally to show any proper desire to fulfil their public duties. The Board of Supervision accordingly called the Court to compel the local authority of Montrose to bestir thamselves. The local authority of course deny that they have hesitated as to the necessity for moving in the matter, but explain that they have been divided as to the scheme of drainage to be carried out. The Court have postponed the consideration of the case for three months, by which date the local authority are expected to prepare and report to the Court a satisfactory scheme for draining the burgh. This will, no doubt, stimulate the peculiarly obstructive policy of this public body.

IRELAND.

DR. CAMERON, the analyst for the city of Dublin, has been appointed Health Officer for the Pembroke township, at a salary of £30 a year.

THE Board of Guardians of the Limerick Union have unanimously voted Dr. Beatty, of the Broadford Dispensary, a superannuation allowance of two-thirds of his salary, including vaccination and registration fees.

SURGICAL SOCIETY OF IRELAND.

THE first meeting of this Society took place on Friday, the 29th November. The President, Dr. Kirkpatrick, delivered the opening address. Dr. Morgan made a statement on the subject of Ether *versus* Chloroform, contending that the former was much superior to chloroform as an anæsthetic, being, according to the statistics which he brought forward, eight times more safe. The debate on the subject was adjourned until the next meeting of the Society. Dr. Morgan will find it rather difficult to back up his arguments from the experience of the profession in Dublin. Dr. Kidd, at the last meeting of the Obstetrical Society, said that he could discover but five deaths occurring during the administration of chloroform (and one of these should properly have been attributed to the admission of air into a vein) over a period of twenty-five years. It would be impossible to find out how many times chloroform has been administered in Dublin during that period, but there are close upon fifty hospital surgeons in Dublin who must administer it at least twice a week, which will give 5,000 administrations in the year ; this, for twenty-five years, would give 125,000 administrations with but five deaths. The deaths can be found out with tolerable accuracy, but the number of times that anæsthesia has been caused by chloroform is probably three or four times as many as is indicated above. No doubt much light will be thrown on this important subject, when the debate comes on at the next meeting of the society.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

OUR correspondent in Dublin writes, under date December 4 :

The Chair of Practice of Medicine in the Royal College of Surgeons, vacant by the resignation of Dr. Benson, has just been filled by the election of Dr. James Little, editor of the *Dublin Journal of Medical Science.* The election for the Professorship of Surgery will take place on the 24th of this month ; Mr. Croly and Mr. Stokes are the only candidates at present in the field. It is not yet known who will be likely to be Mr. Hargrave's successor as representative of the College of Surgeons on the General Medical Council. The conjoint examination scheme cannot be said to have been much advanced towards completion during the past year ; the Colleges of Physicians and Surgeons have got over the pecuniary difficulty, but the Apothecaries' Hall would fain examine in subjects which are considered to be outside its province, and the Queen's University, in the exercise of its own sweet will, will only promise to take the matter under consideration. It is not at all improbable that unanimity will only be obtained, in the end, by Act of Parliament.

PATHOLOGICAL SOCIETY OF DUBLIN.

A GENERAL meeting of the members was held in the Anatomical Theatre of the School of Physic, Trinity College, on Saturday, November 23, when the following were elected officers of the Society for the Session 1872-73. *President :* G. H. Kidd, M.D. *Vice-Presidents :* R. Adams, M.D., Sir Dominic Corrigan, Bart., M.D., E. Hamilton, M.D., H. Kennedy, M.D., J. Banks, M.D., J. Denham, M.D. *Council :* R. Mc Donnell, M.D., T. Hayden, F.K.Q.C.P., B. G. Mac Dowel, M.D., E. H. Bennett, M.D., W. Moore, M.D., R. Law, M.D., J. H. Wharton, M.B., G. H. Porter, M.D., J. S. Hughes, M.D., J. Hamilton, Esq., A. W. Foot, M.D., H. H. Head, M.D. *Honorary Secretary :* William Stokes, Esq. *Secretary and Treasurer :* R. W. Smith, M.D. *Secretary for Foreign Correspondence :* R. D. Lyons, M.D. A vote of thanks to the outgoing President, Mr. Joliffe Tufnell, was proposed by Dr. Stokes, seconded by Dr. R. W. Smith, and carried by acclamation.

LEAMINGTON WATER-SUPPLY AND TYPHOID FEVER.

II.

OUR special correspondent's second report is one of great completeness and detail. The most important parts of it are the following.

I. None of the typhoid fever cases can be traced to drinking the town water.

II. There are local conditions in respect to drinking water and sewer-gas, which will do much to account for the existing cases investigated by our correspondent.

"It is not easy," our correspondent writes, "to trace the first cases of typhoid in the locality; they probably occurred towards the end of September. 'One death from it is registered in the quarter ending September 30th, and sixteen from diarrhœa; since that date, two are registered from typhoid and two from diarrhœa.' (We quote from Dr. J. Thompson's published speech). Now, even calculating as a well-known (non-professional) gentleman of Leamington did to me, thirty cases of recovery from typhoid to each death, this would give a large proportion—larger even than I believe warranted; but we will commend a circumstance connected with these figures to the gentleman referred to. It is within our knowledge that in certificates of death in Leamington—we do not say in Leamington only—the word fever is omitted sometimes, 'for fear of causing alarm,' and the death is registered to its secondary results in brain, or lung, or intestine, as the case may be. Let no one rely too much on statistics compiled from such materials. *Verbum sapienti sat.*"

After referring to the local etiology of particular cases which he investigated, he writes: "After these special cases we need only now say, in general terms, that we have before us information concerning fifteen others recently or now occurring, and not counting cases spoken of as diarrhœa. Now—*most important fact*—all these cases are in *one locality*, including Waterloo Street, Albion Row, Gas Street, Springfield Street, Wise Street, Tachbrook Street, and Tachbrook Road; we hear of none (and we have consulted gentlemen who practise amongst all classes)—of none in other parts of Leamington; and we hear, on the other hand, that in autumn it is never absent from some of the above named streets, and, at present, is by no means worse than usual. A second most important fact is, that in *not a single instance* has the town water-supply been proved to be, or even thought with any probability to be, the cause of the fever; on the contrary, we have abundant medical testimony, in public and in private, that the fever has been lessened or banished when the town supply has been introduced. We have not exact data as to the water-supply of *all* the cases reported to us, but we have enough to show that in a large proportion well-water was used, and ground for strong suspicions that the sewers were not well trapped and the drains not well cleansed; to use a common expression, the saddle has been put upon the wrong horse. Well-water is very largely used in Leamington; out of 4,234 houses, only 2,200 are supplied by the town supply."

He finds no reason to believe that the town water-supply has at any time been inculpated in the causation of typhoid. Regarding the river, however, he says: "We are aware that part of the sewage (filtered) of Southam flows into it twenty-six miles above Leamington; that the sewage of other villages—Radford, Offchurch, and Cubbington—may *possibly* soak through fields and ditches into it; it is certainly not conveyed direct. We are aware, moreover, that some time ago there were sources of infection nearer still (some say they still exist), and that the dark coloured mud in the bed of the river is not pleasant to the eye; in summer, we have heard, it offends the nose; all these make evident grounds of suspicion, and are, in fact, the reason of not unnatural discontent."

Referring to the excellent projects in course of operation for providing a pure water-supply by boring, he points out that, unless more than this be done, little will be effected towards meeting the most pressing evils. "The real and more pressing obligations are, to secure the well-water from contamination, and to obtain efficient trapping, ventilation, and cleansing of sewers and drains. With regard to the first point, the authorities have wisely abolished open cesspools and prevented the forming of new ones. The surveyor informs me that there are not a dozen left in the town; and in the neighbourhood of these, town-water is supplied in pipes, the old closets are panned and drain into the sewers, and are flushed by the pouring in of water. With regard to the second, the trapping generally, we believe, is defective, and the drains, especially in the neighbourhood referred to, do not bear a good character; almost the whole of the town is elaborately sewered, the pipes being laid about three yards below the surface; another set of pipes, five feet below the surface, carry off the surface-drainage, whilst the water supply-pipes are about two feet above these. The sewer-pipes are ventilated in the usual manner at intervals in the middle of the street, and at every 'man-hole' a pot of charcoal is placed, whilst the street 'gulleys' are trapped by the syphon arrangements. The opening of the house-drain into the sewer is not trapped or valved. The sewer-pipes are all connected, and pour their contents from all parts of the town into a main which runs in the direction of the Warwick Road, and the sewage is finally conveyed to Lord Warwick's land. Up to a recent time it was treated by the A B C process, but it is not so now. As regards the disposal of the sewage, there are, we believe, no complaints."

A medical man writes to the Leamington paper to convey the grotesque information that "albuminoid ammonia" (which is the term by which the ammonia *actually formed* by the destruction of complex organic matter in water is known to chemists) is "white of egg and salvolatile." The same gentleman asks further, how long it would be safe for a lady to take a little salvolatile and water after eating an egg for breakfast. Possibly this writer finds difficulty in comprehending that, although a weak solution of ammonia is harmless enough in itself, yet some of the organic substances (sewage) which yield ammonia on being oxidised by the chemist are themselves formidable poisons, and it is not desirable that they should pollute drinking-water. "Albuminoid ammonia" is as much a proof of organic poisoning of water as are the characteristic colour-tests of the presence of strychnia. Harmless in itself as decomposed in the chemist's laboratory, it is the sure evidence of polluted water.

We are very glad to learn that some of the most active and well-informed residents of Leamington have resolved to do their utmost to supply the town with clear water which is known to lie near the surface. We have received very satisfactory communications on this subject and in relation to our reports from distinguished residents.

BRITISH MEDICAL ASSOCIATION: ANNUAL MEETING, 1873.

MR. AUGUSTUS NEWMAN, M.B., writes to us:—As the annual meeting of the Association is to be held in London next year, would it not be possible for the Council, if it be not against the rules of the Association, to decide to hold it in some other month than August—say in June? August is a very pleasant month in the country; and, moreover, it is one when many of the profession in London can easily leave town, and would do so even were there no general meeting. But for country people to visit London in August is not usual; that month and September are the dullest and worst in town. As it is hoped that many distinguished foreigners will visit us then, it would surely be better that they should see our metropolis at its best, and not when half the West-End houses are empty and many places of amusement closed.

*** This question has been much discussed. There are, of course, many reasons why the metropolitan members of the Association would be more pleased to welcome their friends from other parts of the United Kingdom during the height of the London season, than at its close; but a large number of the most valuable and working members of the Association are then engaged in the work of teaching in the hospitals and medical schools of England, Scotland, and Ireland, and would be unable to leave before the end of July. To hold a meeting at such a time as to preclude the attendance of the teachers in all the great extra-metropolitan schools, would of course be impossible. The Committee of Council have, therefore, decided not to change the usual date of meeting. The only other available date would be the Easter vacation, which is not a much more agreeable season than the autumn vacation.

At a meeting of the Arrangement Committee on November 29th, Dr. Stewart, as a member of the deputation from the metropolitan members to the Committee of Council, reported that the invitation to the Association to meet in London had been unanimously accepted by the Committee of Council; that Sir William Fergusson had been appointed President-elect, Dr. Parkes orator in Medicine, Mr. Erichsen orator in Surgery, and Dr. Burdon Sanderson orator in Physiology; and that the Committee of Council had decided, also in accordance with the recommendation of the Metropolitan Arrangement Committee, that a Section of Physiology should be formed in addition to the ordinary Sections. It was resolved that the hospital medical officers and other leading practitioners in the district, being members of the Association, should be invited to join the Arrangement Committee; and that a subscription to defray the expenses of reception should be opened. Dr. Quain was elected Treasurer; and Mr. Callender and Mr. Ernest Hart were elected Local Secretaries, in addition to Dr. Stewart and Dr. A.

Henry, the Secretaries of the Metropolitan Counties Branch. The officers were authorised to take the necessary steps for preliminary organisation.

FORMATION OF A MEDICAL SOCIETY FOR THE WEST RIDING.

A LARGELY attended meeting of the profession was held this week in Leeds, on the invitation of Dr. Chadwick, to consider the desirability of establishing a Medical Society for Leeds and the surrounding district. Besides Dr. Chadwick, Dr. Heaton, Mr. Samuel Hey, Mr. Wheelhouse, Mr. Pridgin Teale, Dr. Clifford Allbutt, Mr. Jessop, Mr. Ikin, and numerous members of the profession in Leeds, there were present Dr. Myrtle and Dr. Deville, Harrogate; Dr. Crichton Browne and Mr. Wade, Wakefield; Mr. W. Haxworth, Kirkby Overblow; Dr. Rabagliati and Dr. Lee, Bradford; Dr. Scott, Huddersfield; Dr. Dolan, Halifax; and other gentlemen from various parts of the West Riding. Dr. Chadwick opened the meeting by stating the advantages of such a Society, and the large amount of support which the proposition to establish it had received. Besides the splendid assembly he saw before him, he had letters of assent from about thirty gentlemen. It was then resolved to establish the new Society, under the name of "The Leeds and West Riding Medico-Chirurgical Society", "whose object shall be to promote the study of medicine and surgery among practitioners by the communication of clinical and therapeutical facts and the exhibition of pathological specimens and discussions thereon." Dr. Chadwick was elected first President of the Society; Mr. Samuel Hey and Dr. Heaton were appointed Vice-Presidents; Mr. McGill and Dr. Symes, Secretaries; and Dr. Heaton, Treasurer. A provisional Committee was appointed to report rules and to receive names of intending members, to be submitted to the first general meeting. Mr. Ikin, as a member of the British Medical Association, hoped that the formation of the Society would not have the effect of withdrawing members from the Association. The Chairman sincerely trusted that such would not be the case; and intimated that, if he had thought such would be the result, he would not have taken part in the formation of the new Society. He rather hoped that the Society would be the means of adding members to the Association in the district. Nearly one hundred of the gentlemen present then gave in their names as members, and the meeting terminated with a vote of thanks to the Chairman.

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH.

THE next meeting of this Branch will be held at the York House, Bath, on Thursday, December 12th, at 7.30 P.M.; T. G. STOCKWELL, Esq., President, in the Chair.

R. S. FOWLER, E. C. BOARD, } *Honorary Secretaries.*

Bath, November 24th, 1872.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT. MEETING.

THE forty-sixth meeting was held at the Fountain Hotel, Canterbury, on November 14th; Mr. WILKS of Ashford in the Chair.

Medical Officers of Health.—The report of the Committee appointed to draw up a plan in promotion of Mr. Reid's motion relative to medical officers of health was read, and adopted unanimously. [The resolutions passed were published at page 615 of the JOURNAL for November 30th.]

Papers.—1. Mr. Rigden (Canterbury) read a paper on the question—Are the number or extent of the Cicatrices of Vaccination a test of the security against Small-pox?

2. Dr. Joyce (Rolvenden) read a paper on a case of Acute Inversion of the Uterus.

The members afterwards dined together.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

THE November meeting of the members of this District was held on Tuesday, the 19th, at Mellish's Hotel, Brighton; Dr. WITHERS MOORE in the Chair.

Public Health Act.—A discussion took place thereon. Dr. Carpenter of Croydon, President of the Branch, attended to explain its provisions; and the attendance of members at the deputation to Mr. Stansfeld on the 21st was invited. Mr. Hodgson (Branch Secretary) read the resolutions agreed to at the meeting of the Executive Council at Redhill, on the 7th; and at the close of the discussion (which was shared in by the Chairman (Dr. Moore), Dr. Cunningham, Dr. Fussell, Dr. Harland, and Messrs. A. Napper, Satchell, Monckton, etc.), the following was agreed to:—"That, in the opinion of this meeting, the resolutions adopted at the meeting of the Executive Council of the Branch at Redhill, on the 7th instant, deserve our unanimous support, and we hereby accord to the deputation our hearty assent to their proceedings."

The reading of Dr. Milner Barry's paper on the Treatment of Purpura Hæmorrhagica was postponed.

The Aquarium.—An adjournment then took place to the Aquarium, which, by the liberal invitation of the Directors, was thrown open for inspection. The tanks were illuminated by gaslight, and much interest was evinced by a study of their remarkable and varied occupants. The thanks of the meeting were awarded to the Directors for their courtesy through their manager, Mr. Lord.

New Members.—Dr. Seymour of Brighton, and Mr. A. R. Ticehurst of St. Leonard's, were nominated for membership of the Association and of the Branch.

The Dinner took place at Mellish's Hotel, when upwards of forty sat down.

The Next Meeting will be held at Hastings in March 1873; Mr. F. Ticehurst in the Chair.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR FRENCH CORRESPONDENT.]

Paris, November 24th.

Canvassing for Vacant Fauteuils.—Lady-Students.—Animal Heat.—M. Péan's Operations.

WE have a peculiar habitude, which I conceive, your ideas across the Channel would not accept with ease. It is, that for every vacant arm-chair in our Academies, and for every vacant chair in the Faculty, the candidates must pay their personal homage to the Academicians, and solicit their benevolence and their votes. This obliges an amount of homage and an interchange of hypocrisies which your insular sense would reject, and which our republican institutions should forbid as contrary to virile habits of mind and to respect for oneself. It is, I fancy, quite unknown, except amongst us; for here, despotism has left such deep traces, that not even learning can dispense with a livery; and, to acquire the costume of a dress-footman on state occasions, we all consent to go through some of the humiliations which are natural to his position. There are eleven vacancies in the Academy of Medicine, and three in the Faculty: such a number of prizes were never before announced at once for distribution. For each vacancy, say six candidates: one of our *feuilletonistes* has calculated that the necessary number of visits of homage and solicitation is 5,280; implying an expenditure, in one way or another—in printing, coach-hire, etc.—of about three thousand English pounds sterling. And the bowings, and the promises, and the heart-burnings! We are promised a miraculous multiplication of votes; for by what other process eighty-nine voters can promise, say one hundred and thirty-two votes, it is hard to picture to oneself. It is a sad and humiliating spectacle; and, until men of science learn to despise these follies, and visits and personal canvassing are prohibited instead of being required with rigour, it is hopeless to see a truly manly spirit. Fancy the state of humility to which a candidate must be reduced, who consents to go through this ordeal of begging four or five times in succession. It is distressing.

The medical courses are now open. We have three or four ladies attending the *cliniques;* they are modest, well informed, and intelligent ladies, and are much respected and kindly received by the professors; and our students, turbulent as they are, know how to respect those who come among them as strangers appealing to their gentlemanly souls, and show a better example than your riotous students of Edinburgh.

The Academy of Sciences has seen a lively discussion between Dr. Bouillaud and Dr. Claude Bernard. The former eccentric and aged physician read a report, in which he took occasion to air his antique notions that the lungs are the focus of animal heat—the furnace of the body. Dr. Claude Bernard, of course, replied, by observing that it has long since been proved that heat is produced in the capil-

laries of all the organs; that the blood is found to be hottest in the vena cava inferior near the liver, and that it is hotter before reaching than after traversing the lungs; and that the blood of deep-seated veins is hotter than that of the arteries. M. Bouillaud said that these experiments were brilliant but not satisfactory; but, as he failed to say in what respect they were incomplete, Dr. Bernard declined to continue the profitless controversy, which was hardly worthy of a grave assembly.

M. Péan is our Fergusson, our Spencer Wells, our Baker Brown: there is nothing hardy which you do which he does not repeat, a little more hardily, and I believe not less successfully. He has cut out every possible and impossible part of the body, and a good many of his patients have survived, leaving in his hands trophies not much smaller or less weighty than themselves. He showed last week, at the Academy, eleven individuals and some bottles of a size truly gigantic: a man from whom he had removed an enormous epithelioma involving the upper jaw—operating by a new proceeding; two other men operated on for irreducible hernia by a new mode of pelotomy; a woman, aged 55, from whom he had removed by *morcellement* (tearing to pieces) and actual cauterisation, an ovarian cyst implanted in the uterus and broad ligament, and largely attached to the wall of the pelvis and right iliac fossa; seven women from whom he has, in the last two years, removed fibrous tumours, uterine, periuterine, or fibro-cystic, of great size, and shown with the patients. He has operated on eight cases for fibrous tumours, with five cures; three times for fibro-cystic tumours, with two cures; thirty-three times for removal of ovarian cysts, with twenty-six cures.

M. Dubois being stricken with an incurable malady now for a long time, we are going to appoint a provisional perpetual secretary, a mode of meeting the difficulty which gives rise to some caustic remarks in one of the journals, and will possibly meet with some opposition elsewhere. Your campaign in favour of a trial of ether is causing some stir here, and will probably excite a sympathetic movement, although we are more careful and sparing of chloroform than you are, and, I believe, have fewer deaths; but, as those which do occur are for the most part carefully concealed or attributed to air in the veins, shock, or any other handy cause, it is difficult, nay impossible, to say what our true mortality is. Our public is so readily *émotionné*, that it is thought best to conceal unpleasant occurrences as much as possible, even at the risk of hiding the perils and multiplying the occurrences. You see we are not brutal, whatever other faults we may have; and, with all your merits, you must acknowledge that you are ever so little brutal. We do not like to shock the feelings of relatives by announcing that a patient was killed by chloroform: that sounds too like homicide, which may not be always justifiable. Syncope, *défaillance*, and air in the veins are much less perturbing causes of death; and you will find that they occasionally occur as very puzzling circumstances under chloroform in our amphitheatres of operations. We are, however, willing to learn from your confessions; and the *Mouvement Médicale*—a new and terribly radical paper, and not at all classical or polite—publishes a complete abstract of your recent editorial articles and memoirs.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 12TH, 1872.

J. A. KINGDON, Esq., Vice-President, in the Chair.

ON THE RESPIRATORY MOVEMENTS IN MAN, WITH AN ACCOUNT OF A NEW INSTRUMENT FOR MEASURING THE MOVEMENTS OF THE CHEST. BY ARTHUR RANSOME, M.D.

(Communicated by WILLIAM OGLE, M.D., of Derby.)

THE author stated that exact numerical records of the movements of the several parts of the chest-wall were needed, both as physiological data and in the study of disease. All the methods of mensuration of these movements hitherto in use were faulty, in that they recorded either the simple gross enlargement of the circumference of the chest, or merely the resultant of the true dimensions of the motion. Most of the movements on each side of the sternum took place in three planes at right angles to one another; and, owing to the variations in even healthy breathing, it was important to measure all the dimensions of the motion during one act of breathing. An instrument for doing this had been devised by the author. [Its construction and the mode of its application having been demonstrated, the possible sources of error in its use were pointed out, and graphical representations of the several motions were shown.] The small extent of costal-motion in ordinary breathing remarked by Haller, Hutchinson, and Sibson, rendered it necessary to observe chiefly forced respiration. In this action, in points near the ends of the sternal ribs the chief motions were forward and upward, the forward movement being most equable and starting much more rapidly at first than the upward rise, which took place at the latter portion of the act of breathing. The ordinary action of the diaphragm seemed first to be increased; then the lower ribs, in most of the cases examined, seemed to have the precedence in rising, and were straightened at the angle between them and the costal cartilages; the spinal column was curved backwards; and finally there was a forced raising of the whole bony cage. In expiration after this effort, the phenomena were reversed in order. This account differed in some respects from that of several authors, who, however, differed among themselves, probably in consequence of the control which the will can exercise over the several motions. The order of movement of the ribs was examined, both by means of tapes and by Dr. Sanderson's stethograph, and the different types of breathing were observed in males and females by the same method. The differences in the rates of motion forward and upward were accounted for partly by the mechanical conditions of the action, the ribs being considered as rigid bones, partly by other considerations. The chief regions examined were the sternum at its upper, middle, and lower portions, the clavicles, and the third and fifth ribs. Tables showing the extent of motion in these parts in adult males and females, in childhood and old age, and in different positions were drawn up, and a want of perfect parallelism in the sternal movement was shown to exist in some cases. The sternum moved usually more than the clavicle, and the ratio of the forward to the upward motion was somewhat greater; the lower end moved slightly more than the upper, but there was evidence of some retarding influence from the action of the diaphrrgm, a conclusion supported by Traube's experiments. The clavicles moved most in the final effort of breathing—they had no outward motion,—and this movement only grew distinct on the second and third ribs, increasing downwards. The forward push of the ribs was very remarkable. The fifth and seventh, and sometimes the second and third, had more forward movement than the sternum, and this dimension of the motion often equalled the upward rise. There was much evidence of independent movement in the several ribs. In women and children the ordinarily high ratio of the forward to the upward dimension was still further increased, but in old age it was diminished to the lowest point compatible with any rise of the ribs. In most of the women examined, the motions on the left side exceeded those on the right; in men the contrary was the case. Position materially influenced the movements, and muscular strength was also an important element. In disease, the motions were naturally less extensive than in health, but there were several cases of pleurisy and phthisis in which there was evidence of an exaggeration of motion over sound parts to compensate for loss of motion elsewhere. Loss of movement was chiefly conspicuous in emphysema and asthma, but also in acute bronchitis, although the proportions of the several dimensions of the movement were but little altered. In phthisis, it was remarkable usually how small was the extent of motion even on the healthy side, and in both males and females one of the earliest indications of disease was diminution of movement over the part immediately affected. The ratio of the forward to the upward motion was much lessened, except in some very chronic cases, in which large, dry vomicæ existed, and the disease was for the time quiescent.

Dr. SIBSON asked whether the instrument registered the three movements accurately. There would be an error connected with the compression of the skin, leading to difficulty in examining fat people. Again, in emphysema the motion of the ribs was reversed, and the intercostal spaces were drawn inwards. Low down, also, a portion of the ribs near the vertebræ extended backwards in inspiration. The fixation of the ribs over an inflamed part might be due to nerve-influence or to the want of air. He did not approve of compressing by bandages in inflammation of the duct.—Dr. R. D. POWELL said that in emphysema the fixation of the chest was due to over-distension. In phthisis he thought a little restraint might do good.—Dr. ANSTIE said that restraint was useful in pleurisy; in peritonitis, also, arresting the motion of the intestines by opium was of service.

PROGRESSIVE MUSCULAR ATROPHY, ACCOMPANIED BY MUSCULAR RIGIDITY AND CONTRACTION OF JOINTS, WITH EXAMINATION OF THE BRAIN AND SPINAL CORD. BY J. LOCKHART CLARKE, M.D., F.R.S.

(Communicated by SIR WILLIAM GULL, Bart., M.D.)

A man at the age of thirty became affected with frequent vertigo, which lasted for three years. From this period he found that he was obliged to be very slow in all his movementss, and that if he attempted to move his limbs quickly they trembled very much. Subsequently he felt weakness in the left leg, so that he would suddenly fall down,

without feeling giddy, and the calf of that leg began to waste. Then the muscles of the right leg wasted, and four months later he noticed wasting of the muscles of the left shoulder. He complained of severe dragging pain in the arms and legs. These symptoms gradualiy increased through a number of years, so that at the age of fifty-eight he was quite unable to stand, or even turn in bed, or feed himself. There was great muscular rigidity. Almost all the muscles of his body were much wasted, especially those of the upper extremities. The respiratory movements were very feeble. There was no trouble with his bladder, nor any noticeable alteration of cutaneous sensibility, but electric sensibility was almost abolished. His speech was indistinct and nasal. Deglutition became difficult, and at last almost impossible, and saliva ran from his mouth. The fibrillar tremors and rigidity of the muscles wholly disappeared during the last week of his life. Parts of the cerebral convolutions were thickly interspersed with corpora amylacea, and many of the blood-cells of the white substance were enlarged. The cells of the grey substance were not altogether healthy. The pons Varolii was somewhat below the average size; its blood-vessels were much dilated. The corpora amylacea were thickly interspersed. The medulla oblongata was about one-fifth below the average size in the adult. All its nuclei were decidedly smaller than usual, and their cells were more or less affected by pigmentary degeneration. The diameter of the spinal cord was at least one-fourth less than the average in the adult. The grey substance, from one end to the other, was severely damaged by a variety of lesions and degenerations. In all regions of the cord the nerve-cells of the anterior grey substance had undergone considerable degeneration. Some of them had wholly disappeared by gradual pigmentary wasting, or by falling into heaps of granules. Of those that remained, the processes were either lost or reduced considerably in size.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 22ND, 1872.

J. COOPER FORSTER, Esq., Vice-President, in the Chair.

On the Therapeutical Use of the Stomach-Pump in Chronic Diseases of the Stomach.—Dr. HERMANN WEBER read a paper for Dr. SCHLIEP on two cases of dilatation of the stomach with speedy improvement and recovery under the use of the stomach-pump. In many other cases also, the results of the application of the stomach-pump had been eminently satisfactory, and appeared in general in the following order: vomiting ceased, pains disappeared, appetite and action of the bowels soon became better, the general health was improved, and the patient's weight was increased. In some cases it was found desirable to wash out the stomach with solutions of various medicines; and he tried soda, creasote, boracic acid, and permanganate of potash with good effect. The patients soon became accustomed to the introduction of the pipe; and, after several applications, the unpleasantness of the operation disappeared entirely. The fear of sucking some mucous membrane into the opening of the tube was almost without foundation, and such an event might be avoided by care and by inserting an India-rubber tube between the pipe and the pump, which would close as soon as any impediment opposed the flow of liquid to the pipe. It happened once to Dr. Schliep in about six hundred applications of the pump, to bring up a small piece of the membrane, when the patient himself pulled out the tube somewhat suddenly after the finishing of the operation; but no bad consequences followed. Considering the advantages of the stomach-pump in the cases alluded to, Dr. Schliep believes that this method of treatment will take an important place in the therapeutical agents in stomach-diseases.—Dr. CHOLMELEY thought that it was only necessary to use the stomach-pump in the few extreme cases of dilatation of the stomach, and perhaps in sarcina ventriculi. Cases of dyspepsia were otherwise amenable to treatment.—Dr. FAGGE thought that dilatation of the stomach was more frequent than was generally supposed. He had tried the stomach-pump in several cases, but the results, under the circumstances, were not of value. One was the case of a man twenty-three years of age, from whose stomach seven pints were drawn off with much relief; but the patient was very weak at the time, and apparently dying. The man died two hours afterwards.—Dr. WEBER, in reply, said that when the stomach-pump came to be used, dilatation of the stomach would be found to be more common than was generally supposed. Dr. Schliep had used the pump in sixty cases, which required six hundred applications, The stomach-pump might tell us what articles of food were digested and what were not in some cases. In phthisis, he had seen excellent results, in both the local and the general symptoms, from availing himself of the stomach-pump in this direction.

Cancer of the Breast.—Mr. NUNN read a paper on two cases of cancer of the left breast—the first of eight years', the second of twelve months', duration. The first case was that of Ann F., spinster, aged 44. The patient came under Mr. Nunn's care as out-patient in 1868, two years after removal of a cancer from the left breast by Mr. Henry Smith at King's College Hospital. In 1870, she was admitted in-patient at the Middlesex Hospital. Soon after her admission, the recurrent cancer sloughed out; and the sore healed, and remained healed until her death in August 1872 from cancer of the liver; the lungs, spleen, and kidneys being normal; while secondary deposits were found on the inner and outer aspects of the ribs of the right side, and also in the manubrium sterni. The second case was that of Mrs. R., who was brought to Mr. Nunn by Dr. Saunders of South Molton Street. The patient was the mother of five children, and was only twenty-seven years of age. At the sixth month of her last pregnancy, she had discovered a small lump in the left breast. Two months after her confinement, she came under Mr. Nunn's observation. The tumour was at that time undefined. After two months, the patient suffered from ptosis of the left eye, and ultimately with paralysis of the third nerve generally. She became extremely fat; and she died paralysed in her lower extremities, frequently having suffered from severe neuralgic pains in the upper cervical and dorsal regions. Towards the end of her life, the temperature in the axilla was 104 deg., the cancer of the breast having become of stony hardness. Mr. Nunn remarked upon the uncertainty of surgical practice in respect of cancer, which, he said, must remain uncertain so long as our knowledge of the disease was incomplete. The variety of forms in which cancer presented itself was in some measure due to the modification of the disease by the peculiarity of the structure in which it was found, and by the situation and surroundings of the selected structure. In the first case, the cancer occurred in an unmarried undersized woman, whose frame was undergoing involution; in the second case, the disease appeared in a woman in full reproductive activity. Assuming cancer to be a local disease, we were still unable to say what rendered the cancer-germs stationary, living their life and undergoing retrograde changes without travelling to distant parts and there proliferating; and we were unable to tell what constituted the difference between cancer-germs content with a local career, and those of a propagandist order, or what conditions provided each of these opposite degrees of activity. Was non-contamination due to resistance of the parts or tissues exposed to contamination, or to some local change in the cancer destroying its power of contaminating? What share had inflammatory action, by softening the tissues and stimulating proliferation, in promoting diffusion? Assuming, on the other hand, that cancer was a blood-disease, how could one justify the removal of a cancer by operation? A clinical study of cancer showed that, if the surgeon did not step in with knife or with caustic, the disease itself, by inducing gangrene or ulceration, produced a wound that very rarely healed; and that, therefore, the surgeon did in a clean and effectual manner, *pro tempore*, what sooner or later the disease would more painfully and ineffectually attempt. Mr. Nunn asserted that he had seen no instance in which diffusion of cancer was really accelerated by operation.—Mr. NUNN, in answer to Dr. THEODORE WILLIAMS, replied that the cod-liver oil had not been given for more than two months to the patient in whom so much adipose tissue was found. He thought the fat due to the dyscrasia, not to the cod-liver oil.

Œsophagismus in a Young Boy.—Mr. HULKE read a paper on the case of a very pale emaciated schoolboy, aged 10, who was placed under Mr. Hulke's care, in the Middlesex Hospital, on October 17th, by Dr. Cooper Rose of Hampstead. During four months he had constantly vomited food and drink, so shortly after taking them that Dr. Rose thought they could not have reached the stomach; milk returned uncurdled. A probang appeared to meet an obstruction just above the lower end of the œsophagus. On giving him a cup of milk before the class, the child swallowed a couple of mouthfuls; then his face flushed, and he retched and threw up the milk quite unchanged. Some sopped bread was thrown up in the same way. He said he felt the milk pass down to a spot (pointing to the middle of his breast-bone) beyond which it could not go; then it choked him and made him sick. The extreme rarity of organic disease of the œsophagus diminishing its calibre at so early an age, except as a consequence of chemical or mechanical injury (and there was no history of such an antecedent), and the absence of any physical signs of a mediastinal tumour which might press on the tube, pointed to a spasmodic contraction, and this was presumed to be a simple neurosis, and not to be due to a circumscribed inflammation or ulcer in the mucous membrane, as no pain was felt in the spot where the food and drink seemed to stop. He was closely watched, and ordered milk and any simple food he fancied. Next day it appeared that he was not invariably sick directly after taking food, but he had kept down some milk at least half-an-hour. Three days later, he said that he knew he

could not get better, because no medicine was given him to make him well. To meet this difficulty, with much gravity he was ordered to take two teaspoonfuls twice a day of a mixture of two drachms of compound spirit of lavender in six ounces of water, and was told that we expected at the next visit to learn that the sickness had quite ceased. This answered completely. A fortnight later he went home, having been sick once only, and that in a violent passion, just after dinner. His mother was extremely hysterical.—Mr. HULKE, in answer to a question by the PRESIDENT, said that the symptoms did not at any time lead him to believe that dilatation existed.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.

WEDNESDAY, NOVEMBER 20TH, 1872.

ALFRED HUDSON, M.D., President, in the Chair.

President's Address.—Having briefly reviewed the past session, the President offered some remarks on the results of the discussions on small-pox and fever, which had been a marked feature of the society's meetings last spring. The prophylactic power, to a certain extent, of primary vaccination had been confirmed by these discussions; and its power of modifying subsequent attacks of variola had been established by the statistics of mortality at the different Dublin Hospitals during the recent epidemic. These statistics showed that, while 11 per cent. of vaccinated patients succumbed, the average mortality of unvaccinated and doubtful cases was 67.83 per cent. The efficacy of revaccination was also borne out; for in all the hospitals only six fatal cases of variola occurred in revaccinated subjects, while in the Hardwicke Hospital, of 611 cases admitted, but three had been revaccinated; and in Cork Street Hospital, among the 425 cases first admitted, none were revaccinated. If the subject were healthy, and the operation carefully performed, the dangers of revaccination appeared to be but slight. Great diversity of opinion had prevailed as to the origin and diffusion of the disease. There could be little doubt that many causes united in regulating the spread of small-pox or of typhus, or in determining the benign or malignant character of an epidemic of scarlatina, or of similar affections. The high rate of mortality in Dublin seemed to have been due, in some measure, to the coexistence of another epidemic influence, that of purpuric fever, or cerebro-spinal arachnitis. This epiphenomenon had been observed in at least fifty-eight fatal cases in the Hardwicke and Mater Misericordiæ Hospitals. With regard to sanitary and precautionary measures, it was highly desirable that the profession should agree upon those most advisable, and should urge the adoption of them on the government and the legislature. Of such measures, compulsory vaccination and revaccination, properly and efficiently carried out under inspectors appointed for the purpose, at once suggested themselves. The annihilation of the *materies morbi*, by the destruction of fomites or their disinfection by heat, especially, and the isolation of the patient, were the true and sufficient preventives of the diffusion of a contagious disease, introduced into a community subject to the varying condition termed "receptivity." Preventive medicine had necessarily engaged the attention of the Association, in consequence of the late outbreak of small-pox; but there were not wanting other proofs of an increasing interest in this subject since the meeting of the British Medical Association in 1867, and Dr. Rumsey's address at that meeting. The institution of a Diploma in State Medicine in the University of Dublin, and the organisation of a Sanitary Association, were steps in this direction. But many of the exciting causes of disease were not preventable; and here the study of causation became closely connected with that of pathology and therapeutics. The study of the genesis of disease suggested such problems as the existence and laws of *pandemic* waves, the action of epidemic influence as a predisponent, and, conversely, the proclivity to epidemic disease acquired by residence in an infectious locality. It enabled us to distinguish the essential phenomena, and the epiphenomena of a disease, as in the case of the occurrence of cerebro-spinal arachnitis or diphtheria in small-pox or fever. The study of causation had done much to explain the nature of fever under the forms of typhus and typhoid; each was an essential disease, but also each was distinct as to its origin and phenomena. The occasional occurrence of mixed types of fever might fairly be attributed to the sources of both typhus and enteric poisons coexisting in a locality—fæcal miasm or impure water, and ochlesis or imported contagion. Again, the study of causation, as an integral portion of pathology, had an influence, both analytical and synthetical, first, "in the separation of diseases previously confounded as one" (to use the words of Sir W. Jenner), and secondly, in grouping diseases correlated as to their cause—thus by cautious generalisation leading to greater uniformity and simplicity of therapeutics. Examples were cited of this application of a single remedy to groups of disease cognate as to their cause; as bromide of potassium, to epilepsy and numerous affections arising from or associated with morbid conditions of the excito-motor centres of the nervous system; mercury, to numerous forms of constitutional syphilis; quinine and arsenic, to a group of affections arising from malaria; perchloride of iron, to the associated affections of erysipelas, puerperal fever, scarlatina, and diphtheria; ergot of rye, to the affections of unstriped muscular fibre generally; and opium, to the numerous cases in which the great principle of treatment was physiological rest of the affected organ. The President believed that the investigations into the causal relations and mutual correlations of these and similar groups, and the *modus operandi* of the remedies employed, would assist in the solution of the question, "Is a system of scientific therapeutics possible?" He could not consider it impossible if founded upon such data as included the comprehensive diagnosis of the disease, and the physiological and therapeutical actions of the medicine. He cited several illustrations of the great interest which the question was exciting in the profession, and combatted the notion that confidence was to be withheld in tried remedies, because they were, or seemed to be, inconsistent with the theories of the day, inasmuch as the theories might be unsound, while, on the other hand, new theories were constantly agreeing with and explaining old empiricisms. As examples of this, he cited the revival of blood-letting in some cases, and of cold affusion in fever. Having referred to several examples of valuable empirical practice still unexplained by theory, the President expressed his confidence that, with the advances in our knowledge of the intermediate links in the series of morbid phenomena, the more general laws on which these and our curative measures depend would be revealed; and he concluded with a hope that the motto of the College, "Ratione et Experientiâ," would be the guiding principle of the proceedings of the Association during the coming session.

Report of Small-pox cases treated in Rathdown Union Hospital.—Dr. DARBY, of Bray, the attending physician, brought forward a report of the late epidemic. From February 21st, 1871, to November 18th, 1872, 321 patients, suffering from small-pox, had been admitted to the Rathdown Union Hospital. Of these, 168 were vaccinated, thirteen were revaccinated, fifteen gave doubtful evidence as to vaccination, and thirty-four had never been vaccinated. One patient was already pitted by small-pox. Of the 169 protected persons fifteen died; of thirteen revaccinated one died; of fifteen doubtful cases nine died; and of thirty-four unvaccinated thirteen died. The total deaths numbered thirty-eight out of 231. In certain fatal cases a local and peculiar confluence of the eruption, in which a leaden-coloured fluid appeared, had been observed. Laryngitis was a frequent and formidable complication; while delirium, although it often ran high, was not of serious import. A feeble state of the heart was of frequent occurrence in convalescence; and, in one instance, that of a child six years of age, led to fatal syncope. The disease seemed to spread by contagion and also to arise spontaneously.—Mr. MAYNE, assistant-physician to the Rathdown Hospital, described a case of variola hæmorrhagica, in which severe subcutaneous hæmorrhages, hæmoptysis, and vaginal hæmorrhage occurred. The patient, a woman aged 40, was treated by stimulants, iron, and gallic acid, and recovered. In a second case, the rapidity with which death ensued was remarkable.—Dr. H. KENNEDY believed that variolous hæmorrhage from the vagina was often trivial. The occurrence of purpuric spots merely was less dangerous than hæmorrhage. The purpuric forms of the disease were commonly met with in females, especially in those of a robust form with *embonpoint*. As regarded treatment, sulphuric and sulphurous acids were of great use in the purpuric forms.—Dr. GRIMSHAW stated that out of nearly 900 cases admitted to Cork Street Hospital during the whole course of the epidemic, only three were revaccinated. Of these one died.

CORRESPONDENCE.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL OFFICERS OF HEALTH.

SIR,—Although very reluctant to object to or criticise an article in the JOURNAL which embodies so much good feeling and generosity as does that at page 615 of last Saturday's number, headed "The British Medical Association and the Medical Officers of Health", I yet feel that I should fail in my official duty were I to let it pass without comment.

With the third resolution there given, and with your remark overleaf, that "there is no reason to believe that the local medical officers of health would object to join the Association *en masse* and in the usual way", I cordially agree; but, in attempting to extend the hand of fellowship further, our East Kent friends will, if their first and second re-

solutions be acted on, commit a breach of our laws, both of their own district and of the parent Association. I believe that the conferring of Honorary Membership of the Association is considered a very high compliment; and it seems suitable, therefore, that, according to Law 18 of the Association, it can be done only by an annual meeting of the parent Association. Again, Bye-laws 2 and 7 of the East Kent district itself contain the following sentences: "All members of the South-Eastern Branch can attend these meetings, and can introduce friends"; but "it shall be generally understood that a non-member of the Branch may attend only one meeting during the same session." . . . "No alteration or addition shall be made in these bye-laws, unless notice thereof shall have been given" . . . "and the approval of the Executive Council of the Branch must be subsequently obtained." . . .

I may add that the honorary secretary of the East Kent district forwarded me a copy of the resolutions some ten days since, and that I contemplated submitting them to our Branch Council at the earliest opportunity; for, as the East Kent district would not have another meeting before April, there seemed no need of my doing so immediately. That it was contemplated to publish the resolutions in the JOURNAL was not hinted to me, or I should have ventured to suggest that such a step was at least premature.

I am, etc.,
G. F. HODGSON,
Honorary Secretary of the South-Eastern Branch.

Brighton, December 2nd, 1872.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

AYLESBURY BOARD OF GUARDIANS.

THE Aylesbury Board of Guardians, which is the rural authority for Aylesbury, met on November 27th to discuss the Public Health Act and to decide if they should send delegates to the proposed conference at Aylesbury, or some central place in Bucks. After a long speech from the chairman, in which he expressed his incompetence to understand the Bill, and a discussion in which ignorance of details of the Act were clearly manifested, it was wisely proposed by the chairman that the Board should bind themselves to no resolution that day, but should wait and obtain more information on the subject, and that the Aylesbury Board should send delegates to confer with a deputation from the Buckingham Board. This resolution was negatived by a large majority; and, a desire having been expressed to keep their affairs in their own hands, it was finally resolved, "That it was not desirable to join any other sanitary authority in the appointment of medical officers or sanitary inspectors." This decision is severely commented on by the local press. At Amersham, the Board of Guardians met and unanimously resolved to send delegates to the Buckinghamshire Conference proposed by Mr. Henley.

BEER TO PAUPERS.

AT a meeting of the Islington Board of Guardians, Mr. Longley, one of the inspectors of the Local Government Board, expressed his satisfaction that the guardians had reduced the supply of beer to the paupers. Giving beer to the paupers, he said, led them to believe that they were not bound to do any work without it; and this was the destruction of all discipline, for they should be taught that in return for food and lodging they were required to do any work of which they were capable without reward.

THE ADULTERATION ACT.

OUR Liverpool correspondent writes:—The milk-adulterators in Liverpool have succeeded in driving the traditional coach and six through the Act of Parliament. In a case lately heard in the police-court, Dr. Brown, the borough analyst, proved that milk sold as new milk by the defendant was adulterated by the addition of a large proportion of skimmed milk. It was urged for the defence that to come within the statute, adulteration must be proved to have been made by the addition of "some foreign substance;" and the stipendiary magistrate, while condemning the dishonesty of the practice, held that in law, the sophistication in question was not punishable. A case was granted for the court above, but the Health Committee, on the advice of their solicitor, have declined to carry the matter further, believing that the only effectual remedy will be found in an alteration of the clauses of the Act.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—M.D. Examination, 1872. Pass List.

Alford, Henry James, University College
Ball, James Barry, University College
Bruce, John Mitchell (M.A.Aberd.), Aberdeen and Charing Cross Hospital
Burgess, Wm. Frederick Richardson. Guy's Hospital
Carter, Alfred Henry, University College
Griffiths, Thomas, University College
Hall, Francis de Havilland, St. Bartholomew's Hospital
Lyell, Robert Wishart, King's College
Smith, Arthur William, Guy's Hospital

Logic and Moral Philosophy only.

Archer, Herbert Ray, St. George's Hospital
Gibbings, Alfred Thomas, King's College
Harris, James Alfred, Edinburgh University
Humphreys, John Henry, University College
Langmore, John Wreford (B.S.), University College and Middlesex Hospital
Morton, John, St. Thomas's Hospital
Read, Charles, University College
Vachell, Charles Tanfield, King's College
Wyman, John Sanderson, St. Bartholomew's Hospital

Second M.B. Examination, 1872. Examination for Honours.—Medicine.

First Class.

Dalton, Benjamin Neale (Scholarship and Gold Medal), Guy's Hospital
*Ottley, Walter (Gold Medal), University College
Philpot, Joseph Henry, King's College
Greenfield, William Smith, University College
Barfoot, George Harry, University College

Second Class.

Jones, Thomas, Guy's Hospital
Perkins, Charles Edward Steele, Guy's Hospital
Godlee, Rickman John (B.A.), University College

Obstetric Medicine.

First Class.

Eardley Wilmot, Robert (Scholarship and Gold Medal), King's College
Greenfield, William Smith (Gold Medal), University College
†Philpot, Joseph Henry, King's College
†Branfoot, Arthur Mudge, Guy's Hospital
†Warner, Francis, King's College
†Jones, Thomas, Guy's Hospital

Second Class.

Dalton, Benjamin Neale, Guy's Hospital } equal
Harris, Michael, Guy's Hospital }
Cane, Leonard, University College
Godlee, Rickman John, University College

Third Class.

Ashby, Alfred, Guy's Hospital

Forensic Medicine.

First Class.

Harris, Michael (Gold Medal), Guy's Hospital
Ottley, Walter (Gold Medal), University College

Second Class.

Greenfield, William Smith, University College
Godlee, Rickman John, University College
Dalton, Benjamin Neale, Guy's Hospital

* Obtained the number of marks qualifying for the Scholarship.
† Obtained the number of marks qualifying for a Gold Medal.

UNIVERSITY OF CAMBRIDGE.—Third M.B. Examination. Examined and approved.

Balding, B.A., Caius
Fletcher, B.A., Clare
Galabin, M.A., Trinity
Moore, B.A., St. Catharine's
Oldman, B.A., Trinity
Shapter, B.A., Caius

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations, held on November 11th, 12th, and 13th, the following candidates successfully passed the examination for the License to practise Medicine.

Armstrong, Benjamin
Butler, Patrick
Carleton, David John
Healy, Joseph Keane
Johnstone, Charles A.
Loverock, Robert George
Peele, Edward
Sheehy, James
Sproule, Godfrey Knight
Sproule, Robert

The Midwifery Diploma was granted to—

Armstrong, Benjamin
Butler, Patrick
Healy, Joseph Keane
Johnstone, Charles Alex.
MacLaughlin, Frederick Peard
Peele, Edward
Sheehy, James
Sproule, Godfrey Knight

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 28th, 1872.

Bevers, Edmund Augustine, Oxford
Buck, William Elgar, Leicester
Charlesworth, Henry, Longnor, Buxton
Cleghorn, George, York Road, London

Jackson, Richard Atkinson, Lancaster
Moss, Herbert Campbell, Stratford, Essex
Northey, Gilbert William, Tavistock, Devon
Vines, Edward Prince, Reading
Whately, George Frederick, Great Berkhamsted

The following gentlemen also on the same day passed their primary professional examination.

Boulger, Isaac, St. Thomas's Hospital
Couldrey, James, Charing Cross Hospital
Finemore, James Harman, London Hospital
Todd, William Hurford, London Hospital

As an Assistant in compounding and dispensing medicines.

Butterfield, Edward, Northampton

MEDICAL VACANCIES.

THE following vacancies are announced:—

ADDENBROOKE'S HOSPITAL, Cambridge—House-Physician.
ALDERBURY UNION, Wilts—Medical Officer for District No. 6: £75 per ann.
BALLYSHANNON UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Churchill Dispensary District: £50 per annum, and fees.
BANBURY UNION, Oxfordshire—Medical Officer and Public Vaccinator for the Banbury District: £102: 16 per annum, and vaccination fees.
BOARD OF TRADE—Medical Inspector of Emigrants: £300 per annum.
CARNARVON—Admiralty Surgeon and Agent for.
CARNARVON UNION—Medical Officer for the Workhouse; £45 per annum.—Medical Officer for the Llanrug District: £60 per annum.
COVENTRY AND WARWICK HOSPITAL—House-Surgeon: £80 per annum, board and lodging.
DUNDEE ROYAL INFIRMARY—Dispenser: £35 per annum, bed, board, and washing.
GENERAL COUNCIL OF MEDICAL EDUCATION, etc.—Representative of the University of Durham.
GRANARD UNION, co. Longford—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Finea Dispensary District: £100 per annum, and fees.
HERTS REFORMATORY, Hertford—Medical Officer.
HOWDEN UNION, Yorkshire—Medical Officer and Public Vaccinator for the Newport District: £40 per annum, and extra fees.
INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
INISHOWEN UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Buncrana Dispensary District; £90 per annum, and fees.
ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY—Resident Medical Officer: £85 per annum, rooms, attendance, cooking, coal, and gas.
KINGSTON UNION, Surrey—Medical Officer for the New Hampton District: £25 per annum.
MANCHESTER ROYAL INFIRMARY—Senior House-Surgeon and (if present junior be appointed senior) Junior House-Surgeon: £84 and £63 per annum, respectively, board, and residence.
MEATH INFIRMARY, Navan—Apothecary, Secretary, and Registrar: £52: 13: 8 per annum, furnished apartments, coal, and gas.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, Bloomsbury—Assistant-Physician.—Surgeon.
NAVAL MEDICAL SERVICE—Assistant-Surgeons.
NENAGH UNION, co. Tipperary—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Portroe Dispensary District; £100 per annum, and fees.
NEW ABBEY, by Dumfries—Resident Medical Officer: £40 per annum.
PERSHORE UNION, Worcestershire—Medical Officer for the Upper Snodsbury District: £41 per annum, and extra fees.—Medical Officer for the Eckington District: £65 per annum, and extra fees.
ROYAL COLLEGE OF SURGEONS, Ireland—Professor of Surgery.
ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon: £75 per annum, board, residence, and washing.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Lower Seymour Street—Physician and Surgeon for Out-Department.
SHARDLOW UNION—Medical Officer of Health: £210 per annum.
SLIGO UNION—Apothecary to the Sligo Dispensary: £100 per annum.
SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth—House-Surgeon.
STOURBRIDGE UNION, Worcestershire—Medical Officer for the Kingswinford No. 2 District: £80 per annum.
WORCESTER GENERAL INFIRMARY—House-Surgeon: £100 per annum, board, and lodging.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGES.

BOSTOCK, Alfred Stileman, Esq., Surgeon, of Horsham. to Ellen Southey, daughter of Thomas BAKER, M.D., Cutton's Hill, East Grinstead, at St. Mary's, Horsham, by the Rev. J. F. Hodgson, Vicar, assisted by the Rev. T. C. Southey, uncle of the bride, and the Rev. F. A. Bowles and the Rev. Canon Hill, on Nov. 28th.

DEATHS.

HARWOOD, Alfred, Esq., Surgeon, of syphilis (contracted while attending on a diseased woman in labour) and pulmonary phthisis, at Cambridge, aged 29, on November 18th.
HUNTER, John, M.D., at Buncrana, County Donegal, aged 46, on November 18th.
YOUNG.—On December 2nd, at Headingley, Leeds, Isabella, the wife of *G. E. Young, M.D.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ..... Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ..... Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY .... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ..... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Sansom, "Case of Infantile Paralysis treated by the Continuous Current"; Mr. Thomas Bryant (President), "A Case of Disease of the Shoulder-joint"; Dr. E. N. Durantz, of Marseilles, "Clinical Notes on Soft Tumours of the Larynx" (communicated).

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. George Johnson, "On the Pathology of Chronic Bright's Disease, with Contracted Kidney, with especial reference to the Theory of Arterio-capillary Fibrosis."

WEDNESDAY.—Epidemiological Society, 8 P.M. Dr. Monat, "On Medical Statistics, with especial reference to Cholera and Syphilis."

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. C. Theodore Williams, "On Cases of the Pyrexia of Phthisis treated by Cool Baths"; Dr. Tilbury Fox, "A singular Case of Fibroma"; Mr. W. B. Dalby, "Wound of the Portio Dura causing Facial Palsy"; Dr. Lockhart Clarke, "Case of Cysts in the Cerebellum": Dr. Edis, "Case of Right Hemiplegia occurring during Pregnancy, with rapid Convalescence after Parturition."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MEDICAL OFFICERS OF HEALTH.—Our Norwich correspondent must follow his own judgment and local knowledge. The salary named seems to us a fair one; but it should be, we think, for acting in conjunction with a principal health officer superintending a much larger area, not separately and subject to the local presence of surrounding farmers and tradesmen.

DR. CURRIE (Lydney) will have received a private letter.

DR. HARRIS (Redruth).—Published by Messrs. Churchill, New Burlington Street, London.

MR. THEODORE PRESTON.—Parkes on *Hygiene;* Wanklyn on *Water Analysis:* Hassall on *Adulteration;* Angus Smith on *Air and Rain.*

ERRATUM.—In the leading article on cholera in the last number, p. 608, line 5 from the top of the second column, for "the *largest* proportion," read "the *smallest* proportion."

LENTIL-MEAL.—Owing to the extended publicity given by the political press to an article in an earlier number of the JOURNAL on lentil-meal, we receive numerous applications to know where ground lentil-meal and rye-meal of the required degree of fineness can be obtained. It would be desirable that retail depôts should be established.

DENGUE FEVER.

SIR,—I did not until this week see the letter of Mr. Barkas in the JOURNAL of October 26th, in reference to the iodide of quinine in dengue fever. I used quinine in two or three cases, both in large and small doses, in the treatment of dengue. I also gave the iodide of potassium a trial, and in neither case did I obtain results which tempted me to continue the use of these medicines. I found the tincture of belladonna so useful, however, that I did not think it necessary to try other medicines. I used the sulphate of quinine in very large doses with excellent effect in intermittent fever. I gave as much as twenty-five or thirty grains to one lady shortly before the time when the attack was expected, and she only had three attacks under this treatment, although she had been subject to them continually in former years. I am, etc.,

Stoke-on-Trent, Nov. 25th, 1872. WM. W. DUNKLEY.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

DEATH-RATE OF WATERING-PLACES.—A correspondent writes: On what principle are the death-rates of watering-places calculated? The death-rate depends on the population, as well as the number of deaths. The census is taken in spring, when most watering-places have few visitors. If all deaths be taken, the rate on the population, thus understated, becomes unfairly large. Are all the deaths of visitors deducted? If so, the rate becomes unfairly small. Is an estimated number of visitors added to the population during the season? What is the method officially adopted?

VOLUNTEER MEDICAL REMUNERATION.

"A VOLUNTEER SURGEON" would place himself in a false position if he received the 2*d.* per week per head in any shape whatsoever. It matters not to what object the money so received by him is applied. The War Office recognises only the fact that, in return for medical attendance given by him to members of the permanent staff and their families, including the supply of medicines, midwifery, splints, and other medical and surgical material, and including also travelling expenses, he has accepted 2*d.* per week per head, The surgeon is thus placed in a position he may find somewhat irksome. His attendance in this or that case is now not optional; it is compulsory. Moreover, he breaks faith with his brother officers, who all over the country resent the War Office circular as insulting. Mr. Cardwell is engaged in a revisal of the clause on remuneration for medical attendance. It is hoped that he fully understands the feeling of Volunteer surgeons, that they decline to receive payment; but if a few isolated Volunteer surgeons accept the regulation of May last, he will think that the indignation has passed over, and that members of the medical profession are ready to accept any return, however small, for their services. Such being the case, he will find it much cheaper for the country to obtain cheap medical advice by compulsory service on the part of the Volunteer surgeons, than by raising the pay of members of the staff to enable them to meet the outlay for their daily demands and medical attendance.

SAFETY OF ANÆSTHETICS.

SIR,—Your valuable article on the administration of anæsthetics leads one to inquire whether, in consequence of their more general employment, they are manufactured and prescribed and given with less care than when first introduced, and whether the alleged increased mortality from the use of chloroform is a result of want of care. Anæsthetics are easily and spontaneously destructible fluids, requiring painstaking manufacture and preservation. We know how chloroform changes when exposed to too high a temperature or too much light. It would be interesting and important to learn whether the chloroform of any particular maker has been found less safe than that of others, and whether it has been kept with due precautions in those cases in which death has apparently resulted from the use of it.

I can bear testimony to the value of a mixture of equal parts of chloroform and ether for producing anæsthesia in some cases where extra precautions appear advisable: a larger quantity and more time are required, but the advantages seem quite to counterbalance the demerits. I am, etc.,

November 1872. STANLEY HAYNES; M.D.

SIR,—On November 22nd, I communicated the following facts to Mr. Settle, Coroner for the Stockton Ward; but, in the hurry to catch the post, I had not time to take a copy of the letter.

"On November 19th, Mrs. Alton, of West Cornforth, was taken in labour and sent for a midwife, who remained with her till 4 A.M. on the 20th, when she sent for Mr. Macneilage (an unqualified man practising on his own responsibility at West Cornforth). He tried all day to deliver her by forceps, but could not; so, at 6 P.M., he procured the assistance of Mr. Jolly of Kelloe (also unqualified). By the combined efforts of the two, the woman was delivered, but died six hours after." She was buried to-day.

His answer was—

"Stockton-upon-Tees, Nov. 23, 1872.

"Dear Sir,—I have received your letter in reference to the death of Ann Alton. If you had entertained any suspicion with regard to the case, your proper plan would have been at once to have communicated with the police in the district, so that if an inquest had been considered necessary, it might have been held before the interment of the body. As between medical gentlemen and their differences of opinion and practice, I cannot think of exhuming a body, and should only feel justified in doing so in such a case as this from the representation of relatives or friends or neighbours of supposed violence having caused death.

"Yours faithfully, "JOHN SETTLE, Coroner."

I simply lay these facts before the profession, and leave them to consider the justness of Mr. Settle's decision in not inquiring into the death of the poor woman.

I am, etc.,

Coxhoe, Ferryhill, Nov. 25th, 1872. J. W. BLANDFORD.

DR. G. (London).—Dr. Murchison's standard work on Fevers contains the information desired. We believe that a new edition is now in the press.

CHARCOAL AIR-FILTERS FOR SEWERS.

SIR,—My attention has been called to a sketch of an air-filter in your JOURNAL of the 19th ultimo, in which the true principle of the charcoal air-filter, as first proposed by me in 1854. has been somewhat deviated from. Mr. Holland has, however, so distinctly demonstrated this in his letter in your last number, that I have but little to add to his observations.

I regard it as essential, in order to secure the proper action of the filter, that the foul air should be caused to pass through a sufficient layer of crushed charcoal, and not merely over it, as indicated in the sketch above alluded to. It is quite true that passing foul air slowly over a considerable surface of charcoal will remove the greater portion of the impurities, but nothing short of actual filtration through a layer of charcoal will insure complete disinfection.

The experience of the last sixteen years, during which my filters have been extensively employed, has abundantly proved that the charcoal used in the filters will, if kept ory, act for an indefinite period, the process of oxidation accompanying the absorption of the putrescent matter, and thereby preventing any diminution in its efficiency. I am, etc.,

JOHN STENHOUSE, LL.D., F.R.S., etc.,

Formerly Lecturer on Chemistry in the Medical School, St. Bartholomew's, Hospital.

The Laboratory, 17, Rodney Strect, Pentonville, N., Nov. 1, 1872.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

DR. BROWN ON FEMALE EDUCATION.

SIR,—Let the ladies hear what Calderon says in their cause.

Rochester, Nov. 1st, 1872. I am, etc., FREDERICK JAMES BROWN, M.D.

"For 'tis ascertained that women,
When to letters or to arms
They with resolute will apply them,
Oftentimes surpass the men.
Thus it is, by envy blinded,
Fearing our unvanquished spirit,
Dreading the result to witness
Of our quick intelligence,
Lest all empire should be given
Unto us, to us have they
Swords and books alike forbidden.

Circe's address to Ulysses in *Love the Greatest Enchantment* (printed in 1641). translated by Denis F. Macarthy, M.R.I.A., 1861.

THE CEREBRAL MACULA.

SIR,—Mr. Balmanno Squire will find an accurate description of the cerebral or meningeal macula, or *tache cérébrale*, in the writings of Trousseau, and particularly in the lecture on Cerebral Fever which appears in the first volume of the Sydenham Society's translation of his *Clinical Medicine*.

On glancing again at my lecture, Mr. Balmanno Squire will perceive that he has been in error in representing that I have there attached any special significance to the cerebral macula when occurring in simple melancholia. Amongst the symptoms of that disorder, it is not referred to. It is, indeed, only incidentally mentioned as appearing in a case in which a certain kind of treatment was found beneficial. Whatever my views as to the true pathological meaning of the cerebral macula may be, my object in adverting to it under simple melancholia was merely to show, that that singular modification of the cutaneous vascularity is seen in other nervous diseases besides cerebral fever.

Though venturing only with great diffidence to differ from so distinguished an authority on dermatology as Mr. Balmanno Squire, I must here express my belief that he takes too narrow a view of his subject when he maintains that prurigo senilis is the only skin-disease associated with "a tendency to suicide", which may, I presume, be taken as equivalent to depression of spirits or melancholia. My own experience leads me to include several other skin-affections in such an association, and notably that very urticaria to which he alludes. I have been repeatedly impressed by the relation subsisting between urticaria and certain emotional states, and have felt satisfied in some cases that that troublesome malady was connected with brain-changes, tending to insanity, and especially to melancholia. The "placid and contented" and "very cheerful" aspect of Mr. Balmanno Squire's patients, who are suffering from chronic urticaria, bears strong testimony to the efficacy of the treatment which they receive at his hands, but does not exclude the possibility that "dreams may come", even beneath so much cutaneous equanimity, or that other victims of the disease when less skilfully managed may suffer from irritation and despondency.

I am, etc., J. CRICHTON BROWNE.

West Riding Asylum, Wakefield, Nov. 2nd, 1872.

GALVANO-EMESIS.

SIR,—In your issue of Nov. 2nd, among the Therapeutic Memoranda, there is an interesting note from Dr. Charles Fox on "Galvano Emesis". This treatment seems likely to be so useful in cases of narcotic poisoning that it would be satisfactory to have further details as to the *modus operandi*, and particularly as to the means of applying the suitable conductor (what was the "suitable conductor"?) to the œsophagus, etc. I am, etc., E. D. TOMLINSON.

Curragh Camp, Nov. 4th, 1872.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Nov. 30th; The Manchester Guardian, Dec. 4th; The Ulster General Advertiser, Nov. 30th; The Bath Express, Nov. 30th; The Scotsman, Dec. 2nd; The Pembrokeshire Advertiser; The Lincolnshire Chronicle; The Norwich Argus; The Orkney Herald; The Yorkshire Post, Dec. 2nd; The Western Daily Times; The Lincoln Journal; The Oldham Evening Express; The Oldham Standard; The Western Daily Press; The Birmingham Daily Post, Nov. 30th; The Leeds Mercury; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Cheadle, London; Dr. George Johnson, London; Mr. T. R. Jessop, Leeds; Mr. Annandale, Edinburgh; Mr. James, Snitterfield; Mr. Hardesty, Lochee; Mr. Waller, Norwich; Mr. Soutter, London; Dr. Joseph Bell, Edinburgh; Our Liverpool Correspondent; Mr. Bartleet, Birmingham; Mr. Adams, London; An Associate; Mr. Lawson Tait, Birmingham; Mr. Brighty, Leamington; The Secretary of the Clinical Society; Dr. Foster, Birmingham; Our Edinburgh Correspondent; Dr. Currie, Lydney; Mrs. Garrett-Anderson, M.D., London; A Member; Dr. Day, London; Mr. Wheelhouse, Leeds; Dr. Henry Churchill, Cheltenham; Dr. Durrant, Ipswich; Mr. Balmforth, Pershore; The Secretary of the Royal Medical and Chirurgical Society; Dr. Symes Thompson, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. Wanklyn, London; Dr. Joyce, Rolvenden; Our Dublin Correspondent; Mr. Couper, London; Mr. Moore, Belfast; Mr. E. R. Morgan, Neath; Dr. Alexander, Halifax; Mr. Hodgson, Brighton; Mr. Poole, London; Mr. Greenway, Plymouth; Our Glasgow Correspondent; Mr. Church, Edinburgh; Mr. Russell, Neath; Mr. Manson, Howden; Mr. W. A. Hunt, Yeovil; Mr. G. Pollard, London; Dr. Rolleston, Oxford; Dr. Brett, Watford; Dr. Joseph Rogers, London; Dr. Heywood Smith, London; Mr. Teevan, London; Mr. Maclean, Applecross; Dr. Balfour, Edinburgh; Dr. J. W. Langmore, London; Dr. Brazier, Aberdeen; Mr. Osman Vincent, London; etc.

CLINICAL LECTURES

DELIVERED IN

THE OUT-PATIENT DEPARTMENT OF THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

By W. B. CHEADLE, M.D., F.R.C.P.,
Assistant-Physician to the Hospital; Senior Assistant-Physician to St. Mary's Hospital; etc.

III.—Meningitis. (*Concluded.*)

Having thus laid before you the reasons which satisfied my mind that I had not to deal in this case with any of the three disorders which simulate acute hydrocephalus, I must briefly sum up the positive evidence which identifies the condition as one of the forms of the latter disease itself.

First, the mode of invasion, the constipation, the loaded tongue, the vomiting, the intolerance of movement, the cry, the squinting and convulsions, the dilated and motionless pupils, the subsequent blindness and evidence of optic neuritis, the sequence of the symptoms and the course of the disease up to the time of amendment, form a combination of phenomena which we meet with in acute hydrocephalus, and in no other disease, except perhaps less completely in the meningitis of adult life.

The question, to which form of acute hydrocephalus the present case must be referred, cannot, however, be answererd with the same confidence as the preceding inquiries.

The varieties of organic cerebral affection included under the general term acute hydrocephalus are described as three—acute essential hydrocephalus, simple meningitis, and tubercular meningitis. The morbid anatomy of these different forms may be briefly stated thus. In acute essential hydrocephalus there is found effusion of simple serous fluid only in the ventricles and arachnoid cavity with or without softening of brain-substance. There are none of the products of inflammation. In simple meningitis the effusion is fibrinous and corpuscular; there is lymph as well as serum, and softening of the central portions of the cerebral matter. It is an inflammation of the meninges and brain-substance. In tubercular meningitis these same morbid changes are accompanied, and probably excited, by the presence of miliary tubercle. The distinction between these different pathological conditions is not positively betrayed during life by any marked difference in the symptoms; the existence of one or the other can only be inferred from slight and uncertain signs, and from general considerations. The age of the patient throws less light upon the point than it has been assumed to afford. It is stated by some authorities that tubercular meningitis does not occur in very young children, but is replaced by the simple form. Dr. West, however, found that, on an average, five out of forty fatal cases examined by him *post mortem* were infants under a year old; and Bouchut states that, in fifteen fatal cases in children from eight days to thirty months old, ten were tubercular, four simple, and one acute essential hydrocephalus. Trousseau affirms that twenty-nine out of thirty cases of meningitis in children are of a tubercular character, and that tubercular deposit is absent in the meninges in rare cases only. These statistics relate to fatal cases alone; but, considering how rarely recovery takes place from acute hydrocephalus in any form, we may venture to assume that the large majority of all cases are of tubercular origin, and that, as far as has yet been made out, the proportion is much the same in early infancy as in later childhood. The age of the child, then, affords no satisfactory indication, and we must turn to the history and the symptoms.

Acute essential hydrocephalus, or acute dropsy of the ventricles, is described as usually supervening upon scarlatina or nephritis, and allied to the dropsy of other serous cavities and of the connective tissue which occurs as a sequel of the same disease. A similar condition does arise independently, however; and I have seen one fatal case in which all the symptoms during life were those of acute hydrocephalus, which did not supervene upon any previous disease, and where the only morbid changes found after death were extensive effusion of serum into the ventricles, and softening of the septum lucidum. In such cases, however, where there is no discoverable cause for dropsy, it is probable that the process is of an inflammatory nature, differing from the ordinary meningitis just as pleurisy, with simple serous effusion, differs from that accompanied by a plentiful exudation of plastic lymph.

In this form, too, the attack comes on insiduously, and, with the exception that the symptoms are perhaps less pronounced and severe than in the others, there is nothing in either of them or the history sufficiently characteristic to enable us to distinguish it in actual practice. Simple meningitis differs from the others chiefly in the mode of invasion—the access is, as a rule, sudden; without that long train of prodromata which signalise the approach of the more insidious forms—those slight disturbances of the functions of the nervous centre which betray the deposit of tubercle or the effusion of serum slowly and secretly going on there. In simple meningitis, the cause of the inflammation is obscure; but it seems, at any rate, to be one which usually produces little cerebral disturbance until active inflammation is lighted up. When once this has fairly set in, when once the specific symptoms have commenced, the phenomena in the two forms of meningitis are identical. And then, in some instances of the tubercular disease, the premonitory symptoms are absent or are overlooked, and the previous history affords no clue.

Now, in the case before us, the mode of invasion was that of acute essential hydrocephalus, or tubercular meningitis, while later, the symptoms of excitement were so marked that they indicated acute inflammation rather than simple serous effusion. The active symptoms showed that there was meningitis—the way in which these symptoms had come on, that it was of tubercular origin—and this I never doubted for a moment, until the patient recovered. Now, however, although I can have no doubt that the patient had meningitis, in view of the difficulty of distinguishing between the simple and tubercular forms, and the extreme rarity of recovery from the latter, I cannot express a positive conviction that this case was of that kind. But I may mention that some evidence, with which I was unacquainted at the time, has since come to my knowledge, which greatly strengthened the presumption in favour of the tubercular origin of the disease, and that is the intensity of the tubercular taint existing in the family. I have found that both the parents of the mother died of consumption; that her brother died of the same disease after his discharge from the Brompton Hospital; and that the father's aunt was at the present time an in-patient of that institution for the same complaint. The child, therefore, would probably inherit the tubercular diathesis with great intensity. Leaving, however, the particular origin of the disease undecided, we may, I think, conclude that in their case there was encephalic inflammation; that the progress of this was unusually slow, and the exudation poured forth probably neither very profuse nor rich in young cells. The amount of effusion was not great enough to produce fatal pressure; pus was not developed, and the damage inflicted was not so severe as to cause irreparable softening of brain-substance.

Lastly, there is one lesson which this history teaches us, and that is, that in cases of acute cerebral disease in children, enormous as the mortality is, we are not absolutely to give up all hope—to cease to try and do anything to help the patient. The old practice of a vigorous antiphlogistic treatment is now well-nigh universally abandoned. We no longer try to cut short the inflammation, and terrify and exhaust our patients by bleeding them from the arm, or by a coronet of leeches, or torture them with blisters or antimonial ointment to the scalp. We have learnt that such measures rather hasten than retard the fatal event. The obvious futility of these active measures has led to a belief that nothing can be of any avail, and the doctor is tempted to look on a passive spectator of the terrible calamity he feels powerless to avert. Now, I am altogether unwilling to accept this position. It is, indeed, only too probable that tubercular meningitis will prove completely beyond the control of medical art. But then we can never be absolutely certain that the disease is of the tubercular form; and we do not yet know that even that intractable malady is altogether unalterable, and cannot in any degree be influenced for good. In very rare and exceptional instances, as I told you, recovery has taken place; and it is reasonable to suppose that the event might be determined by the nature of the surrounding conditions. By rendering these conditions as favourable as possible we can, by our art, increase the chance of recovery, as by rendering them adverse we can increase the chance of death.

It is impossible to say how small a matter may turn the scale when the balance swings evenly; and, although in the vast majority of instances the series of pathological changes are so serious as to be necessarily fatal from the first moment of their initiation, and their course cannot be materially modified by any external influences we are able to bring to bear upon them, yet now and again the morbid series may be less extreme, the results produced reparable, and recovery possible. Upon such critical cases our action may be decisive for good or evil.

It is true that we cannot judge with exactitude what the favourable and unfavourable conditions are; but we know, roughly, that violent measures, such as bleeding and hard purging, must hasten death; that their influence on the general condition must be hurtful; for, while we have no evidence that they have the slightest power in modifying the

inflammatory process, we know that they are directly injurious in certain ascertained effects. The loss of blood will increase the tendency to serous effusion and convulsion, which are great sources of danger, while the free purging will eventually favour a similar result by impoverishing the blood through the drain of albumen which it involves. Both processes are exhausting, and inimical to the ready repair of injured tissues.

On the other hand, we know that careful feeding, healthy surroundings, a judicious regulation of symptoms by drugs, the assistance by artificial means of natural functions which are in abeyance, favour recovery from disease generally. These measures we must adopt in acute hydrocephalus as in the rest; and, when symptoms indicative of serous effusion within the cranium become apparent, such as dilatation of the pupil, slowness of pulse, and stupor, we may legitimately attempt to relieve this by a brisk purge or by diuretics. I have seen the most remarkable improvement follow a cathartic dose of calomel; and I believe the reputed efficacy of purgatives in this disease is due to their influence in temporarily lessening the fluid in the cranium. The condition of the patient in such cases is probably utterly hopeless, and the advantage gained transient and futile; yet we must give such relief where we can. It is, however, I think, our duty to do even more.

While we are bound to avoid those rude and violent measures which, we have reason to believe, do positive harm by their general action on the system, there are two powerful agents which we may bring into play, which certainly do not seem to be injurious in their general effect upon children—at any rate at the time—and during the administration of which, if not by their influence, recovery has taken place in certain instances. I allude to mercury and iodide of potassium: they are both well borne by children. You may here see this with regard to the former every day in cases of congenital syphilis, and in certain forms of chronic vomiting and diarrhœa, in which mercury is given in small doses in the form of grey powder for a considerable time, not only without producing the specific effects of the drug, but usually with the most positive and palpable good results.

A few seemingly hopeless cases of acute hydrocephalus have recovered under mercurial treatment; and it is well at the outset to attempt to regulate the torpid bowels and to relieve vomiting by small doses of grey powder twice or thrice a day. That iodide of potassium may be taken in considerable quantity by children with equal impunity is exemplified by the case before us, and by many others of syphilis and chronic hydrocephalus, in which I have administered it continuously for a length of time without any evil result whatever.

Now, many of the cases of recovery from the meningitis of infancy which have been recorded recently, including the two in Niemeyer's experience, and which he judged to be undoubtedly tubercular, have occurred under the free use of iodide of potassium: and modern cases, since diagnosis has become more accurate, give more valuable indications than could be drawn from the looser pathology of former times. Such considerations as these induced me to adopt the full treatment by this drug in the present instance. But whether the favourable event which followed was due in any degree to the influence of the remedy, can only be determined by more extended experiments.

ON AMERICAN MEDICAL INSTITUTIONS.

By FRANK UNDERHILL, M.R.C.S., Tipton.

HAVING lately returned from a tour in the Northern States of America, undertaken partly for recreation and partly with a view of becoming acquainted with the medical institutions of the country, I think it may not be uninteresting to my professional brethren at home, if I write a brief outline of the several courses of medical study pursued there, together with a few remarks on the chief medical schools; and I am the more emboldened to do this, when I consider the little that has been written or said upon the subject by authors and journalists. With regard to medical affairs on the continent we are well informed; every remarkable case is duly published, each new plan of treatment widely known, and the names of the various professors are to us almost as household words. Students flock to Paris, Vienna, or Berlin, but few indeed find their way across the Atlantic. That this should be the case is a matter for regret; for I can, from personal experience, assure those who have leisure to travel, that they will not only reap much benefit from a visit to America, but will be received in the most cordial manner by the profession there. There is unfortunately a proneness to undervalue everything coming from our sister country, which only more extended personal intercourse will dissipate.

The number of medical faculties and colleges is very great; indeed it has been said, and with some show of truth, that there are more of such institutions in America than in the whole world besides. Every city of any size or importance possesses one, two, or more; each endeavouring, in too many cases, to outrival the other in giving facilities for obtaining diplomas. This naturally leads to much competition and corresponding laxity in the course of instruction and final examination. One can hardly be surprised that where the portals are thrown so widely open many rush in. Also, as no previous examination in arts is required in nine-tenths of these institutions; as the time required for attendance on lectures is extremely short; and as candidates are rarely rejected by the examiners, who are usually their own teachers, the ranks of the profession are yearly swelled by those who reflect no credit upon it, but rather tend to lower its status with the public generally.

It must be admitted in extenuation of this, that in so vast a country as America, to which the tide of emigration is constantly flowing, where in a few years, or even months, small settlements spring up into towns, and towns into large and populous cities, the demand for medical men must be great, and the supply great in proportion.

I have in my possession records and prospectuses of a large number of these institutions, most of which I have personally visited; but these are only a tithe of the whole. They are nevertheless amply sufficient as a foundation for the following remarks.

The only professional title given in the States is that of Doctor, there being no institutions analogous in any way to our colleges of physicians and surgeons. This degree, which every legalised medical school has the power to grant, entitles the holder to practise medicine, surgery, and midwifery; and the qualifications necessary for obtaining it, speaking generally, are as follows.

1. The candidate must have attained the age of 21 years, and be of good moral conduct.

2. He must have been for three years, including the time spent at the medical school, the pupil of some respectable medical man.

3. He must have attended two full courses of lectures, with dissections and clinical instruction, at a recognised college, the latter course at the school where he proposes to graduate.

4. He must present at the time of examination a thesis on some medical subject written by himself, and be prepared to defend it if necessary.

5. He must pass the professional examination in a satisfactory manner.

Each course of lectures is of about five months' duration, and extends from the beginning of October until the end of February, being somewhat equivalent in time to our winter session. Each course is complete in itself, and embraces all the subjects necessary for graduation. These are much the same as those taught in our own schools—namely, anatomy, physiology, medicine, surgery, midwifery, chemistry, and materia medica. In most of the schools there is a summer session of three or four months, where auxiliary lectures are given on collateral and special subjects, and practical work is pursued in the laboratory, dissecting-room, and elsewhere. Attendance upon this course, though not necessary for a degree, is very generally recommended to the students, and many avail themselves of its advantages, more especially as in a large number of schools no fee is required. Several have preliminary terms of a few weeks' duration just before the regular winter session, in order that those just entering may be better prepared for the regular routine of professional study. Almost all offer private instruction to those willing to pay for it.

Owing to the short time which students are *compelled* to spend in the prosecution of their studies—not much more than equal in point of time to a year's instruction in a British school—the lectures are much crowded together, and an unusual number are of course obliged to be given daily, allowing little leisure for reading, and less for hospital work. The result which must and does follow, is partly obviated by the better class of students almost invariably taking some hospital appointment immediately after graduation, and thus obtaining that practical acquaintance with disease without which they are totally unfitted to become efficient practitioners.

The lectures are eminently practical, are illustrated, when possible, by drawings, preparations, and specimens, and are usually listened to with very great attention. They are of an hour's duration, and often follow each other in such quick succession that the students are engaged for several hours without leaving their seats.

Of the clinical lectures I can speak in terms of almost unqualified commendation. They are delivered daily either in the theatre of the medical school or in the hospital. Here, at the appointed hour, all the interesting and instructive cases are exhibited, and the various necessary operations performed before the whole class, the steps of each being minutely described, and the remarks illustrated by every possible means. The students are thus brought into direct contact with the patients. Shortly before each lecture, the professor selects from the

hospital wards or from such out-patients as present themselves for the purpose, those cases which he thinks most suitable. Unless the theatre be in an hospital building, a few private wards are provided in which are received those upon whom capital operations have been performed, or who are from any cause unable to return to their own homes.

With regard to the examinations, I cannot speak from personal experience; but, judging from the short time required for study and the small number of rejections, I am bound to conclude that they are not very searching.

To the general system of medical education I have mentioned I am happy to record exceptions. The authorities of the medical school connected with the Harvard University, near Boston, have recently not only framed, but put in practice, a plan for lengthening the course of study and rendering it much more efficient. In this institution, the academic year now begins in October and ends in June. It is divided into two equal terms, with a recess of one week between them. Either of these terms is more than equivalent to the former winter session. The course of instruction has been extended so as to embrace three years, and is so arranged as to carry the student progressively from one subject to another. Practical work is much more insisted upon. Instead of the former hasty oral examination for a degree which was held at the termination of the period of study, a series of examinations has been arranged which may be passed either at different times during the course, or at the end. The subjects to be studied in progressive order are—First year: Anatomy, Physiology, and General Chemistry. Second year: Medical Chemistry, Materia Medica, Pathological Anatomy, Medicine, and Surgery. Third year: Pathological Anatomy, Therapeutics, Obstetrics, Medicine, and Surgery. Examinations are held yearly in the subjects previously studied, and no student will receive his diploma until he has passed satisfactorily in all the above mentioned branches. He must also produce a certificate of having dissected the whole body. As these new regulations have only lately come into force, I have not had the opportunity of hearing the result, but they are steps in the right direction to which we may heartily wish every success.

The course of study pursued at Yale College also presents some points of difference. The year is divided into winter and spring terms, each consisting of about four months. The spring terms, though not absolutely necessary for graduation, are nevertheless strongly recommended to be attended, and count as a part of the time spent in medical study. Unless the student be a graduate in Arts of this or some other university, he is required to spend three years in the acquirement of professional knowledge. It is intended soon (as at Harvard) to adopt a systematic classification of study, so as to place medicine on the same footing as the other branches of science taught at the University, by making the course extend over three successive years.

Most of the dissecting-rooms visited were spacious, and fairly ventilated and lighted. Owing to the number of lectures during the day, dissection is chiefly done in the evening, a jet of gas being suspended over each table. These tables are mostly covered with marble or slate, perforated at the centre or end for the escape of fluid. Very little disagreeable odour is noticeable. The bodies are injected either with arsenic or preparations of zinc, the latter being generally preferred, as it is alleged to preserve the "material" much longer, and entirely prevent smell. In most large cities "subjects" are very easily obtained, and are correspondingly cheap. The Anatomy Act in force in Philadelphia allows "any officer having control over the same, to give permission to any physician or surgeon in the city or county to take the bodies of deceased persons required to be buried at the public expense, to be used by him within the limit of the State for the advancement of medical science, preference being given to medical schools. The number assigned to each of these is in proportion to the number of students; provided, however, that the deceased shall not have previously requested burial, or that no relative shall have claimed the body. If, also, the deceased person was a traveller, who died suddenly, the body shall not be handed over. Any one buying or selling such bodies shall be deemed guilty of a misdemeanour, and fined or imprisoned accordingly." An act similar to this is in force in many other places.

The list of text-books recommended and used at most of the schools embraces nearly all those manuals and professional works read in England, in addition to those by the best American authors. In the following allusions to some of the principal medical schools, brevity is my chief object; but I shall at all times be happy to give fuller information to those desiring it.

In New York and vicinity, there are four separate and distinct medical schools, each granting diplomas and having its own teachers—namely, the University, the College of Physicians and Surgeons, the Bellevue Hospital Medical School, and the Long Island Medical College. In all, the requirements for graduation are the same as those previously mentioned; in all, the regular session begins in October and ends early in March; all have summer courses of lectures, attendance upon which is optional. The fee for a full course in each is about £30.

The Bellevue College is most conveniently located in a comparatively new building in the grounds of the Bellevue Hospital, upon the banks of the East River, affording students great facilities for clinical instruction in this institution, and at the Charity and other hospitals on Blackwell's Island, a short distance from the shore, and to which a steamer runs several times a day for the convenience of those having business there. In this school, besides the above-mentioned courses, there is a preliminary term just before the regular October session for the purpose of initiating students into the general medical work. During the regular session at least four didactic lectures are given each day, besides a daily clinic. There are two annual examinations for degrees. The class last year consisted of about four hundred and fifty students, one hundred and thirty-four of whom graduated. The Faculty consists of some of the most eminent men in New York, comprising among the number Wood, Hamilton, Sayre, Van Buren, Barker, Austin Flint, and many others equally well known both at home and abroad. The building is in every way suited for the purpose of a medical school, having a good theatre and dissecting-room, with a fair anatomical and pathological museum. Lastly, a new theatre has been built in Bellevue Hospital, which greatly facilitates clinical instruction.

The College of Physicians and Surgeons, situated in Twenty-third Street, is the medical department of the Columbia College. The theatre and dissecting-room are both good. There are five or six lectures daily, exclusive of clinics. The Medical Faculty is excellent, and the class in 1870 numbered upwards of three hundred, seventy of whom graduated.

The Medical Department connected with the University of New York is situated in a new building close to Bellevue Hospital, and enjoys equal advantages with that school. Having only recently been erected, the institution contains all the modern improvements, and is very complete in its various arrangements. The nucleus of what promises to be an excellent museum has been established by Dr. Darling, the Professor of Anatomy. The dissecting-room is one of the best in the country, and among the professors are Drs. Paine, Draper, Loomis, Darling, and Gouley.

In addition to these regular schools, there is a Women's Medical College, where much the same course of study is pursued. Among the professors are the names of Elizabeth Blackwell, Professor of Hygiene; Emily Blackwell, Professor of Obstetrics; and several other female teachers. There are also Dental and Pharmaceutical Colleges.

The two regular medical schools of Philadelphia are the University of Pennsylvania and the Jefferson Medical College.

The University was founded in 1749, and is, therefore, one of the oldest in the States. The present building having been found too small and inconvenient, a large new one is in process of erection on the outskirts of the city, and will probably soon be ready for the reception of students. The general requirements for a degree are precisely the same as those already mentioned, but the division of the year differs in a slight degree. Besides the ordinary summer and winter sessions, there is an auxiliary term just before the latter. There are five or six lectures a day in addition to the daily clinic, frequent instruction in the Dispensary, and the students are admitted to the clinic at the Pennsylvania and other hospitals in the city.

For the accommodation of patients requiring surgical treatment, wards and proper attendants are provided in the College building, in order that the students may have the benefit of the clinical instruction. During the past year, upwards of four hundred operations were performed here for almost every variety of disease.

The summer term comprises lectures by the auxiliary Faculty upon various collateral subjects, as Botany, Jurisprudence, Hygiene, etc., attendance upon which is optional, and no fee is required from those who have taken the tickets of two of the lecturers. A degree of Doctor of Philosophy is conferred upon graduates who attend two of these courses and pass a satisfactory examination therein. The College Museum, founded a hundred years ago, is one of the best in the states, and contains a large number of morbid specimens, most of which are used in illustrating the lectures. A cabinet, collected by Dr. Wood, contains an excellent series of drawings and wax models, illustrating the various diseases of the skin and internal organs. Owing, however, to want of proper accommodation and light, and consequent crowding, much of interest is lost to the visitor.

Before leaving the subject, I would say a few words on the difference between this institution and the notorious University of Philadelphia in the same city. The former is one of the most respectable of

American schools; the latter has lately been rendered infamous by the barefaced sale of diplomas without residence or examination. The mistake of confounding the two is constantly made, and, whilst the fact that such an institution could ever have existed has been deeply deplored by all respectable men, nothing has tended more to foster that suspicion concerning all American degrees which exists in the minds of the profession at home and abroad. This subject has been frequently the theme of conversation and correspondence, and I rejoice to see that steps have at last been taken by the State legislature for the suppression of this disgraceful traffic.

The Jefferson College was first incorporated as a separate institution in 1838. The regulations and fees are the same as those of the University, the course of instruction also being nearly identical. The building contains good theatre, dissecting-room, and museum, with wards fitted up for those operated upon at the surgical clinics. The session 1869-70 was attended by 435 students, 160 of whom received a diploma. The Faculty is, I believe, the best in America, containing the names of Gross, Pancoast, Wallace, Meigs, Da Costa, and others of equal reputation.

The clinics, at many of which I was fortunate enough to be present, are unusually good. Among other operations, Dr. Pancoast removed the whole of the branches of the third division of the fifth nerve for neuralgia. The patient, an elderly man, with spare face and figure, had been a martyr to the disease for many years, during which time every imaginable remedy had been tried without success. The operation was performed by making an incision in front of the condyle of the lower jaw, dividing the masseter, removing the coronoid process, and dissecting down upon the nerves, which were removed just at their exit from the foramen ovale. The internal maxillary artery was secured, and very little blood lost. Relief was immediate, and promised to be permanent. Dr. Pancoast had previously operated with success in two or three similar cases.

At this time, when so much discussion is taking place concerning the admission of women into the profession, and as the verdict is decidedly in their favour in America, it may not be uninteresting to say a few words about the Women's Medical College. This institution is situated in the confines of the city, adjoining the Women's Hospital, and is now in its twenty-second year. The college was originally a private house, but, by alterations and extensions, has now been made suitable for the purposes of instruction. The dissecting-room, though small, is well warmed and ventilated, and there is the nucleus of a museum containing preparations and models for the lectures. The general course of study is on the whole the same as that pursued at other institutions, and embraces attendance upon clinical lectures and dissections. The Faculty claim the right to refuse examination to a candidate on the ground of moral or mental unfitness for the profession. Students have the privilege of attending the practice of their own hospital, at which several thousand patients, chiefly women and children, are annually treated, and, under appropriate direction, are permitted to take obstetrical cases either in the hospital or homes of the patients. They also follow the practice and clinical instruction at some of the large city hospitals, more especially the Pennsylvania, in which institution two weekly clinical lectures are given especially for their benefit by members of the staff. Several are annually appointed from the class to act as assistants in the Women's Hospital. For the purpose of encouraging women to join the profession, six students are annually admitted to the entire privileges of the college course on payment of a merely nominal fee. During the last year's session there were nearly sixty pupils, seventeen of whom graduated. The Dean and several of the professors are women, and the institution is well supported by those interested in the cause of "women's rights."

The Dental Colleges of Philadelphia have obtained great and deserved celebrity throughout the country; and for the information of those interested in the subject, I will briefly state a few of the more prominent facts in connection with them. There are two in the city, the Philadelphia Dental College and the Pennsylvania Dental College; but, as the regulations are precisely the same in each, I will content myself with describing the latter. The qualifications for the diploma of Doctor of Dental Surgery are much the same as those expected from a student at the regular schools, embracing apprenticeship, two courses of lectures on dentistry and collateral subjects, and a thesis. In addition, he must treat thoroughly some patient requiring all the usual dental operations; he must take up at least one artificial case, and bring the patient before the Professor of Mechanical Dentistry; he must also prepare a specimen of his work to be placed in the college museum. The operations must be performed, and the specimen prepared, in the college building. Satisfactory evidence of having been in practice for five years is considered equivalent to one course of lectures. The Faculty consists of six professors, who are assisted by two demonstrators and assistants. Each of the former delivers three lectures a week, and occupies a certain part of every Saturday in clinical instruction. Four hours a day are devoted to mechanical and operative work. To afford the students an opportunity of acquiring a practical knowledge, a large operating-room, one hundred feet by twenty feet, has been provided. It is furnished with twenty-eight chairs, so arranged as to command every advantage of light and comfort. To these chairs, the students are assigned in regular order, and certain hours are fixed by the demonstrator for each one to operate. Patients are always to be had in abundance, as no charge is made except for the actual cost of gold used in stopping teeth, etc. The nitrous oxide gas is administered twice weekly for the purposes of painless extraction.

In the laboratory are all the conveniences for the preparation of metals and manufacture of teeth. Every process known in dentistry is fully taught and explained, the student being required to go through all the necessary manipulations, from taking the impression of the mouth to the proper adjustment of the artificial teeth.

The museum contains some capital illustrations of the various diseases of the jaws, with large wax models of unusual deformities. Many of the specimens prepared by the students previously to the third examination are of excellent workmanship. All of these are collected together in a special cabinet. There are also samples of every substance used in dentistry. The number of students attending last year was seventy-four, of whom thirty-eight obtained their diplomas.

In addition to those already mentioned, there are several other sources in Philadelphia for obtaining medical knowledge, such as the Medical Institute, the Summer School of Medicine, the School of Anatomy, and the College of Pharmacy. Of these I would gladly speak did space permit.

The Medical School connected with the Harvard University is in Boston, where the advantages of clinical study can be better obtained. In addition to the usual qualifications for a diploma, the student, unless a graduate in Arts, is required to show a competent knowledge of Latin and experimental philosophy. The class of 1870 numbered more than three hundred, and the Faculty comprises many well known names.

Connected with the school, and in the same building, is the Warren Museum, named after the late Dr. John C. Warren, who formed the nucleus of the collection many years ago, and on his death presented it to the College. It is unusually rich in anatomical and rare pathological specimens, and possesses, among other things, a fine set of coloured lithographs illustrating various diseased structures. In this collection, also, is the skull taken from the body of a man who survived more than twelve years the passage of an iron bar completely through the head, and is widely known and ridiculed as the "crowbar case". This specimen is open to the fullest inspection, and I may add that, together with Dr. Jackson, the able curator, I carefully examined it, and have no doubt concerning the accuracy of the statements made in reference to the case in the catalogue of the museum.

In Washington and vicinity, there are three medical colleges, each having much the same regulations with regard to qualification and course of study as those I have previously mentioned. In the Howard University, in addition to these, the candidate must possess a thorough English education and a competent knowledge of mathematics and Latin. At this College, moreover, females are admitted, and encouraged to present themselves for degrees, and many of the students are coloured men.

Among the other medical schools visited were those of Baltimore, Burlington, St. Louis, Cincinnati, Chicago, Buffalo, and Columbus. In all these the regulations are much the same; but in several of them four years' reputable practice, after studying under a preceptor, is considered equivalent to one course of lectures.

ON THE APPEARANCES PRESENTED BY THE BODIES OF TWO CHILDREN EXHUMED AT ST. HELEN'S AUCKLAND.*

By R. T. MANSON, M.R.C.S.E., etc., Howden.

OPPORTUNITIES for the examination of bodies that have been for some time interred are very rare; and it may, therefore, be of interest to state the appearances presented by the bodies of two children, one aged ten years and the other fourteen months, who were both buried in March last, and were exhumed on October 15th, at St. Helen's Auckland. The soil of the churchyard is comparatively dry; that is, beyond the ordinary dampness of alluvial soil there was no moisture: the coffins

* Read before the Northumberland and Durham Medical Society.

were, therefore, simply damp, and on the outside appeared some patches of whitish mildew. The coffin-plates were in good preservation, being only slightly rusted at the backs and edges. These particulars are mentioned as bearing on the condition in which the bodies were found.

The coffin of the elder boy contained a quantity of shavings. These were damp and discoloured, like shavings kept in a cellar, but were not actually wet. The smell given forth from the bodies was peculiar. It was unlike any dead-house or dissecting-room smell; and, though offensive, was not nearly so much so as might have been expected. Perhaps there is not such a thing as a salt smell, but that is the term which would convey some idea of the odour. I have smelt something similar in close bedrooms where red herrings have been cooked.

The face of the elder boy was dry, and of a dark brown colour; the soft parts of the nose were gone, and the mouth was wide open, the lower jaw looking as if dislocated. From the right upper jaw, one of the teeth was hanging out of its socket. When the head was lifted, the skull at the back separated entirely from the muscles and scalp as if it had been macerated, and the muscular structures were seen to be of a grey colour, moist and pulpy. The brain, as seen through the foramen magnum, was a mere pulp; and of the eyes, only traces were seen at the bottom of the orbits. The skin of the chest and abdomen was of a reddish-brown colour, as was that of the thighs. These last were in good preservation, and had a mummified appearance. The genitals were converted into a mass of adipocere; but it would have been quite possible to ascertain from them the sex of the child had it not been known.

The younger child had been a well nourished infant. The face had only slightly shrunk; the cheeks still showed the plumpness of babyhood; the lips were only slightly separated, and one could almost fancy a smile on them. The soft parts of the nose were gone, and the orbits contained a thick yellow fluid. The skin of the chest and abdomen was dry, and reddish-brown in colour. After an incision had been made down the sternum, the skin and muscles left the ribs on a slight touch, and were rolled back as easily and completely as if made of thin lead. The genitals were converted into adipocere; and in this case also the sex could have been determined. The feet of this child were covered with woollen socks, which appeared soaked in a fluid like that in the orbits.

In both children the lungs were the most decomposed of any of the internal organs. The heart of the younger child was in a capital state of preservation; internally it was moist, and really looked as if it were that of a recently deceased subject.

M. Devergie, as quoted by Dr. Chambers (*Lectures, Chiefly Clinical*, p. 3), says, from notes made on the bodies at the Morgue at Paris, that it is four and a half months before complete destruction of the face occurs, and the bulky muscles of the neck and thighs are converted into adipocere. In the cases of these children, seven months had elapsed between the burial and the exhumation. In a wet soil the process of decomposition would have been hastened. The bodies had been buried within a few days (nine, I believe) of each other, but not in the same grave.

It would have been exceedingly interesting to have had an opportunity of examining the body of the father of these children. He had been buried more than twelve months. Every search was made for him; but the absence of any record of the place of burial, and the firm conviction on the part of each person who attended the funeral, that the man had been buried at a spot where nobody else who had been present remembered his being buried, and the sexton's general bewilderment, and the fact that the names had, in many instances, been effaced from the coffin-plates, in consequence of their having only been painted on in some material which does not stand damp, caused the search to be abandoned.

Exhumations are not of common occurrence, but they do occur; and I shall always retain the idea that the grave of the man we sought really was opened, and that the failure in identifying his coffin was caused by official carelessness.

Where no head-stones are erected, it would be easy to have a number or the initials of the deceased burnt on the coffin. Certainly it would not, to the popular eye, look so well as the name in full, inscribed on tin plate impressed with the figures of angels furnished with anatomically impossible wings, but it would be efficacious in preventing such a failure as happened at St. Helen's Auckland; and some plan ought to be adopted by which, if it be necessary to exhume a body, there might be a reasonable chance of finding it.

Since the above paper was written, I have been informed that arsenic has been found in the bodies of these children.

MUSCULAR TREMORS, IN THEIR RELATION TO LEAD-POISONING.

By W. A. HOLLIS, M.D.,
Medical Registrar and Casualty-Physician to St. Bartholomew's Hospital.

In several cases of suspected lead-poisoning, I have noticed the presence of considerable muscular tremor. This tremor may or may not be associated with distinct symptoms of saturnine paralysis; and it usually affects, in the first instance, the muscles of the forearms, subsequently the muscles of the face, and in one case (that of an oil-cloth printer) it attacked the muscles of the trunk and lower extremities generally, simulating in its severity well-marked mercurial tremor. In a former number of this JOURNAL (February 10th, 1872), I noticed the case of a brass-finisher, who, with other well-marked symptoms of lead-poisoning, had both paralysis of the extensors of the forearms and considerable muscular tremor of those extremities; and in a previous volume (July 1st, 1871), I also recorded the case of a looking-glass silverer, wherein there appeared to me to be poisoning by both lead and mercury conjointly. In this patient there was great muscular tremor. I have since had the opportunity of comparing several other cases of lead-poisoning, and I conclude from them that the mode by which the lead obtains access to the system operates greatly to determine the character of the subsequent symptoms. A comparison of the cases which I had recorded in my notes showed that occupations involving the use of the metal or its combinations in a heated condition greatly favour the early production of muscular tremor in association with symptoms of lead-poisoning; whilst, on the other hand, employments in which the metal is used in a cold state are far less frequently the cause of this peculiar symptom in the workmen, although they may be affected with saturnine colic or even paralysis. In the cases of the oil-cloth printer before mentioned, the tremor was especially severe at night-time, and was associated with the distinctive blue-gum-line and frequent attacks of colic. I have observed this tremor with other well-marked symptoms of lead-poisoning in brass-founders and finishers, type-founders, looking-glass silverers (although in these cases possibly the mercury employed may complicate the symptoms), and lead-pipe makers, all of whom employ the metal in a heated state. I have occasionally, although rarely, found white-lead workers, engine-fitters, and plumbers, affected with the tremor, but painters are generally exempt.

As regards white-lead workers, I find, upon inquiry, that persons employed in such factories are necessarily exposed to considerable heat for hours together. In the case of plumbers and gas-pipe-fitters, although their occupation does not necessarily involve a prolonged stay in an apartment containing the heated metal, yet they are frequently brought more or less closely into contact with it in a hot state. With regard to gas-fitters, I have notes of one man who had well-marked muscular tremors, with colic and constipation, without, however, a distinct blue-gum-line, although the gums were spongy. This man was accustomed to apply his mouth to the lead and other metal pipes, and, by an inspiratory effort, to test the joints after the process of soldering. I think this last case supplies a clue to the explanation of the appearance of muscular tremors in the others. From it I conclude that heat is not a necessary, although a frequent, factor in the production of saturnine tremor, as it is unlikely that the tremulousness of the muscles in this case was induced to any great extent by the heated solder. Heat probably aids the rapid production of lead-poisoning in persons engaged in the above-mentioned occupations, by permitting the aspiration of the metal or its compounds in the form of a vapour. We can readily imagine, if this conjecture be correct, that the action of a poison, when it obtains access to the body by means of the great mucous surface of the respiratory system, should be more rapid and general than when it is conveyed in small quantities through the integument of the extremities, especially (as is the case with lead) when the poison is essentially slow and local in its operation on the system.

If we look for a physiological interpretation of the cause of the tremor in such cases, perhaps the best one will be found by adopting Heubel's views (*Pathogenese und Symptome der chronischen Bleivergiftung. Experimentelle Untersuchungen.* Berlin, 1871). He accounts for the fact that in lead-palsy, muscles, which are innervated by a single nerve, are not all equally weakened, by supposing the lead to affect the peripheral intramuscular extremities of the nerves rather than the main branches, so that certain bundles of muscular fibres may be deeply affected by the lead, whilst others closely adjoining them are much less so. Supposing this reasoning to be correct, we can easily understand why tremor occurs in the early stages of this disorder. "Tremor", to use the words of Sir Thomas Watson, "is always a token of debility". *If* certain fibres in a muscle be weakened, partly by the implication of

lead among their molecular constituents, and partly by the loss of nervous power, in the way mentioned by Heubel, an uncertain intermittent contraction of the enfeebled fibres will in all probability replace that "sustained state of gentle contraction" which produces their "tone" in health, and consequently a general tremor of the affected muscle will quickly ensue.

MECHANISM OF EXPULSION OF THE PLACENTA.*

By WILLIAM LYON, A.M., M.R.C.S.Eng,, Peter-Culter, by Aberdeen.

HAVING had my attention directed to the natural mechanism of the expulsion of the placenta by reading Dr. Matthews Duncan's paper, I was anxious to know what could be learned of the subject from books. I was both disappointed and astonished at the unsatisfacty results of my search, and to find that the subject was not even alluded to in the directions given by midwifery authors for the management of the placenta. I have been long satisfied that Nature observes a particular form in the expulsion of the placenta, from careful observation of the manner in which she conducts the ordinary process.

In most cases of detached placenta, where undue interference has not been practised, we find, on examination, that its lower part is lying in the cavity of the pelvis, and its upper more or less above the brim. When the uterus contracts, the placenta is folded on itself, with sometimes the uterine and sometimes the fœtal surface in contact, and the folds always longitudinal or in the direction of the length of the passages. The doubled mass is then expelled with its two edges foremost, and the part which first passes the os vaginæ is the point where the two edges meet in forming the double.

I have so often observed this process, that I believe that every placenta, when separated from the uterus, will be expelled in this form, provided that Nature is allowed to work alone, and no pretended assistance is given by pulling the cord or otherwise. We cannot help admiring the mechanism displayed in this process as much as we admire that of natural labour; and we must at the same time be convinced of the propriety of withholding all interference, except what may contribute to uterine contraction—the only admissible moving power. The adaptation of the mass to the shape of the passages, and its consequent facility of egress, will be more apparent if we contrast the case with one in which the protrusion is effected by pulling the cord. Under such circumstances, the placenta is brought through the passages in the form most certain to offer resistance, and is protruded like a plug. The irritation caused by this treatment may raise a pain, which may assist in its expulsion; but it is remarkable how much force is often required to effect that purpose, if the placenta be of large size. Cases may occur, however, which may seem to contradict my statement. We may sometimes feel the placenta advancing in the form of a smooth ball, by purely uterine effort; and may be unable to detect the edge of the mass; but, on particular examination, we find that the insertion of the cord is up in the cavity of the uterus, and that the membranes are still adhering to the edge of the placenta. The situation of the insertion of the cord proves that the presenting part must be the edge of the placenta; and, if we wish for further proof, it will be obtained by tearing the membranes with our finger-nail, and converting the case into an ordinary natural one. If the expulsion take place before we can accomplish that, as is sometimes the case when the membranes are strong, we can take the most prominent part between our finger and thumb, and retain our hold till it is completely protruded, when we will be quite sure. We find also, in cases in which the whole mass is brought into the pelvis by traction of the cord, that it will be expelled, if left to uterine contraction, in the regular way, and not otherwise; whereas, if the traction be continued till the completion of the process, the part which is first protruded is that into which the cord is inserted. Under the same circumstances, also, if it be necessary to help the pains, we effect our purpose most easily by reaching the edge of the placenta with our finger, and using a little pressure on it, so as to form a natural folding. It will then be in the most favourable position for being expelled, whether it be left to the action of the uterus, or assisted by pulling the cord.

We must look on this subject as something more than mere matter of curiosity, because it affects the management of the placenta—a very important part of labour. The temptation to pull the cord, both when there are no pains and when they are not sufficiently strong, is the cause of much rough treatment; and such conduct can only be defended on the ground that it tends to ensure contraction of the uterus. But surely such a state is more certain and less painful when induced by the natural effort, or by manipulation of the uterus in the abdomen.

* Read before the Deeside Medical Association.

ON ANÆSTHETICS.

By WILLIAM ALEXANDER, M.D., F.R.C.P.,
Senior Physician to the Halifax Infirmary and Dispensary.

THE general subject of anæsthetics, to which the JOURNAL prominently calls the special attention of the profession at this moment, is second to none other in its importance and practical value; and, having had frequent opportunities of witnessing the relative merits of nearly all these agents, and having introduced the hydrate of chloral from Berlin, I have to offer a few reflections as my mite of contribution to the appeal of the editor.

During 1847 and the two or three following years, we used ether inhalation at the Infirmary here, and privately pretty generally, without any ill result. We found it very apt to occasion cough and a sense of suffocation, which might probably have been obviated had the patient previously practised with the mouth-piece, and had an anhydrous preparation been employed. Total oblivion was with difficulty obtained, and the cerebro-spinal reflex action never utterly lost. The volatile liquid used had about 85 per cent. of ether, with a gravity of 0.750, and was given in half-ounce quantities every two or three minutes until the desired effect was induced. Its stimulating, intoxicating property was often very conspicuous, as evinced by very profane ejaculations. As with chloroform, I look to the respiration rather than the pulse, and see that the heaving of the chest is properly performed, voluntary suspension of that function being commonly attempted whilst consciousness remains. No doubt the pulse must be carefully watched, since paralysis of the cardiac ganglia and pneumogastric nerve is unquestionably the customary cause of death.

For etherisation, Morgan's inhaler, used at Mercer's Hospital, would probably answer better than that of my late friend, Dr. Snow, as it altogether obviates the dilution of the vapour by atmospheric air, and thus earlier secures the object desired; but the conical towel and sponge, or even folds of lint, supply a ready method and answer the purpose. An empty stomach is desirable, though after-sickness very rarely follows, and the somnolent effect soon vanishes.

So far as is yet ascertained, the percentage of accidents is very greatly in favour of ether. Dr. Jones, who was a great authority on this matter at St. George's Hospital, feels assured that, efficiently administered, ether will soon supplant chloroform as the anæsthetic in general use. It should not be forgotten, however, that casualties have always occurred occasionally, and are incident to operative manipulalation arising either from shock or syncope, or from idiosyncracy of constitution. "If a sufficient amount of chloroform be given to produce narcotism", Dr. Jones observes, "there is sufficient in the system to cause death in these cases"; and he illustrates the axiom by reference to a case in which but five per cent. of it was inhaled—the amount prescribed as being within the limit of safety—and yet the patient died suddenly without any warning, by lividity of countenance or other symptom. Unlike such instances, the signals of danger usually come on gradually, and may, fortunately, be arrested. When full narcotism is accomplished and consciousness abolished by chloroform, it seems very desirable, if the effect be desired to be kept up, to change the anæsthetic to ether or nitrous oxide. Mr. S. Charles Smith of this town informs me that this practice is already adopted at most of the London ophthalmic hospitals.

In the selection of one of the two great agents, I should be much governed by the precise nature of the case; as, for example, traumatic injury with hæmorrhage, or a morbid condition of the heart or other viscera. Wherever alcohol would be indicated I should give the preference to ether, its special action being stimulant. Complete stupor by the protoxide of nitrogen is difficult and ephemeral, though safe, and is accompanied by a great mitigation of local pain under the knife. It is rather a curious circumstance, as mentioned by Mr. Woodhouse Braine, that the lowest known temperature is produced on the combined mixture of two anæsthetics—the bisulphide of carbon and compressed liquid nitrous oxide; viz., 220 deg. below zero of Fahrenheit.

On a review of the question so hastily and imperfectly expressed, my impression is, that the late ventilation of the subject has greatly added to the store of our knowledge, and restored ether to its pristine position. It has given us the option of one or other of these agents, or a combination of them in any threatened cardiac failure. Profound narcotism is, no doubt, more easily induced by chloroform, were it unattended by danger. On Tuesday last I administered a drachm and a

half on lint to a youth whilst under lateral lithotomy, performed by Mr. Jubb of this place. Complete somnolence continued until after he had been put to bed, and was not followed by any untoward after-symptom. Chloroform is more pleasant in such quantity to take than ether, though in that respect surpassed, perhaps, by the nitrous oxide gas. As observed by Mr. Couper, however, the time relatively consumed in the administration, and the disagreeable perfume of the vapour of ether, are unimportant, if regarded as safer, and to be free from nausea and other sequelæ.

With the bichloride of methylene, except as spray, we have had no experience here, and it would seem to possess no immunity from danger in its use.

ALCOHOL AS A CAUSE OF BRIGHT'S DISEASE; AND DR. DICKINSON'S STATISTICS.

By W. ROBERTS, M.D., F.R.C.P.,
Physician to the Manchester Royal Infirmary.

In a previous paper, I pointed out that Dr. Dickinson's attempt to prove from the Registrar-General's Reports that renal disease was not causally connected with intemperance, broke down on a closer investigation—that, in fact, by the same rule it might be proved that cirrhosis of the liver was unconnected with intemperance, which is a manifest fallacy. In his recent rejoinder to my criticism, he rests his argument mainly on the *post mortem* statistics of St. George's Hospital for a period of thirty years, which he has collected and compared with admirable industry. First, he compares the state of the kidneys in fifty-two persons who died of delirium tremens with that in fifty-two persons who died from accident and who were presumably of sober habits. Secondly, he compares the kidneys and urine in a hundred and forty-nine persons who followed alcoholic trades with those of a hundred and forty-nine persons who followed other occupations. He finds in both series of cases that the total of renal disease was about as great in the presumably sober as in the presumably intemperate.

This conclusion is so opposed to the general opinion, and the statistics contain on the face of them some things so improbable, that I am sure Dr. Dickinson will not think me captious if I subject them to a somewhat searching criticism. I believe I shall be able to show that they only cover a part of the ground occupied by alcohol as a producer of disease; and that, in so far as they relate to the kidneys, they are misleading.

Before going further, it is desirable to define the exact scope of the controversy. It is not contended that alcohol has any important share in the production of the acute forms of Bright's disease, or of those chronic forms which begin acutely either as a result of scarlet fever or other acute disease, or of a sudden impression of cold, and which are associciated with the large, smooth, white, or mottled kidney; but it is contended that alcohol is one of the most important factors in the production of those types of Bright's disease which are chronic from the beginning, and which are associated with the granular contracting or cirrhotic kidney.*

The first thing to be remarked about these statistics is, that they contain no mention of gouty lesions; yet it cannot be denied that one of the commonest morbid effects of alcohol is gout, and that one of the not uncommon results of gout is a certain form of Bright's disease. Dr. Dickinson has felt this difficulty, and endeavours to turn it by the allegation that the "gouty kidney" generally occurs in saturnine gout. But this can hardly apply to the better classes, among whom the gouty kidney is common enough. Further, Dr. Garrod doubts if lead alone, without the help of alcohol, can produce gout.

In the next place, cases of chronic Bright's disease (non-gouty) with the symptoms of granular contracting kidney, are frequently actually met with in practice, in which no definite causal antecedent can be discovered, except the abuse of alcohol. These are generally middle-aged or elderly persons, most of whom have not been intemperate in the ordinary sense of the word, but who have been in the constant habit, for many years, of taking every day alcoholic drinks to some excess. Three such cases are at the present moment under my observation, all belonging to the easy classes, and about whom it could never perhaps be said that they had been palpably the "worse for liquor." It is also remarkable how often intemperate habits are mentioned among the antecedents of the cases of chronic Bright's disease recorded by authors—especially in this country. Of fifty-one cases related by Bright, Christison, George Johnson, Frerichs, and Grainger Stewart, no fewer than twenty-seven are reported as persons of intemperate habits. Dr. Dickinson thinks it a sufficient answer to this point, to say that intemperate habits are so common in this country, that this is a mere coincidence. But let him take another chronic disease, which also prevails largely in middle life and advancing years, namely, cancer, and he will find that clinical observers have not found any such coincidence. I believe that the chief reasons why these remoter effects of alcohol on the kidneys are not indicated on Dr. Dickinson's statistics are, first, that these statistics apply to comparatively young persons, who have drank hard and killed themselves early, in whom, therefore, the later and slower effects of more moderate abuse of alcohol are not developed; secondly, that the granular kidney of chronic Bright's disease has not been sufficiently distinguished, by morbid anatomists, from granulation of the kidney induced by other morbid states.

The mean age of the cases tabulated by Dr. Dickinson varied from 36.8 to 40.6 years; but the mean age of the victims of the granular kidney of Bright's disease is, according to the same authority, 50-2 years. Here is a difference of age of nearly a decade, which may fairly be assumed to have an important influence. But there is something more than the difference of age. These statistics do not really test the point at issue; they apply, on the alcoholic side, to what one may call the acute effects of alcohol to persons who, in ordinary parlance, would be called intemperate. In such persons are produced cirrhosis of the liver, alcoholic phthisis, early fatty changes, and delirium tremens. But there is another very considerable class of persons who ostensibly rank among the temperate—persons who never get drunk, who run little risk of cirrhosis or alcoholic phthisis, and none at all of delirium tremens. These persons imbibe daily a few glasses of spirits or wine, or a few pots of porter, more than is good for them. This goes on steadily for a long course of years, apparently without ill effects; but at length they become gouty, or the urine becomes albuminous, or their arteries become fatty ten years earlier than they would otherwise. Are these effects less real because they are produced more slowly? There has, I believe, been too little attention paid to the effects of these long continued small excesses of alcoholic drinking, which do not, as hard drinking often does, rob a man of three-fourths or one half his life, but which curtail his life by some ten or fifteen years.

Another source of error in these statistics is the excessive amount of renal disease credited to presumably healthy persons. Dr. Dickinson would have us believe that one in every seven presumably healthy persons, of the average age of forty-one, is affected with granular kidneys. If this is to be taken to mean that one-seventh of our presumably healthy population are the subjects of chronic Bright's disease—even in the incipient stage—the statement must involve some notable fallacy. Chronic Bright's disease is not easily robbed of its victim. If this statement were true, or anything like true, Bright's disease ought to rank enormously high in our mortuary returns. But I find that all the types of renal disease only account for about one per cent. of the total mortality. But this point may be tested in another and more satisfactory manner—namely, by the examination of the urine of a number of presumably healthy persons. If the urine be free from albumen, and of normal quantity and specific gravity, it may be assumed—with only a very slight risk of error—that the producer of that urine is free from Bright's disease. I would suggest for this purpose the examination of the urine of the patients admitted into a general hospital for fractures and other injuries, which do not compromise the general health. I have made a small beginning of an investigation of this sort, but under less stringent conditions. My clinical clerks were instructed to examine the urine of all patients in the surgical wards of the Manchester Infirmary above the age of twenty years. Vesical cases were excluded, as were also patients who were moribund, or labouring under severe general ailment. Forty-two cases answered to these conditions; their average age was forty-two: twenty of them were cases of fractures and other injuries, seven had joint-disease, seven had ulcers, and the remainder had cancerous tumours or some trifling ailment. Of these, only two had albuminous urine; one was a man of intemperate habits, suffering from strumous disease of the knee-joint; the other was a syphilitic youth, with ulcer of the leg. All the accident cases—which were really the only cases fairly comparable with Dr. Dickinson's cases of death from accident—had not a trace of albumen in the urine; so that, instead of one in seven exhibiting signs of renal disease, there was only one in twenty-one, and this in spite of the inclusion of struma and syphilis. These numbers are far too few to found a safe conclusion on, but they indicate very clearly the necessity for caution in accepting purely *post mortem* data on the condition of the kidneys. Dr. Dickinson is inclined to reproach me with testing pathological observations by clinical experience. I would in my turn venture to say that morbid anatomy, without the control of clinical observation, may sometimes lead very

* I put out of view the "lardaceous" or "waxy" cases, because of their limited number, and their more obvious connection with chronic suppuration, joint-disease, and syphilis.

widely astray. There are still a good number of conditions which stand out in large outlines to clinical experience, which are vague and dim to the morbid anatomist. Need I do more than mention acute articular rheumatism, typhus, tetanus, and epilepsy?

We may be sure that the phrase "granular kidneys," as it occurs in *post mortem* records, means something else besides the granular degeneration of Bright's disease, as practically and clinically understood. And, in fact, the kidneys do often show granular surfaces in cases which have no real claims to be classed with genuine Bright's disease. I can only speak with exactness of some of these cases. In my work on *Urinary Diseases* (second edition, p. 350), I have pointed out the confusion into which morbid anatomists have fallen in not distinguishing the granular appearance of the kidneys consequent on long sustained passive congestion of the kidneys, from the granulation due to Bright's disease. The anatomical identity of these two conditions, although generally assumed, has been denied on high authority, and clinically, they are certainly distinct.* A real combination of regurgitant heart-disease, or cirrhosis of the liver, with chronic Bright's disease, is comparatively rare; and when it exists, the renal affection never fails to vindicate its existence by its appropriate symptoms. But, as a rule, the passive renal congestion which accompanies impediments to the circulation is quite a subordinate condition, and has none of the clinical features of chronic Bright's disease. The urine is of high specific gravity and scanty, and it either contains no albumen at all, or only small quantities. The renal disorder has no progressive tendency of its own; it does not produce the special secondary effects of Bright's disease, and it oscillates in its intensity strictly with the activity of the primary disease.

There are also morbid conditions of the kidney of a temporary character, which probably leave behind them certain alterations in the cortex of the organs much resembling granulations. When we reflect how many middle-aged persons have suffered in earlier years from scarlatinal and other forms of acute renal disease—from syphilitic tubercles of the kidney, from renal gravel—how many women have suffered from renal congestion during repeated pregnancies, and yet how recovered with practically sound kidneys from all these ailments—it is scarcely a matter for wonder that the organs should, years afterwards, bear upon their surfaces irregularities, depressions, and even more or less granulation with thickening and adherency of the capsules—not as indicating any existing disease, but, like a scar on the skin, as footprints of a bygone disorder.

LONDON DRINKING WATER.

By J. ALFRED WANKLYN, Esq., Corresponding Member of the Royal Bavarian Academy of Sciences.

THE following, which is the second of a series of monthly analyses of the London waters, is intended as a substitute for the analyses published by the Registrar-General.

COMPANIES.	Free Ammonia.*	Albuminoid Ammon.*
Kent Water Company.—Deptford Railway Station, Nov. 20..	0.01	0.02
New River.—Cab Rank, Tottenham Court Road, Nov. 21....	0.01	0.05
East London.—Cambridge Heath Gate, Dec. 3	0.01	0.18
THAMES COMPANIES.		
Chelsea Company.—Cab Rank, Horse Guards, Dec. 2.....	0.02	0.13
West Middlesex.—Cab Rank, Portland Road, Dec. 3	0.00	0.10
Southwark & Vauxhall.—Cab Rank, St. George's Road, Dec. 4	0.00	0.18
Grand Junction.—Cab Rank, Woodstock Street, Dec. 4	0.00	0.17
Lambeth.—Cab Rank, Palace Road, Dec. 2	0.00	0.16

* Parts in a Million (Milligrammes per litre).

The two first specimens of water were collected on the 20th and 21st of November, and the rest on the 2nd, 3rd, and 4th of December. The analyses have special interest, inasmuch as they exhibit the effect of continued floods on the quality of the metropolitan water-supply. As will be observed, only two of the companies have maintained the quality of their water; viz., the Kent and the New River. All the other companies have suffered in a greater or less degree. The West Middlesex has suffered only slightly. The Chelsea comes next; whilst the East London and Grand Junction Companies (which usually supply excellent water) have, during these floods, sunk to the ordinary level of the Southwark and Vauxhall and of the Lambeth Companies.

* Frerichs has pointed out that a similar confusion has arisen with regard to granulation of the liver in true cirrhosis, and granulation from congestion and other causes.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

THE LONDON HOSPITAL.

SPECIAL KINDS OF FRACTURES.

(Under the care of Mr. RIVINGTON).

Oblique Fracture of the Lower Ends of the Humerus.—Two cases of oblique fracture of the lower end of the humerus have come under Mr. Rivington's care. Each case occurred in an old man over seventy years of age. One of these patients had been shut up in a cupboard for two days before his admission into the hospital, and his arm was extensively ecchymosed from the shoulder to the elbow. The fracture extended obliquely across the humerus from a point above the inner condyle to another just below the external condyle, and crossed the olecranon fossa. Flexion and extension were not interfered with. The patient died from the effects of the injury and neglect after it, and the specimen is in the London Hospital Museum. In the second case, there was great breadth, especially when the joint was flexed; crepitus was obtainable only on grasping the arm with one hand and the forearm with the other, and moving the two parts of the limb from side to side. Flexion and extension were readily effected, as well as rotation of the radius, without eliciting crepitus. When the two condyles of the humerus were grasped and flexion made, no crepitus could be felt, because the lower fragment was then fixed in apposition with the shaft of the humerus. The inner condyle moved with the forearm, and the outer with the humerus. Hence it was concluded that the fracture extended obliquely across the humerus from above the inner condyle to a point below the external, as in the previous case.

Fracture of the External Tuberosity of the Tibia.—Mr. Evan Llewellyn, of Mile End, asked Mr. Rivington to see a patient of his who had met with an accident. She was a housekeeper, sixty years of age, had slipped off a chair while cleaning a window, and had fallen on her right knee. There was a good deal of swelling below the knee, due to effusion of blood. When the joint was extended nothing could be made out, and the fibula appeared to be uninjured. On flexing the knee-joint, however, and grasping the outer tuberosity, crepitus became apparent, that part of the tibia being moved with comparative ease. Ice was recommended to be applied in the extended position of the joint, and the patient did well. The joint swelled considerably after the first twenty-four hours, as had been predicted; but no unfavourable symptoms presented themselves throughout the progress of the case.

Compound Fracture of Frontal Bone: Recovery.—Charles Moss, aged 33, was admitted into the London Hospital, under the care of Mr. Rivington, on December 23rd, 1871. He had been kicked by a horse on the forehead, and there was a lacerated wound extending transversely from the right side above the right eyebrow to the middle of the left eyebrow. The frontal sinus was laid open on the left side, and a fracture extended upwards from that point through both tables of the bone. The finger introduced could feel the dura mater. Some loose fragments could be felt in the wound, and a piece of the orbital portion of the bone was detached. The loose pieces of the bone were removed, but the portion which formed an integral part of the orbit, and had the tendon of the superior oblique muscle attached to it, was retained. The edges of the wound were brought together with sutures for the greater part of its extent, and a piece of lint dipped in carbolic oil inserted at its left extremity. Ice was applied to the head. The temperature had risen next day to 104.5 deg. On the 25th, it was 103.5 deg., and did not fall again till the 31st, when it went down to 101 deg. There was some delirium at first, especially at night, and a great deal of purulent discharge. The eyelids both became infiltrated, so as to close the eyes completely, and the conjunctivæ became inflamed and œdematous. There were no rigors at any time. There was occasional headache. By the 2nd of January, 1872, he was much better, the eyelids were much less swollen, and the eyes had begun to clear. By the 4th, the wound had quite healed on the right side, and the eyes were nearly well. He continued to improve, and was soon able to sit up. By the end of January, he was able to leave the hospital cured.

Transverse Fracture of Radius close to the Wrist-Joint.—Jane Bristow, aged 78, widow, was admitted into the London Hospital, under Mr. Rivington, on December 21st, 1871. She had fallen down and injured her wrist. On examination, a transverse fracture of the radius was found close to, and parallel with, the articular extremity, a mere plate of bone having been broken off. The patient was suffering from severe chronic bronchitis and emphysema. Splints were applied, and a mixture of ammonia, opium, squills, and senega was ordered. The patient improved, and was able to leave the hospital at the beginning of February.

Wound of Cartilage covering the Capitellum of the Right Humerus and of the Cartilage on the Head of the Radius: Erysipelas: Death.—William Hyde, aged 63, was admitted, under Mr. Rivington, on January 23rd, 1872. The patient had fallen on his right elbow-joint some days previously. The joint was slightly swollen, and on the outer side a sinus existed, through which a synovia-like fluid could be pressed. A probe could be passed upwards obliquely towards, and apparently into, the joint in front of the head of the radius. After a few days' continuance in the hospital, the arm was attacked with erysipelas, which spread rapidly to the trunk, and the patient died on the 13th of February. He was a worn-out man, who seemed older than his stated age.

At the *post mortem* examination, the right elbow-joint was removed; and, on opening it, it was found that a small piece of the cartilage of the capitellum had been chipped out, and that part of the cartilage covering the head of the radius had been knocked off. The floor of the wound in the capitellar cartilage was very vascular.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

CASE OF TYPHOID FEVER, WITH TEMPERATURE OF 106.8° F., TREATED BY BATHS: RECOVERY.

(Under the care of Dr. BRADBURY.)

E. M., aged 18, single, a servant girl, was readmitted into the hospital on September 2nd, 1872, complaining of severe headache and diarrhœa. She had been an in-patient from the 13th to the 23rd of August, for what was considered to be an attack of febricula; her temperature during the period of her stay in the hospital not corresponding to that of typhoid fever, and being normal for three days previous to her discharge. There was slight diarrhœa during this period, but no rose-coloured spots could be detected. Three days after she had left the hospital, and had gone back to her situation, the diarrhœa returned, and continued till the time of her readmission nine days later. The day she was readmitted (September 2nd), she had three characteristic typhoid stools. The temperature at noon was 103.6 F., and in the evening 105.4 F.; the pulse being 124 in the minute. No rose-coloured spots were found. She was ordered one pint of beef-tea and two pints of milk.

September 3rd. She had been delirious through the night. The bowels were very loose, acting eight times during the twenty-four hours. Morning temperature, 103.8; evening temperature, 104.8. Pulse—morning, 116; evening, 116.

September 4th. She was again delirious in the night, and the bowels were very loose. Morning, temperature 102.8, pulse 116; evening, temperature 104, pulse 120. Lime-water was ordered to be added to the milk, with the view of checking the diarrhœa. She was ordered to have four ounces of port wine.

September 5th. She had had eight stools since yesterday morning, two of which contained blood. The tongue was very dry and furred. Temperature at 8 A.M., 103.2; pulse 140. A draught containing three grains of acetate of lead, ten minims of dilute acetic acid, five minims of tincture of opium, and an ounce of water, was directed to be given every six hours. In addition to the port wine, two ounces of brandy were also prescribed.—At 6 P.M., the temperature was 105.8; the pulse was so quick that it could scarcely be counted; and the patient was very delirious. Her hair was cut off, and ice applied to the scalp; but the delirium did not abate, and she attempted frequently to get out of bed.—At 10 P.M., the temperature had risen to 106.8, and the pulse was so rapid that it was impossible to count it. A bath was prepared at the temperature of 84 deg. (there not being hot water enough in the hospital to raise it higher), in which the patient was placed at 11.10 P.M.; her own temperature being 106. (If the thermometer had remained longer in the axilla, the temperature would probably have risen higher.) At first, the patient struggled a great deal, but gradually became quieter, and spoke more sensibly. The water in the bath was slowly cooled down to 68 deg. The patient's head was not immersed, but some ice-cold water was poured over it. After she had been immersed about fifteen minutes, she complained of shivering, and her limbs and body were rubbed by the nurse. She was taken out of the bath at 11.30, dried, and put into a warmed bed with a blanket round her. A little brandy was given her, and a hot bottle was put to her feet. Her temperature in the axilla was 99.2. She fell asleep, but talked incoherently but quietly at intervals.

September 6th. At 1 A.M., the temperature was 101.3; at 3 A.M., 102.5. She now took some brandy and beef-tea. At 4 A.M., she was asleep again, talking as before. At 6 A.M., temperature 103.8; at 7 A.M., 104.8; at 8 A.M., 105.4. Pulse 120. At 9.55 A.M., she was put into a second bath at 92 deg., her own temperature being 103.4. The bath was gradually cooled to 70 deg., which point it reached at 10.28 A.M., when the patient was taken out. She was chilly when removed from the water, but said she had enjoyed the bath. She was placed in a warmed bed, and a hot bottle was applied to her feet as before. She seemed quite sensible, and her temperature in the axilla was 97.6. The temperature gradually rose through the day, being, at 1.30 P.M., 100.6; at 6 P.M., 103.8; at 8.30 P.M., 105. The pulse at 7.30 was 128. During the day, she passed two stools, both of which contained a great deal of blood. She took the acetate-of-lead draught at 2 P.M. and 8 P.M., and the quantity of port wine was increased to six ounces. At 9.25 P.M., the temperature was 104 8. She was then put into the third bath, the temperature of which was 95 deg.; in fifteen minutes, it had been cooled to 91. Ice was now added, and the temperature was lowered more rapidly. She soon began to shiver and complain of the cold, occasionally coughing; and cried to be taken out of the bath, although at first she had seemed to enjoy it. The temperature of the water at 9.50 P.M. was 72, and she was then taken out and put to bed as before. Ten minutes later, she was sleeping quietly, her temperature being 98.4. In another hour, it had risen to 102.

September 7th. At 7 A.M., the temperature was 105, but at 9 A.M. it had fallen to 103.4. It was noted that the patient slept a good deal, generally quietly; but sometimes she talked in her sleep. She asked for another bath. She coughed occasionally, and a few moist *râles* could be heard over the posterior part of the chest; but there was no dulness on percussion. Pulse 144 at 8 A.M., and 120 at 8 P.M. The temperature oscillated between 103 and 104 all day. The patient's bowels acted three times during the day, the motions being formed and free from blood. In the evening, she was somewhat restless, and talked less coherently than in the morning.

September 8th. She had been very thirsty during the night. She had retained the milk and wine, but had vomited the beef-tea. At 7 A.M., the temperature was 103, but at 9 A.M. it had fallen to 100.8; the pulse being 130, and the respirations 42. She appeared tolerably sensible and quiet. It was remarked that she slept a good deal, not being easily roused. She had passed three formed motions without blood. The cough was almost gone. There had been no albumen in the urine, and the tongue was moister and less brown. At night, she wandered somewhat. Temperature at 9 P.M., 104; at 10.30 P.M., 103.5.

September 9th. At 6 A.M., the temperature was 100. She was very much more sensible, and answered questions quite rationally. At 6 P.M., the temperature was 102.4; pulse 96. The patient was more restless, and there was some tremor of the hands. The usual night-nurse was unable to attend; and her substitute unfortunately allowed the patient to eat a little bread and butter, and did not give her through the night her usual quantity of milk, beef-tea, and wine. The bowels acted three times, one motion being loose.

September 10th. She had passed a restless night; morning temperature 98.8; pulse 108. She was still restless, and shook a good deal. She fumbled about her night-dress, and picked the bedclothes. There was no action of the bowels. There were sordes on the teeth; and she wandered, and tried occasionally to get out of bed. Her fee being cold, a hot bottle was applied to them. Evening temperatur 101.6; pulse 144. Ten grains of Dover's power were ordered to b taken at 11 P.M.

September 11th. Morning temperature 100.8; pulse 120. She did not sleep till 5 A.M., but slept quietly during the day, only awaking for a moment when it was necessary to feed her. The tongue was dry, and coated with a thick brownish fur in the centre. The bowels had not acted. Evening temperature 102.6; pulse 130.

September 12th. She had passed a good night. She seemed quite sensible now, but slept a good deal. The hands did not shake, and there had been no picking of the bedclothes since the 10th. The tongue was moister and cleaner. When awake, she asked for food. The urine contained slight excess of phosphates. There was no stool.

Morning temperature, 101.8, pulse 126; evening temperature, 99.2, pulse 120.

September 13th. She was quite sensible. The bowels were still confined; the tongue was much cleaner. Morning temperature, 99.2, pulse 116; evening temperature, 99.2, pulse 108.

September 14th. Morning temperature, 98 4, pulse 112; evening temperature, 100, pulse 124. She continued sensible. She had slept well during the last night. Her bowels not having acted since the 9th, she was given an enema of a pint of tepid water. This produced five evacuations during the day. The first two, full of hard dark lumps, passed with difficulty and pain; the next two, small and loose, passed with less difficulty; the fifth, more abundant, full of hard lumps, caused great pain.

September 15th. She was much better. Morning temperature 98.6, evening 99; tongue almost clean.

September 17th. The catamenia appeared.

September 19th. She was ordered to have sole for dinner, and three ounces of bread.

September 21st. She was ordered a slice of meat and six ounces of bread.

September 27th. The temperature had remained normal, and the patient had continued to improve steadily in every way.

REMARKS.—I have often asked myself the question, whether this patient would have recovered or not, had I not given her the baths; and I have been compelled to answer that, if one's previous experience in similar cases is of any value in forming a prognosis, it is in the highest degree probable that she would have died. In cases of typhoid fever, the gravity of the prognosis does not depend solely on the temperature, for I have noticed in some of my fatal cases that there has been an increase in the frequency of the pulse out of all proportion to the elevation of the temperature. It cannot be denied, however, that a temperature of 106.8 deg. F. is a very unfavourable indication.

The immediate change produced by the baths upon the patient was very remarkable. Her intellect became much clearer whilst she was in the baths, and she fell asleep after them. The frequency of the pulse was also considerably reduced. Judging from the present case, I am of opinion that it is best to commence with the water at a temperature of about ten degrees below that of the patient, and *gradually* to cool down the water to about 68 deg., as recommended by Ziemssen. The house-physician cooled down the third bath rather rapidly towards the end; and this seemed somewhat to distress the patient, and brought on occasional fits of coughing.

I trust that this mode of treating cases of typhoid fever accompanied with high temperature will be more generally tried by hospital physicians. It is my belief that in some cases it is the only chance left for the patient.

There is one other point of some interest in connexion with this case—viz., the nature of the first illness for which the patient was admitted into the hospital. Was she suffering from a very mild attack of typhoid fever? The thermometric observations and the short duration of the attack seem opposed to this view; and yet the patient, soon after returning to her situation, falls ill again with well marked typhoid. I ought to mention that it is very improbable that the patient could have taken the disease in the hospital during her stay there, for there were no cases of typhoid fever in the same ward with her. It appears that, about four days before the patient first applied at the hospital, she had paid a visit for the day to her relations at Lowestoft; but she assures me that there was no illness in her father's house, the only one visited by her when in Lowestoft. I have made careful inquiries at the house in Bridge Street, Cambridge, where this young woman was servant, and the mistress of the house informed me that there had been no person ill in the house except E. M., my patient. Altogether, therefore, it is difficult to make out how and where this young woman became infected with the typhoid poison.

I desire to state, in conclusion, that the house-physician rendered me great assistance in giving the baths and in preserving accurate records of the case.

P.S.—Since writing the above, I have seen it stated (BRITISH MEDICAL JOURNAL, February 3rd, 1872, p. 131) that hæmorrhage from the bowels in typhoid fever, even if it be present in the slightest degree, is a contraindication to the treatment by baths. The statement is not borne out by the present case.

NATIONAL ORTHOPÆDIC HOSPITAL.—The second of a series of concerts, in aid of the funds of the National Orthopædic Hospital, was given at the Beethoven Rooms, in Harley Street, on Wednesday evening, December 4th. Among other artists who kindly gave their services, Mr. Wilbye Cooper, Mr. Augustus Tamplin, and Miss Alice Barth delighted a crowded audience with their performances.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1872.

SUBSCRIPTIONS to the Association for 1872 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 14TH, 1872.

DEATH FROM CHLOROFORM.

WE have been favoured by a correspondent with a copy of the *Barrow and Furness Daily Times* for November 13th. It contains the repor of an inquest held on a labourer aged 28, who died under chloroform administered for the purpose of painlessly amputating a thumb which had been crushed by an accident. The death took place at ten in the morning; the inquest was held in the afternoon. There does not appear to have been any *post mortem* examination, for none is mentioned; nor are any *post mortem* appearances detailed. The evidence was a little unusual. Dr. Sinclair, the surgeon, stated that the man was willing to have the operation done without an anæsthetic. Chloroform was administered on a napkin. In a few minutes, the man began to struggle a little; his face became suffused; his eyes were observed "to turn up and jerk". "I immediately removed the cloth, laid him on his side, drew forward his tongue, and sent for another medical man. He continued to breathe very heavily ten minutes or a quarter of an hour after this. Dr. Schuster came in just before he died. Deceased did not regain consciousness. I sent to the North Lonsdale Hospital for a galvanic apparatus." The witness further stated, in answer to questions, "that there is a safer preparation than chloroform—chloral; but it is not given in place of chloroform by the medical profession." He accounted for death by saying: "I believe the man died from the rupture of a blood-vessel on the brain. There must have been some disease in the man himself, or else the chloroform *per se* would not have caused his death. I believe there would probably be some disease of the kidneys."

This inquest only affords another example of the singular results of appointing as coroners, to conduct inquiries into the causes of death, gentlemen entirely destitute of medical knowledge, and incapable of testing the character of the evidence before them. It is certain that no well-informed coroner would have accepted evidence which guessed at the causes of death in this rash way by supposing a rupture of a vessel on the brain, and imagining a disease of the kidney. An inquest without a *post mortem* examination is, in such a case, so incomplete as to be worthless for any ends, whether for information to justice or to science. Nor can we feel satisfied to pass over this case without observing that, although no culpability attaches to the operator, there are certain considerations which arise out of his evidence which are of public importance. In the first place, it is evident that the great number of deaths from chloroform which have come to light in our pages since we have earnestly called for the publication of all such fatalities, ought to inspire very great caution in administering it, and to ensure the adoption of certain necessary precautions. The suddenness and the unforeseen nature of the accidents to which it gives rise make it eminently necessary that it should never be administered (unless in cases of extreme urgency, or in circumstances of exceptional character) by other than a skilled assistant, who gives his whole attention to the administration of the chloroform, and to watching the circulation, respiration, and facial aspect of the patient; leaving the operator to attend to his own responsible duties. The means of meeting accidents by galvanism ought to be in every case prepared beforehand and ready for immediate use. There should be no delay of a quarter of an hour in sending

for such apparatus. The giving of chloroform is evidently a very serious business, attended with fearful risks; and it ought no longer to be undertaken lightly and as a matter of course for small operations. It is open to very grave doubt whether it should be any longer habitually administered for trivial causes and for such minor operations as may safely be performed without anæsthetics, or where the patient is willing to endure the pain rather than incur the risk of death. If any anæsthetic be administered in such cases, it seems clear that, of three agents to which our choice is at present limited—chloroform, ether, and nitrous oxide gas—chloroform is that which ought to be rejected. Nitrous oxide gas produces a very perfect insensibility, which may, by a little practice in its administration, be maintained for a space of time varying from a minute up to a quarter of an hour or longer. Its records show it to be thus far entitled, after an experience of some hundred thousand cases, to be considered absolutely safe. Ether, properly administered, produces an insensibility not less complete, capable of prolongation to any desired extent; and, so far as the testimony of a great number of trustworthy witnesses can be accepted, it appears to be very much less dangerous, very much less prone to destroy life, than chloroform.

The conclusions at which we arrive, after reading the report of this case, are: 1. That it would have been better not to have administered chloroform at all; 2. That, if administered, it should have been under the charge of a skilled assistant giving his whole attention to that duty; 3. That the apparatus for combating accidents arising from its inhalation should have been ready at hand.

The records of chloroform-accidents week after week, such as may now be found in our columns, give additional force to the arguments and statements of those of our correspondents who have been able to point to the much more favourable and harmless annals of ether-administration. They give urgency also to our appeal to members of the profession to give a full trial to the anæsthetic uses of ether, for which much greater immunity from fatal accidents is claimed, and to place on record the results of their experience.

CLUB-DOCTORS IN PORTUGAL.

THE defects which exist in the relations between the medical profession and the public in this country have been so often demonstrated, that all our readers must be familiar with them. While we keep them steadily before us with a view to their amendment, it is interesting sometimes to take a glance at the social position of the profession in other lands, and to note those points in which its good fortune may call for our congratulation, or its misfortunes for our sympathy.

Dr. Joaquim Namorado of Lisbon, a gentleman who appears to have the interests of his profession at heart, has lately published in various numbers of the *Gazeta Medica de Lisboa* his views on the social aspects of medicine. The complaint which runs through his remarks is one in which we in England can sympathise—that the public take advantage of the charity and forbearance of the medical profession to extort from it services which are paid for either insufficiently or not at all. In the *Gazeta* of November 15th, he writes as follows.

"There is no incompatibility between the defence of professional interests and the noble exercise of charity. The physician has to draw the line of distinction between those individuals who require the solace of charity, and those who, under its shadow, live at the cost of other men's labour.

"Whenever patients plead poverty for the purpose of evading the payment of fees, and at the same time spend in luxury what they thus save, they commit a robbery on industry, and discourage the medical profession from the exercise of charity. Those who can afford to pay their medical advisers, ought to do so in such a way that the latter may be able to maintain themselves, and at the same time be charitable. In this way the social balance would be maintained. But there has sprung up a singular method of having a doctor—without saying that he is to attend patients gratuitously, and at the same time without giving him a fair recompense. Mutual benefit societies have been formed; and the idea which underlies them cannot but be approved, inasmuch as it is that of mutual aid in sickness or disability. Viewed in this light, such societies cannot be blamed. But some may go further, and say that the societies are not to be interfered with in their career, because on them falls the duty of watching over the interests of their members and providing for the future. Nothing at first sight can be more reasonable; but it often happens that the interests of one class gain the upper hand at the expense of those of other classes, until—as naturally tends to happen in the course of time—an equilibrium is restored.

"The mutual benefit societies for the most part exist with difficulty, and would have succumbed, if medical men, with their proverbial charity, had not consented sometimes to labour gratuitously, sometimes to wait for months for the receipt of the meagre salary, which in many cases never comes into their hands at all."

Dr. Namorado complains of the exacting and inconsiderate manner in which the club members behave towards their medical men. "The doctor", he says, "has to travel miles, and is subject to the grossest insults if he do not instantly hasten to the house of a club member who, perhaps, thinks himself dangerously ill because he has some trifling pain; and the illustrious directors think that they do him a great favour if they pay him his *splendid* salary. . . . How often we have seen a rag-collector or shoemaker acting as director of one of these clubs, and judging of the capability of the doctor! How often we have seen the capability of the doctor measured by the strength of his legs, which have carried him over a great distance to satisfy the caprices of the ignorant and insolent!"

This state of things, Dr. Namorado says, cannot continue; and for its amendment he advises association. "Medical men", he says, "must associate and discuss their interests. . . . . We are not averse to benefit societies; but let us combine to prevent them from existing at our cost. Let them pay proper regard to our interests; and let them regulate their own in such a way that an equilibrium may be established, and that there may be no enriching of some to the injury of others."

In a previous article, Dr. Namorado complains of the injustice often done to medical men in the matter of fees, and of the manner in which professional services are demanded of them in the name of charity. He recommends the adoption of a tariff of fees; and says further that "it is indispensable that the members of the profession should combine for the protection of those interests on which its independence and dignity are founded."

It is evident from the remarks of Dr. Namorado, that our Portuguese brethren have much to endure, in respect of which they merit sympathy. At the same time, it is encouraging to see that the writer of the remarks which we have quoted points out the right means for rectifying the evils of which he speaks—association of the members of the profession for the protection of its interests. Those here who know the value of a manifestation of the *esprit de corps*, will wish him all success in his endeavours to induce his professional countrymen to unite for their common good.

MEDICAL CERTIFICATES.

OUR advertising columns bear testimony to-day to the sad consequences in a case, to which we have already referred, of negligence in signing certificates, which the law regards sternly (and with cause), although there is no reason even to suspect any moral offence in the circumstances. The papers this week record another instance of similar carelessness severely visited.

Mr. Robert Oke Clark, surgeon, of Farnham, has been summoned before the local magistrates for having signed a medical certificate relating to a pauper lunatic without having first personally examined the said lunatic. Mr. Poland, instructed by the solicitors to the Lunacy Commissioners, appeared in support of the information. Mr. Clark pleaded guilty. Mr. Clark, it appeared, in the first instance, signed a certificate, in which he stated that he had personally examined the lunatic, Sarah Forrester, in March 1869, and found her a proper person to be taken charge of and detained. This certificate, however, was not valid, as the provisions of the Lunacy Act required that the certificate

should be signed and dated on the day on which the person was examined, or within seven days after that date. This having been pointed out to Mr. Clark, he signed another certificate, which stated that he had personally examined Sarah Forrester at an address mentioned, on the 9th of August last, although he had never seen her on that date, or on any other day since March 1869. The Chairman said the Bench felt quite sure that, though this act was a grave error and a legal offence, no moral wrong was intended. He fined the defendant £10, but, under the circumstances, he would grant no costs, as the prosecution was by a public body. Mr. Poland said the decision was such as he was happy to be able to take.

THE MEDICAL COUNCIL.

THE English Branch Council will meet on Wednesday, the 18th inst., for the transaction of ordinary business. It is very probable that the question when the General Council will meet may become the subject of conversation; but we have the best reason for knowing that no definite time is fixed for such meeting, nor is it at all decided that any movement towards medical legislation will be made in the present complicated state of affairs. The Apothecaries' Society have addressed a very clear and satisfactory letter to the Council, explanatory of the reasons which led the Society not to persevere with a Bill enabling it to give its adhesion to the Conjoint Examining Scheme—the explanation being an intimation from the Government that a Bill of wider scope was in contemplation.

M. POUCHET, celebrated as a leading champion of the doctrine of spontaneous generation, has this week died in Paris.

THE President and Secretary of St. Thomas's Hospital Physical Society have issued cards for a microscopical *soirée* on Thursday.

DR. MEYMOTT TIDY has been appointed Medical Officer of Health for the Islington district.

A NEW monthly Journal, under the name of *Il Galvani*, is to be published at Urbino in Italy next year. It is to be specially devoted to electro-therapeutics.

THE Actonian Prizes of £105 each have been adjudicated to Mr. B. Thompson Lowne of the Middlesex Hospital, and the Rev. G. Henslow of St. Bartholomew's Hospital, for essays on the Theory of the Evolution of Living Beings.

THE *Transactions* of the Odontological Society for November (vol. v, No. 1) contain the text of the report of the Committee of the Society on the merits of nitrous oxide as an anæsthetic, of which we have already given a brief abstract.

AT St. Bartholomew's Hospital, Mr. Holmes Coote's illness has for some months incapacitated him from attending to the duties of surgeon. Mr. T. Smith has been charged with the performance of his duties; and Mr. Howard Marsh with those of assistant-surgeon.

A FLOATING HOSPITAL FOR CHEST-DISEASES.

TO our numerous land-hospitals low down on the sea-coast and high up in the mountains, is to be added now a new institution with very many advantages, but with the single disadvantage of being only for the benefit of the rich. Dr. V. Wallendorf (*Wiener Med. Presse*) establishes a hospital for chest-diseases this winter on a screw propeller, which is to journey out late in the autumn from Cuxhaven beyond Gibraltar and along the coast to Malta, if the weather be fair, and to return again in the beginning of April. The vessel is to be specially prepared for its purpose, is to have a competent physician on board, and the patients are to be allowed to make land-sorties as long as possible in several stations of mild climate.

BRIGHT'S DISEASE AT THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THERE was a very full attendance at the meeting of the Royal Medical and Chirurgical Society on Tuesday evening, to hear Dr. George Johnson's paper on the Pathology of Chronic Bright's Disease with Contracted Kidney, with special reference to the theory of Arterio-Capillary Fibrosis. Dr. Johnson argued that the hyaline fibroid deposit, described by Sir William Gull and Dr. Sutton in their paper read in the last session of the Society, was due to the alteration produced in the outer coat of the arterioles by the glycerine and camphor water in which their preparations were put up. He exhibited several microscopic specimens in support of his opinion. In the discussion, Dr. Dickinson, Dr. Charlton Bastian, Dr. Sankey, Dr. Sibson, Dr. Anstie, Dr. Broadbent, and other members took part; and it was resolved on the proposal of Dr. Sibson, seconded by Dr. Quain, that the Council of the Society should be requested to nominate a Committee to investigate the matter, and, if possible, arrive at a decision as to the apparently opposite views held by Dr. Johnson on the one hand, and Sir William Gull and Dr. Sutton on the other.

CONJOINED TWINS.

A SPECIMEN of twins, conjoined at the chest and abdomen, was lately shown by Dr. Sangalli at a meeting of the Lombard Institute. The union was somewhat more extensive than in the case of the Siamese twins. It does not appear from the notice before us, whether the individuals were alive or dead.

THE STATISTICS OF CHOLERA IN ST. PETERSBURG.

AT a meeting of the Epidemiological Society, held on the 11th instant, Inspector-General Lawson, President, in the chair, Dr. Mouat, C.B., well known for his researches in the cholera statistics of India and Russia, delivered an interesting paper on "Medical Statistics with especial reference to cholera and syphilis." After some preliminary observations, he dwelt especially upon the question of endemicity of cholera in St. Petersburg, and gave an interesting sketch of the plans adopted by the Russian authorities for the investigation and prevention of this disease. He clearly showed that, although cholera was not generated in St. Petersburg, when it arrived there it found a most comfortable home, for everything had been provided for its reception; to show this, Dr. Mouat exhibited a beautiful map of St. Petersburgh, and explained how, in order to obviate some of the inconveniences occasioned by the ice, a network of canals had been constructed throughout the city, which, while they fulfilled one requirement, had in reality created a greater and a graver evil than the one which they were intended to remove—this was the evil incidental to open sewers. In fact, the author dwelt particularly upon the incalculable mischief to the public health that this canal expedient had created. St. Petersburg was surrounded and pervaded in every direction by open drains, which lowered the vitality of the citizens and gave every encouragement to epidemics, especially cholera. Dr. Mouat regretted that the education of the medical man was so generally neglected as to the higher branches of knowledge, and notably as to mathematics. He considered that mathematics would give his mind greater logical powers and enable him to reason more closely than he was wont to do upon the multitudes of facts which the statistics of disease presented to him. Dr. Buchanan asked whether the subsoil theory of Pettenkofer had received any attention at the hands of the Russian authorities; to which a negative reply was given. Mr. Radcliffe, in proposing a vote of thanks to Dr. Mouat, fully endorsed his opinion with regard to the value of mathematics; and then alluded to the overwhelming mass of facts which we possessed, but which seem to be almost useless, from a want of power to arrange them. He alluded also to the transmission of cholera by railways; and Dr. Mouat observed that Dr. Pelikan was preparing a paper upon that subject. Mr. Haviland, in seconding Mr. Radcliffe's vote of thanks, begged to ask Dr. Mouat if, in the map proposed to be made to show the geographical distribution of cholera in India, attention would be made to the distribution of the water-

supply, further observing that, so far as his own investigations were concerned (which were illustrated by a map of the relative mortality at the military stations for the ten years 1860-1869), the death-rate was greatly influenced by the water-supply; in fact, that the mortality, both at the military stations and amongst the natives, was in the direct ratio of the amount of exposure of the water-supply to external contamination. A cordial vote of thanks was accorded after a brief discussion.

A VALUABLE PRIZE.

THE Riberi triennial prize of 20,000 *lire* (£800) has been awarded to Dr. Giuseppe Corradi, director of the surgical clinic at Florence, for four works on the Diseases of the Genito-Urinary Organs, three of which are as yet unpublished.

INFANT LIFE PROTECTION BILL.

AT the last meeting of the Metropolitan Board of Works, Mr. Newton, Chairman of the Works Committee, brought up a report recommending that communications be addressed to the Commissioner of Police, the several vestries and district boards, and the boards of guardians, informing them that the board, upon receiving any intimation from them as to any infraction of the provisions of the Infant Life Protection Act, will be prepared to take steps to enforce the law. This was agreed to.

ABUSES OF LUNATICS.

ACCORDING to the Brussels correspondent of the *Pall Mall Gazette*, the Belgian Minister of Justice has laid a Bill before the Chamber for remedying the abuses in lunatic asylums. The medical attendants are to be nominated by the Government, to be dependent on it for their tenure of office; and their salaries are to be fixed by the Government, at the charge of the proprietors of the respective asylums. The latter will have to deposit securities in money, the amount to be fixed by the Government, in order to provide the funds for carrying out at once any improvements which the Government may eventually think necessary. If the Government wish to close an ill-conducted asylum, its administration is to be undertaken by the Government until all the patients in it have been provided for elsewhere.

THE PUBLIC HEALTH.

THE health of London continues exceptionally good, and the rate of deaths in the metropolis last week was lower than that of every other large town. The annual rates of mortality per 1000 of the population in the following places were—London, 19; Portsmouth, Wolverhampton, and Nottingham, 20; Bristol, Edinburgh, and Leicester, 21; Sheffield and Newcastle-on-Tyne, 22; Salford, 23; Glasgow and Norwich, 26; Dublin, Liverpool, and Birmingham, 27; Leeds and Sunderland, 28; Hull, Manchester, and Bradford, 29; and Oldham, 32.

THE MEDICAL EDUCATION OF WOMEN.

THE *Pall Mall Gazette* has the following from a medical correspondent.—The medical education of women will shortly be placed upon a solid foundation in the city of Boston, U.S.A., by the New England Female Medical College being made a branch of Harvard University. Among the great universities of the New World, Harvard is well known as the oldest, the wealthiest, and the most celebrated, so that no reason for complaint will remain to English-speaking people on the other side of the Atlantic when the medical degrees of Harvard are as freely accessible to women as to men. Probably, also, the enlightened course thus taken by the New Englanders will materially influence the attitude of our own university authorities in reference to this question. By arrangement just completed between the trustees of the New England Female Medical College and the overseers of Harvard University, the women's college becomes the female medical department of the university, bringing with it as dower property and endowments amounting in value to about £30,000. This arrangement is now only awaiting formal ratification by the Massachusetts Legislature, an Act of which is necessary in order to make valid the transfer of the property to Harvard; and thereupon the university, having assumed the trusts and responsibilities connected with the women's college, will appoint the professorial staff, regulate the courses of study, and confer upon successful students the Harvard degrees. The Female Medical College, with all its endowments present and future, will be reserved absolutely and administered exclusively for the medical education of women, but in all respects, beyond that of working in a separate collegiate building, the women students will be dealt with by the university on precisely the same footing as the men students. The present building of the New England Female Medical College is a handsome edifice located in one of the best parts of the city of Boston, and uninjured by the recent fire. It was completed and opened in November 1870, and is in every respect admirably adapted for the purposes of a complete medical school, while the students will have ample opportunities for clinical practice at the City Hospital, from which the college is separated only by the width of a street. Some of your readers will be interested to know that attached to the women's college there are a large number of scholarships freely open to all comers who possess a sound preliminary education, and that information as to these scholarships and other matters may be obtained in this country by inquiries addressed to the lady secretary of the Female Medical Society, 164, Great Portland Street, London, W. I understand that this important and satisfactory settlement of the women's medical education question in the New England States is owing chiefly to the initiation and personal effort of Dr. Elizabeth Abbott Carleton, M.D., a lady of independent means, who has devoted herself to the practice of medicine, and is now staying in London in order to acquire special proficiency in the treatment of diseases of the skin and diseases of the eye. The proposal met with prompt support from Dr. Elliott, the distinguished president of Harvard University, and the settlement has been generally approved of by the medical profession in Boston.

ROYAL MEDICAL BENEVOLENT COLLEGE.

AMONG the candidates for admission to the Royal Medical Benevolent College at the next election, are sons of Mr. Holmes Coote, lately, and indeed still nominally, surgeon of St. Bartholomew's Hospital, and of Mr. Baker Brown. Mr. Holmes Coote has for some little time been suffering from general paralysis—a sad announcement, which needs nothing of comment. Popular, able, and even distinguished, as an anatomist and a surgeon, the later years of Mr. Coote's life have been clouded by misfortune. We have abstained from referring to the illness of Mr. Coote during its progress, and to the changes which it introduces into the staff of St. Bartholomew's Hospital. Mr. Coote's family is, unhappily, now without means of support; and we feel sure that his old friends and pupils will not fail to give consideration to the claims of his son to the benefits of the charity. Mr. Baker Brown is also now reduced to helplessness; and his son, too, appeals—and will not, we think, appeal in vain—for support at the next election. It is more than ordinarily distressing to find these two names on the list of applicants.

ARMY MEDICAL DISTINCTIONS.

THE *London Gazette* of the 3rd instant contained the following notice.

"Staff Assistant-Surgeon John Dallas Edge, M.D., to be promoted staff-surgeon, in recognition of his gallant services when engaged against the Indians at Orange Walk, British Honduras, as soon as he has qualified for the superior grade, in accordance with Article 337 of the Royal Warrant of December 27, 1870."

It will be remembered that the lieutenant commanding an outpost in Honduras, recently attacked by Indians, was disabled by a severe wound early in the day; and that Dr. Edge, the only officer remaining, then took the direction of the troops, and ultimately repulsed the enemy. Much as we admire the bravery displayed by Dr. Edge, we regret to see the manner in which it has been rewarded. He has only been one year in the Army Medical Service; and there are more than five hundred assistant-surgeons above him, some of whom have been fifteen and sixteen years in the same service. His promotion over the heads of this number will retard their promotion proportionably; and

thus, instead of the Government rewarding Dr. Edge, it will simply be at the expense of his compeers that he is rewarded. But what we chiefly regret to note in the matter, is the superior merit attached to physical courage in the officers of the Medical Department of the Army, as compared with professional superiority. Some of the assistant-surgeons whom Dr. Edge will step over have distinguished themselves by high professional attainments and the discharge of very trying professional duties, but no such advantage as promotion has been given to them. The absurdity and injustice of the system of reward adopted in the present instance would be only made fully manifest, if a junior lieutenant in the army were to be promoted over all the senior lieutenants because he had made an excellent cure of some severe attack of disease. The reward to Dr. Edge for his bravery should have been a Companionship of the Bath, the Victoria Cross, or some other similar badge of military merit.

EDIBLE AND POISONOUS MUSHROOMS.

A WRITER in the *American World of Science*, under the initials W. G. S., gives the following concise account of the difference between the edible mushroom and the poisonous fungi resembling it. First and foremost, the true mushroom (*Agaricus campestris*) is invariably found among grass in rich open pastures, and never in or about stumps or in woods. Many cases of poisoning have occurred, owing to the supposed mushrooms being gathered from stumps and in woods. It is true there is a certain variety found in woods and woody places (*A. salvicola*), but, as far as amateurs are concerned, it is best left alone. A second very good point is the peculiar intense purple-brown colour of the spores (which are analogous to seeds); the ripe and fully matured mushroom derives the intense purple-brown colour (almost black) of its gills from the innumerable presence of these spores. To see these spores, and to become acquainted with the peculiar colour, remove the stem from a mushroom, and lay the upper portion, with the gills lowermost, on a sheet of writing-paper; in a few hours the spores will be deposited in a thick, dark, impalpable powder. Several dangerous species, at times mistaken for this mushroom, have these spores umber-brown, or pale umber-brown, in colour, and belong to *Phaliota* or *Nebeloma*. There are innumerable varieties of the true mushroom (and of the horse-mushroom), but all are equally good for the table. Sometimes the top is white and soft, like kid-leather; at other times it is dark brown and scaly. Sometimes, on being cut or broken, the mushroom changes colour to yellow, or even bright red; at other times, no other change whatever takes place. But, observe, the mushroom always grows in pastures; always has dark purple-brown spores; always has a perfect encircling clothy colour; and always gills which do not touch the stem, and a top with an overlapping edge.

A NEW RULE FOR DOSES.

DR. E. H. CLARKE, writing in the *Boston Medical and Surgical Journal* for September 26th, remarks that the doses given in works on materia medica for the administration of medicines are intended for adults of average health and strength. These average doses are of course varied by the physician, when prescribing, so as to suit differences of age, disease, sex, temperament, idiosyncrasy, and the like. Of the various modifying circumstances that affect the dose, age has always been recognised as the most important, as it is the most obvious one. Several schemes or rules, intended to aid the memory in apportioning doses to different ages, have been proposed. Two are commonly referred to as the best. One is the table of Gaubius, according to which, the dose for an adult being (for example) one drachm, the amount is gradually diminished till the dose for a child a year old is five grains. The other rule is that of Dr. Young, according to which, "for children under twelve years, the dose of most medicines must be diminished in the proportion of the age to the age increased by twelve; thus, at two years to $\frac{1}{7}$—viz., $\frac{2}{2+12} = \frac{1}{7}$. At twenty-one the full dose may be given." Physiological experiment has shown that the weight of animals is not only as important an element in apportioning doses of drugs as age, but is probably more important. Dr. Fraser, of Edinburgh, has shown that the minimum lethal dose of sulphate of physostigmia for rabbits is 0.04 grain for every pound. M. Claude Bernard has called attention to the fact that in physiological experiments the dose should vary with the weight of the animal. Clinical observation, Dr. Clarke further says, shows that in the administration of remedies the dose should vary with the weight of the patient in order to obtain the best therapeutical result. He therefore recommends the following rule. Assuming the average weight of an adult to be one hundred and fifty pounds, for whom an appropriate dose is *e. g.* one drachm, the dose of most medicines must be increased or diminished in the proportion of the weight of the patient to that number of pounds. This proportion is represented by a fraction, whose numerator is the patient's weight and whose denominator is 150. If a child at birth weigh six pounds, the appropriate dose for it would be $\frac{6}{150}$, or $\frac{1}{25}$; if it weigh ten pounds, $\frac{10}{150}$, or $\frac{1}{15}$. A child two years old, weighing twenty pounds, would require $\frac{20}{150}$, or about $\frac{1}{7}$ of an adult dose; or, more precisely, $\frac{1}{7.5}$. A person whose weight is two hundred pounds should have $\frac{200}{150}$, or $1\frac{1}{3}$ of an average adult dose. A child twelve years old, weighing seventy-five pounds, would require $\frac{75}{150}$, or $\frac{1}{2}$ of an average dose. The modifications of the average dose, demanded by a patient's idiosyncrasy, disease, and other conditions than age or weight, are not, of course, met by the above rule.

EATING DIRT.

IT is a common opinion that even in the most civilised communities it is not easy to avoid one's peck of dirt; and some individuals manifest quite a peculiar talent for it, and go through the operation with a readiness and grace which seem to imply a suppressed inclination for the practice. Dr. Frank Galt, of Iquitos, Peru, describes quite a devouring passion for it to prevail among the mestizoes, or half-breeds of the Upper Amazon. His account is very interesting. Dirt-eating becomes an irresistible passion.

Even strangers, English, or the white Peruvian, who have married with the mestizo, and have had children by them, find its presence among their little ones the plague of their life; and the accounts one hears about the tyranny of this habit of dirt-eating on the victims of it would seem almost fabulous, were there not evidences all around one to give sanction to them. Children commence the habit from the time they are four years old, or less, and frequently die from the results in two or three years. In other cases, they grow to manhood or womanhood with the "appetite growing by what it feeds on," and I have seen here myself, in the case of a mestizo soldier, who was dying from the dysentery which generally, sooner or later, supervenes on this habit, the poor creature, half an hour before his death, detected with a lump of clay stuffed in his sunken cheeks, which he had dragged from the wall near where he was almost breathing his last. Officers here who have the Indian or half-breed children as servants in their employ sometimes have to use wire masks to keep them from putting the clay to their mouths; and women, as they lie in bed sleepless and restless, will pull out pieces of mud from the adjoining walls of their room to gratify their strange appetite, or will soothe a squalling brat by tempting it with a lump of the same material. If persisted in, the effects are surely fatal, at varying terms of years, some living tolerably to middle age, and then dying with dysentery, or from that disease at an earlier period. In the children dropsy is usually the most prominent apparent cause of decline and death.

CHOLERA RECORD.

IN consequence of another outbreak of cholera at Taka and the vicinity, a quarantine of ten days is imposed on all vessels arriving at Suez from places on the African coast of the Red Sea, and the embarkation of pilgrims from Africa is prohibited at Egyptian ports. This is not, however, to apply to traders, though these are not to be allowed to enter Lower Egypt *viâ* the Nile. It appears that the present outbreak dates from the middle of October, from which time to the end of the month 145 deaths are stated to have occurred.—Arrivals in Egypt from the Hedjaz are reported to be admitted to free *pratique*. It is supposed that this is in consequence of the authorities at Jeddah having taken precautionary steps in the matter.—It is reported that cholera

made its appearance at Teheran about the middle of August, and that the deaths have amounted to about 200 *per diem*.—Cholera is reported to have totally disappeared at Pesth and Buda.—The following are particulars of attacks in the Government of Bessarabia, in South Russia: from September 25th to October 19th, 1,020 attacks and 400 deaths.—The Ottoman Board of Health have had erected for them a new and handsome office on the site of the old building in Galata; and on the recent occasion of its being taken possession of, the president on that occasion stated that a lazaretto for the Bosphorus was all but completed, and that other lazarettos for quarantine purposes would also be built, in addition to huts on several places on the Danube.—Cholera has broken out in Moravia. The disease has been imported into the commune of Stitna by a patient from Russian Poland, and into the commune of Slawitschin by a workman returning from Pesth. In the first named commune, two out of three patients attacked with the disease have died.

HOSPITAL SUNDAY.

A MEETING to further the object of Hospital Sunday was held at the Mansion House on Wednesday. Very little was done, beyond the appointment of a committee to act with the Lord Mayor to communicate with the authorities of the different charities and fix a day for a public meeting. It is expected that some detailed arrangements will be then made as to the mode of carrying out a Hospital Sunday.

COMMITTEE ON TRANSFUSION.

IT must be admitted that it is highly desirable to obtain further information on the subject of transfusion, and to collect, for the sake of comparison, the results of the different methods of performing the operation. We are, therefore, glad that a Committee of the Obstetrical Society, with Dr. Hall Davis as Chairman, and Dr. Madge as Secretary, has been formed for that purpose. The members of the Committee propose to meet frequently at the Society's Rooms, 291, Regent Street, and will gladly receive any communications on the subject.

PRIZES OF THE ACADEMY OF SCIENCES.

AT the annual meeting of the Academy of Sciences in Paris on November 25th, the following prizes were awarded. For 1870: *Bréant Prize:* a recompense of 5000 *francs* to M. Chauveau, for his "Researches on Virus." *Montyon Prize:* 2500 *francs* to M. Gréhant, for his "Physiological and Medical Researches on Human Respiration"; a like sum to M. Blondlot of Nancy for a series of memoirs on debated questions in medicine, toxicological chemistry, and physiology; and honourable mention, with 1500 *francs*, to M. Berenger-Féraud for his "Treatise on Direct Immobilisation of the Fragments in Fracture"; the same to M. Duclaut for an account of three cases of Vesico-vaginal Fistula treated successfully; and also to M. Léon Colin, for his Treatise on Intermittent Fever. M. Raimbert, M. Bucquoy, M. Hayem, and MM. Krishaber and Peter, received honourable mention.—The *Godard Prize* was awarded to M. Jacques Joly for his essay on Cancer of the Prostate; and honourable mention to Dr. Puech for his treatise on Atresia. The prize for *Experimental Physiology* was awarded to M. Chantron for "Observations on the Natural History of Crabs," and to M. Gris for a memoir on the "Medulla of Woody Plants"; M. Mehay received honourable mention for his "Studies of the Sugar-Beet." MM. Chéron and Goujon received an "encouragement" for their Researches on the Functional Properties of the Nerves and Muscles during Intrauterine Life. The *Barbier Prize* was awarded to M. Duquesnel for his work on Crystallised Aconitine.—For 1871: *Bréant Prize:* 2500 *francs* each to MM. Grimaud (de Caux) and Tholozan; and honourable mention to Dr. Bourgogne, jun. The *Chaussier Prize* of 10,000 *francs* fell to the share of M. Tardieu, for his works on legal medicine.—*Montyon Prizes:* 2500 *francs* to MM. Lancereaux and Lakerbauer (pathological anatomy); 2500 *francs* to M. Chassagny (forceps); 1200 francs to MM. Coze and Feltz (infectious diseases); to Dr. Jousset (studies on the scorpion); to Dr. Decaisne (pathology); and to Dr. Desprès (ulceration of the cervix uteri). Honourable mention was accorded to Dr. Victor Fumouze (absorption spectrum of blood) and to Dr. Bergeret (changes of the bile and urine). The *Godard Prize* was awarded to Dr. Mauriac for studies on reflex neuralgia, symptomatic of blennorhagic inflammation of the testes and epididymis.

OBSTETRICS IN THE SANDWICH ISLANDS.

DR. CHARLES H. WETMORE, who has been twenty-two years resident in Hawaii, describes in the *Buffalo Medical and Surgical Journal* the native obstetrical practice. When the period of utero-gestation is nearly completed, many of them drink freely of a mucilage prepared from the inner bark of the "Haw" or Hibiscus tree, much as some American women drink of a nostrum intended to prepare the system to do its duty properly at such a period. When labour is fairly commencing, the patient assumes a sitting posture upon a hard pillow or stone, with her husband or some other intimate *male* or female friend, resting upon his or her knees behind her, whose duty it is to grasp her above the abdomen in such a way that he or she can press down with considerable force upon the uterus and its contents, never relaxing this grasp to allow the fœtus to recede. The accoucheur's position is in front. He (or usually she) has but little to do but receive the child. If the case be at all tedious or prolonged, they imagine it a "cross-birth", or that the child is dead, or something else, never certain what presentation exists until the head or some other part shows itself externally. They seldom allow the cord to be tied or cut until the after-birth comes away. To effect its speedy removal, which they regard as very desirable and necessary, they place the mother in a semi-erect posture, with the pelvis thrown backwards and the knees partly flexed, the midwife at the same time supporting the child. At this juncture the patient thrusts her fingers into her fauces to produce nausea or vomiting: this causes spasmodic expulsive action in the uterus, resulting not unfrequently in the immediate birth of the placenta and its membranes. If such be not the result, there is more or less anxiety. The woman retains her erect position, and is "lomied" over the womb and abdomen (a sort of kneading, squeezing operation, generally performed with the hands of the attendant) until the "flowing" is moderate or almost ceases. She is then conducted to a stream, or large container of water, where she is washed down *secundum artem*, and re-dressed to return to the house and its promiscuous inhabitants. Children and all are often allowed to witness the performance, and think no more of it than they would if it were occurring among the ordinary animal kingdom. This is partly owing to the fact that the common native thatched house has but one room. Curtains are used to form their departments, and these are not always "kapu" (taboo). The water there is never at a very low temperature; and this bathing process is not usually injurious to these amphibious beings; and only in one instance have I known a serious result follow the erect posture and practice described above. After returning to her "hikie" or bed, the "loming" process is resumed, and kept up for half-an-hour or more until the pain ceases and the womb is reduced to nearly its normal size. If "after-pains" come on, they give orange-leaf tea almost *ad libitum* (this did not originate with the Hawaiians). They repeat the loming daily, and several times a day where there is pain or enlargement of the uterus, without inflammation. When milk begins to secrete, if there be hardness or pain, each gland is "lomied" until the hardness and pain nearly or entirely passes away: this softens down the parts so that the child can more easily perform its duty; and there is very little danger of sore nipples and "broken breasts" where this practice is properly and thoroughly performed. Usually no aperient is taken, and no restriction as to diet adopted. The child is often, during the first two days of its postparturient life, given to a "wet nurse" to obtain its nourishment, particularly if it have spells of crying. The mother is required to drink from a pint to a quart of cold water as soon as the "kaiewe" (the placenta) is removed, in order to wash away all that is deleterious. The mother is usually up and about in twenty-four hours.

SCOTLAND.

THE Edinburgh Royal Infirmary has been left a legacy of £4,000.

THE new Fever House of the Aberdeen Royal Infirmary is now partially occupied.

IN consequence of the illness of Lady Beaconsfield, the installation of Mr. Disraeli as Lord Rector of the University of Glasgow has been postponed.

DR. BEVERIDGE, Dr. Patrick Nicol, and Dr. John Traill have been elected Examiners in Medicine in the University of Aberdeen.

INFIRMARY FOR STIRLING.

THE proposal to erect Infirmary and Dispensary buildings at Stirling is beginning to assume a practical shape. It is probable that, in the course of the next year, buildings will be commenced on the Gowan Hills, at the west end of Gowan Street.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

THE following office-bearers have been elected for the ensuing year. *President:* P. D. Handyside, M.D. *Vice-Presidents:* J. Lister, Esq., F.R.S.; R. Paterson, M.D.; P. H. Watson, M.D. *Councillors:* Dr. Gordon, Dr. J. Sibbald, Dr. J. R. B. Cunynghame, Dr. W. Craig, Dr. Sinclair, J. H. Pridie, Esq., Dr. M'Kendrick, and Dr. Cadell. *Treasurer:* Joseph Bell, M.D. *Secretaries:* C. Muirhead, M.D.; J. Chiene, MD.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

AT the annual election meeting of the College on December 5th, the following office-bearers were elected for the ensuing year. *President:* R. Paterson, M.D. *Council:* R. B. Malcolm, M.D.; Alexander Wood, M.D.; A. H. Douglas, M.D.; W. H. Lowe, M.D.; J. M. Duncan, M.D.; W. Sanders, M.D. *Vice-President:* A. H. Douglas, M.D. *Examiners:* Drs. Bell, Douglas, R. Paterson, Wright, Keiller, Pattison, Cumming, Duncan, Haldane, G. W. Balfour, Struthers, Ritchie, Stewart, Linton, Muirhead, A. Macdonald, Fraser, and Gamgee. *Treasurer:* S. Somerville, M.D. *Secretary:* D. R. Haldane, M.D. *Curator of Museum:* T. R. Fraser, M.D. *Librarian:* W. Cumming, M.D. *Registrar of Applicant for Licence:* D. R. Haldane, M.D.

CONVERSAZIONE OF THE MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

THE hall of the Freemasons in George Street was crowded on Tuesday evening, on the occasion of a very brilliant and successful *conversazione* given by Dr. Handyside, President of the Medico-Chirurgical Society. Besides the *élite* of the profession in and around Edinburgh, the Right Hon. the Lord Provost, and some of the most distinguished legal, clerical, and other professional gentlemen of the district, were present. The arrangements of works of science and art were admirably carried out. Some of the objects were of very considerable interest, and none more curious than an old actinia of no less remarkable age than powers of reproduction. The specimen was exhibited in a glass jar, in which it had resided since 1828. It had given birth, during its forty-four years of confinement, to a vast number of youngsters. The animal's powers of increase appear in nowise diminished, for it presented its present owner, Dr. McBain, with another brood this month. Amongst the exhibitors were Dr. MacLagan, Dr. Littlejohn, Dr. Dewar, Dr. J. H. Balfour, Dr. M'Kendrick, Dr. Bell Pettigrew, and others. The evening passed off in every way most successfully.

THE LADY MEDICAL STUDENTS: THE EDINBURGH INFIRMARY INTERDICT.

THE ladies have gained the day on this question. The Court of Session on Saturday gave their decision. Their lordships unanimously adhere to the interlocutor of Lord Jerviswoode in so far as it found a single partner of a firm entitled to vote at the annual meetings of the General Court of Contributors to the Royal Infirmary in respect of the qualifying contribution of the firm. The Court, however, recall the portion of the interlocutor of the Lord Ordinary, finding that such individual partners of contributing firms voting at such meetings required to have written mandates from their firms, and have declared that no mandate is required. The judgment on composite votes is to the effect that all the contributors may vote whenever the amount of the joint contribution, when divided by the number of its contributors, shall be such as to qualify each of them to vote in respect of the quotient contribution so obtained. Their lordships stated that they would pronounce an interlocutor in certain special cases referred to them, and in the meantime found for the respondents in the matter of expenses. The report of the Committee appointed by the Infirmary managers to consider the question of the admission of lady students to the Infirmary, will be brought up at the first meeting of the Managing Board on Monday, the 16th instant.

IRELAND.

A PROJECT is on foot to resume the publication of an Hospital Gazette in Dublin, containing only original scientific matter. It would be published twice a month, would consist of sixteen pages only, and would be issued at an annual subscription of half-a-guinea.

A DUBLIN correspondent writes:—It is now three months since we have had a fine day; nevertheless Sir John Gray and our conscript fathers, the Corporation—nearly half of whom are publicans—are fining us incontinently for waste of water. They say we waste nine millions of gallons daily; although it is asserted that 100,000,000 of gallons go off by the bye-wash at the reservoir.

SUPERANNUATION.

AT a recent meeting of the Tralee Board of Guardians, Captain Rowan moved that £27 12s. 8d., being two-thirds of his emolument for vaccination and registration, on the average for three years ending June 30th, 1872, be allowed to Dr. Fitzmaurice, in addition to the sum of £66 13s. 4d. already sanctioned. Mr. Rea seconded the resolution, which was adopted.

ULSTER MEDICAL SOCIETY.

THE fiftieth annual meeting of the Ulster Medical Society was held in Belfast, on November 27th. The chair was occupied by the President, Dr. Johnston. In alluding to the medical school of Belfast, he said that there were at present nearly 200 students attending the classes in the Queen's College; of these, 125 were in attendance on the General Hospital. The president regretted the apathy shown towards the Medical Benevolent Fund, both by the profession and the public; and thought it should have the very strongest claims upon their sympathies. When he read of the miserable pittances which were dealt out to the widows and orphans of medical men who had fallen at their post of duty, without being able to leave provision for their families, he felt ashamed of the little that had been done. He had much pleasure in handing to the treasurer £100, his contribution to the Medical Benevolent Fund.

PAYMENT IN EMERGENCIES.

AT the last meeting of the Cork Board of Guardians, the following resolutions were passed unanimously. "That, whenever the relieving officers of the Cork Electoral Divisions receive a written request from any of the medical officers of that division for additional assistance in cases of emergency, they be directed to obtain the best and nearest assistance when it can be had on payment of one guinea." "That, as the Cork Dispensary officers have refused to accept a fee of 10s. 6d. in each case when called in for consultation with any of their brethren, and as the Local Government Board have decided that they cannot be required to attend outside their subdistricts without payment, the resolution, dated September 5th, 1872, fixing the scale of remuneration at 10s. 6d., be rescinded, and that a fee of one guinea be paid in future to whatever doctor may be called in to assist the Dispensary doctors in cases of emergency."

THE DRUITT TESTIMONIAL FUND.

MR. HAYNES WALTON, the Treasurer, begs to acknowledge the receipt of the following subscriptions since Wednesday, November 27th.

	£	s.	d.		£	s.	d.
Dr. Du Lac (Hérault)	21	0	0	Messrs. Hedges & Butler	2	2	0
Dr. Bissett Hawkins	10	10	0	Dr. Peter Allen	2	2	0
Mr. Prescott Hewett	10	10	0	Mr. E. Lund (Manchester)	2	2	0
Mr. R. B. Oakeley	10	0	0	Dr. Cahill	2	2	0
Mr. George Lawson	5	5	0	Dr. E. A. Parkes (Southamptom)	2	2	0
Mr. B. E. Brodhurst	5	5	0	Dr. John Macpherson	2	2	0
Dr. W. T. Gairdner (Glasgow)	5	5	0	Mr. T. B. Curling	2	2	0
Messrs. Auld, Burton, and Co.	5	5	0	General Gascoigne	2	0	0
Mr. Wm. Acton	5	5	0	Mrs. Gascoigne	1	0	0
Mr. John Wood	3	3	0	Mr. C. Vasey	1	1	0
Mr. Liebreich	3	3	0	Dr. Cooper Rose	1	1	0
The Earl of Cawdor	2	2	0	Dr. Robert Barnes	1	1	0
Dr. J. B. Sanderson	2	2	0	Mr. Henry Harris (Redruth)	1	1	0
Mr. A. Norton	2	2	0	Mr. A. Browning (Lewes)	1	1	0
Mr. Fleming (Brighton)	2	2	0	Dr. W. Pretty	0	10	6
Dr. W. S. Playfair	2	2	0				
Dr. Wm. Farr	2	2	0				
Mr. W. Johnson Smith (Greenwich)	2	2	0				

Dr. P. Allen, in last week's list, should have been Dr. John Allan.

Subscriptions may be sent to the Treasurer, Mr. H. Walton, 1, Brook Street, Hanover Square; the Secretary, Mr. A. Norton, 6, Wimpole Street; or may be placed to the account of the Druitt Testimonial Fund, Union Bank, Argyll Street, Regent Street. Subscriptions will be acknowledged weekly in one or more of the medical papers.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

The Liverpool Medical Institution.

AT the second and third meetings of the session at the Medical Institution, the following interesting cases were brought forward.

Dr. Carter described a case of Cancer of the Liver. The patient came into the hospital for suppression of urine. Nothing abnormal was discoverable, except enlargement of the liver; no pain, jaundice, or symptoms pointing to cancer. He had never been confined to bed, and had worked till a few days before his admission. He sank in eleven days. The liver weighed ten and a quarter pounds, and was full of cancerous nodules. There was also an aneurism of the thoracic aorta, pressing backwards and eroding the vertebræ; it had ruptured into the cavity of the chest. The patient had dropped down dead in the street, having been known to have suffered for some time from aneurism.

Dr. Rawdon showed seven calculi, removed by him by Lateral Lithotomy from seven boys in the Children's Infirmary, each with complete success. He also showed a girl whose elbow-joint he had excised in consequence of straight bony ankylosis, with an useless arm, which had supervened upon necrosis of the humerus, for which several operations for removal of dead bone had previously been necessary. The movements of the false joint were perfect.

Dr. Davidson showed a man from the Northern Hospital, presenting a well marked example of Progressive Muscular Atrophy or Cruveilhier's Disease. The affection commenced eighteen months previously with partial loss of extension in the middle finger, followed by gradual loss of power in the forefinger and thumb; then in the ring and little finger; and in six months dropping of the wrist, and subsequent weakness in the arms, which for the last month had prevented him from following his employment (machine-fitting). The remarkable quivering or vibration of small portions of the partially atrophied muscles was very distinctly seen on exposure to cold on stripping. The man had worked seven years prior to the commencement of the disease in a shop where white and red lead were used, but he never had any symptoms of lead-poisoning. There was no blue line on the gums, nor colic; and this, with the gradual invasion of the paralysis, and its being preceded by atrophy, were sufficient to establish the diagnosis.

A second patient, with the same disease in a less advanced stage, was at the same time shown by Dr. Dickinson.

A case of Chronic Inversion of the Uterus, successfully treated by manipulation, was related by Dr. Wallace. The inversion occurred after parturition, but was not detected until some weeks afterwards, when Dr. Wallace was consulted in consequence of the appearance of grave constitutional symptoms. The restoration of the uterus to its normal position was effected without much difficulty by pressure with the hand, and the patient rapidly recovered.

Dr. Davidson exhibited a specimen of Embolism of the Pulmonary Artery, which had been diagnosed during life from the occurrence of rigors and the sudden appearance of slight dulness and diminution of the respiratory murmur at the base of the right lung. The patient had been the subject of ulcerative inflammation of the lower urinary passage, consequent upon gonorrhœa, going on to suppurative nephritis and abscess in the neighbourhood of the bladder. There was thrombosis of the cervical veins, whence a clot had been carried up through the heart and into the lung. The embolon seemed to have been a long cord-like piece, which had passed into a branch of the pulmonary artery, and was arrested at the bifurcation of the vessel; the longer limb of the fibrinous cord completely obstructing one arterial twig, and the shorter one hanging loosely in the other.

Mr. Rushton Parker exhibited a specimen of Œsophageal Cancer communicating with a cavity in the lung.

Dr. Glynn showed a specimen of Cancer of the Head of the Pancreas, obstructing the bile-duct, from a woman who had been suffering for five months from ascites and extreme jaundice. Cholæmic poisoning and suppression of urine supervened.

Mr. Hamilton showed a Cancerous Tongue, removed from a man in the Royal Southern Hospital five weeks ago, and now convalescent. The large size of the diseased mass rendered it necessary to divide the symphysis of the jaw, instead of the more usual method of bringing the tongue through the floor of the mouth.

Dr. Finegan exhibited an enormous Colloid Cancer of the Omentum from a woman who has presented all the appearances of ovarian disease. Gastrotomy was performed, and six quarts of fluid escaped from the abdominal cavity, when a large nodulated cancerous tumour was exposed, adherent to the liver, and of a character which rendered removal out of the question. The wound was closed, and the patient seemed to be doing well for a day or two, when she suddenly grew ill, and died at once. The incision had completely healed. A mass of encephaloid cancer, an inch and a half thick, occupied the abdomen, being moulded over the intestines, liver, and spleen; the peritoneum was studded with cancerous nodules. The liver was cancerous, and the ovaries were converted into small masses of cancer.

Mr. D. J. Hamilton showed a Liver containing numerous Hydatid Cysts. The man up to his death was apparently in health; and, while running away from a policeman in pursuit of him, fell down dead. He was taken to the Northern Hospital; and, on *post mortem* examination, the heart, lungs, and other organs, were healthy, except the liver, which was filled with numerous hydatid tumours, each containing a number of daughter-cysts, the fluid having abundance of echinococci. One of the cysts was calcareous; another communicated with the bile-duct. One of the largest tumours had pressed upon the vena cava, so that death was probably induced by syncope, induced by the violent efforts, to which the impeded circulating system was unequal.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 26TH, 1872.

T. B. CURLING, Esq., F.R.S., President, in the Chair.

A FIFTH SERIES OF 100 CASES, WITH REMARKS ON THE RESULTS OF 500 CASES, OF OVARIOTOMY. BY T. SPENCER WELLS, F.R.C.S.

CASES of completed ovariotomy, from 400 to 500, were arranged in a table of similar form to the previous series of 1 to 400 cases, published in successive volumes of the *Transactions* of the Society. The author then reviewed the whole of the cases, examining the influence which the social condition of the patient, her treatment in large or small hospitals or in private practice, the season when the operation was performed, the age and conjugal condition of the patient, the size, solidity, and connections of the tumour, and the length of incision required for its removal, and the various modes of carrying out the extraperitoneal and the intraperitoneal treatment of the pedicle, had upon the result of the operation. Twenty-five cases where both ovaries were removed at one operation, and four cases where ovariotomy was performed twice on the same patient, were then reported; and some remarks followed upon fifty-two cases of exploratory incisions and incomplete operations,

and exceptional cases of recovery after suppuration and drainage of cysts which could not be removed. The subsequent history of patients who recovered after removal of one ovary proved that they might menstruate regularly, and might bear children of both sexes, or twins; and that after removal of both ovaries they did not become excessively fat, nor lose their feminine appearance or sexual instinct. Of 373 women who recovered, 36 who were unmarried at the time of the operation had married since; of these 15 had had one child, 6 two children, 3 three, and 3 four children; 2 had had twins. Of 259 who were married when the operation was performed, many being beyond the age of child-bearing, 23 had had one or more children since. No particulars could be obtained of 23 patients recovered, but 312 reported themselves as in good health last summer. A few complained of some trifling ailment, and 17 had died of causes more or less directly connected, and 19 of causes not at all connected, with ovarian disease or the operation, at various periods from a few weeks to eight years after ovariotomy. These were rare exceptions to the general rule that a woman who recovered after ovariotomy was restored to perfect health, and was enabled to fulfil all the duties of wife and mother. Supposing that the 373 women who recovered might have lived four years if ovariotomy had not been performed, they might have realised 1,492 years of miserable invalid life. Taking their average age as 38 years at the time of operation, and the average expectation of life for a healthy woman of that age in this country as 29 years, the 373 women had secured by the operation the probability of the gross amount of 10,817 years of average healthy life.

NOTE ON A NEW FORM OF TROCAR FOR USE IN OVARIOTOMY.

BY ROBERT LAWSON TAIT, F.R.C.S.

For this instrument it was claimed that it had the following advantages over those at present in use. The penetrating edge cut, and did not tear, making a wound which the tube completely filled, and was easily retracted. One size of trocar would answer all purposes. The cutting point might be used as a knife to slit open smaller cysts contained in the major, of which the contents might be so viscid as to be unable to pass along any trocar. The catches adapted to this trocar were such as to obviate any possibility of its slipping, and the instrument was much handier than any other at present in use for ovariotomy. It was made by Salt and Son, of Birmingham.

Mr. SPENCER WELLS would be disposed to try Mr. Tait's instrument; though he did not recognise the objection to the cutting part of that which he himself used. It was probable that some of the instruments were made with a cutting edge all round; whereas it ought only to be partial. There might, however, be danger of splitting the cyst by the use of the instrument shown; although Mr. Tait assured him that this had not occurred in his practice. It was also possible that, the cannula being largely occupied, there might be a difficulty in the escape of viscid fluid.—Dr. PRIESTLEY had been a colleague of Mr. Wells at the time when he performed his earlier operations, and was well acquainted with the doubts and difficulties which then prevailed; and he now congratulated him on the results which he had obtained. He asked whether it was more desirable, in unilocular cysts, to tap simply, or to remove the cyst at once through a small incision; and also, whether it was better to operate early—*i.e.*, as soon as the tumour could be felt above the pelvis, or to wait till the patient's strength was seriously affected.—Dr. SQUAREY asked whether Mr. Wells had observed ovarian cysts in their early stages, and whether he had traced their origin to ovaritis.—Mr. THOMAS SMITH remarked that more success appeared to attend the use of the cautery alone than of the cautery and ligature combined.—Mr. CHRISTOPHER HEATH said that, at the Hospital for Women, he had divided the pedicle without using the clamp, and had been satisfied with the results. He did not altogether recognise the necessity for the precautions insisted on by Mr. Wells. On a recent occasion, he had been obliged to go to the *post mortem* room before performing ovariotomy. He carefully cleansed his hands, and performed the operation. The patient did well for a week, until it was necessary to remove her to a ward in which was a patient suffering from carcinoma. She now had several rigors; but, on her being again removed, these did not recur, and she was going on well.—Mr. SPENCER WELLS said that unilocular cysts often disappeared after a simple tapping. They were frequently not ovarian at all, but connected with the parovarium or the broad ligament. His views as to early operation had become modified from those which he at first held. He had found that the results of operations on small tumours in healthy women were not so favourable as in cases where the cysts were large and the patients had become accustomed to disease. He had had no opportunity of examining ovarian cysts in their earliest stages. He did not think it right to remove small ovarian tumours, unless they caused great pain and inconvenience to the patient. The ligature was used only in cases where the cautery failed to arrest hæmorrhage. He considered that it was unjustifiable for a surgeon to perform ovariotomy after visiting the *post mortem* room. If he were about to operate, he should get some one to go to the *post mortem* room in his place. He had never used the carbolic acid spray; the only application he had occasionally used was perchloride of iron. Dr. Keith of Edinburgh had told him that he had found the result less favourable when carbolic acid was used than when it was not.—Mr. LAWSON TAIT said that his instrument stretched and plugged the wound, but did not split the cyst.

SUBCLAVIAN ANEURISM TREATED BY TEMPORARY COMPRESSION OF THE INNOMINATE ARTERY, FOLLOWED BY LIGATURE.

BY E. BICKERSTETH, F.R.C.S.

The patient, a strong, healthy-looking dock porter, aged 40, was admitted into hospital on April 15th, 1868. He was suffering from an aneurism of the third part of the right subclavian artery, traceable to a strain incurred while moving a heavy weight about three weeks previously. It was about the size of a hen's egg. A review of the various plans attempted for the cure of this complaint seemed so unpromising, that it was resolved to try temporary compression of the innominate artery. Mr. Porter of Dublin had attempted this in 1867 by means of an instrument not unlike a miniature lithotrite, between the blades of which the artery, after having been laid bare, was compressed. The pressure here, however, being rigid and unyielding, produced a slough in the coats of the vessel, and fatal hæmorrhage resulted. In this instance an attempt was made to secure elastic compression, sufficient to stop the flow of blood through the vessel, but not strong enough to injure its coats. An instrument was devised, consisting of a hollow stem with a transverse bar, having eyes at its extremities. In the hollow stem worked a screw, having also a transverse bar, to the extremities of which two India-rubber bands or accumulators were attached. A wire passed through the eyes of the lower bar, and was attached to hooks at the ends of the accumulators, and by means of this wire the artery was compressed against the lower transverse bar. By moving the screw the accumulators were put on the stretch and the wire tightened upon the vessel. The great difficulty was to find a suitable wire; one which should be quite pliable and supple, and yet sufficiently strong. Gold, copper, silver, aluminium, and lead were tried upon an innominate artery removed from the dead subject, upon which the instrument was placed, while a very powerful stream of water was forced along the vessel, and lead was adopted. On May 5th, an incision was made parallel with the anterior edge of the sterno-mastoid as low as the sterno-clavicular articulation, and another from this point outwards along the clavicle. The flap thus formed was raised, the sterno-mastoid, sterno-hyoid, and sterno-thyroid were cut through, and the sheath of the common carotid laid bare; this was followed down to where it meets the subclavian, and the innominate then came into view. A portion of the sheath of the latter was separated, an aneurism-needle armed with thread was passed beneath the vessel, and by means of this the lead wire was pulled through. The clamp was passed down on the wire and screwed up, when pulsation in the aneurism and in the radial artery at once ceased. The end of the instrument was out of the wound a long way, and moved like a pendulum with every beat of the innominate. For the first forty-eight hours everything progressed most satisfactorily, but at the end of that time pulsation was found in the tumour, and the house-surgeon, on proceeding to tighten the clamp, found that it did not act. A few hours afterwards Mr. BICKERSTETH, having had the patient put under chloroform, opened up the wound, and found that the constant sawing action produced by the impulse of the artery had cut through the lead wire at the point where it passed through one of the eyes of the transverse bar. As the instrument seemed now useless, two strong silk ligatures were put beneath the vessel, one above and one below the point where the lead wire had been. This second operation was accomplished with the greatest ease. The patient went on tolerably well till the evening of the fifth day after this last operation, when hæmorrhage occurred. On the sixth day three attacks ensued, and on the last occasion the loss of blood was so great and so uncontrollable that the patient died rapidly in a convulsed condition. Loose shot was poured into the wound on the last two occasions. The *post mortem* examination showed the wound healthy, the innominate from the aorta to the point of ligature filled with a firm tightly fitting clot, the common carotid empty, the subclavian empty as far as the aneurism, the aneurism itself filled with firm, laminated coagulum, and the subclavian beyond it also occluded. The aneurism was practically cured. The hæmorrhage had occurred on the distal side of the ligature.

Mr. HOLMES said that the advantage of catgut ligature was, that it became absorbed. Sometimes, however, this occurred too rapidly; but rarely if the ligature had been sufficiently steeped in carbolised oil.

Indeed, hæmorrhage after the careful application of the catgut ligature was almost unknown. The catgut ligature combined the advantages of compression and of the ordinary ligature, inasmuch as the internal coat of the artery was not divided. If it were generally used, much could be done to remove the great objection to operation on large arteries—secondary hæmorrhage. Whether the germ-theory were accepted or not—and, as far as he could see, it had received no sufficient physical proof—there could be no doubt of the value of carbolic acid in the treatment of wounds.—Mr. MAUNDER had employed the antiseptic method extensively at the London Hospital. For three years, he had exclusively used the carbolised catgut ligature for tying vessels, and had had no cases of secondary hæmorrhage.—Mr. LAWSON TAIT suggested that a Committee of the Society should be formed to inquire into the real merits of the antiseptic system. The catgut ligature had not been attended with such successful results in his hands as in those of others.—Mr. SPENCER WELLS asked whether Mr. Bickersteth had used silk ligatures, the ends being cut off there and left in the wound. Porta of Pavia stated twenty years ago that the silk was absorbed; and Mr. Wells had found this to be the case.—Mr. BARWELL thought that the hæmorrhage was not connected with the mark made by the wire, but with the want of formation of a coagulum in the portion of the artery distal to the ligature.—Mr. BICKERSTETH said that there was little fear of hæmorrhage with the catgut ligature. If a similar case again occurred, he would not hesitate to use catgut. He had used silk in two cases of ovariotomy, tying the pedicle with it, and returning it into the abdomen, without any ill consequences.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 11TH, 1872.

THOMAS BRYANT, Esq., President, in the Chair.

On the Treatment in extremis of Acute Cases of Fibrinous Deposition in the Heart. By B. W. RICHARDSON, M.D., F.R.S.—The author said that when, twenty-two years ago, he revived the subject of the nature, diagnosis, and treatment of fibrinous depositions in the heart during life, he met with two classes of objectors in the course of the debate. One esteemed Fellow of the Society, taxing his labours as visionary, had asked the severe question, Whether had the paper been before the Committee of Reference? Another equally esteemed Fellow had said that, if the facts were as had been stated, they served but to raise up a hopeless knowledge for medical men. Therefore, *cui bono?*

By repeated experiment, Dr. Richardson had demonstrated that fibrine does in some cases separate in the heart during life; while, from clinical observation, he had been able to point out the symptoms indicating the fact of such separation. The second objection had been met with infinitely more difficulty; and he had not, though many years had passed, ventured to speak of it with the hope of removing it. He had year after year seen cases *in extremis* where death was clearly the result of fibrinous separation, and he had discovered no opportunity of affording distinct service. At last this distressing state of doubt was passing away, and he might venture to speak of some method of approach towards success. He next referred to the exceeding mortality of the cases which he had seen. They included cases of croup in children; of pneumonia; of peritonitis; of ovarian operation; of parturient cases before and after labour, and with and without phlegmasia; of erysipelas; of scarlet fever; and some obscure cases in which nothing was proclaimed until the appearance of the fatal symptoms, except what was called cold or febricula, or remittent feverishness. After describing cases in detail, he stated that in his experience recovery after fibrinous deposition had become actually developed did not occur in more than three per cent. Of all classes of disease, croup, he believed, yielded the largest number of examples; after that, diphtheria; and after that, the puerperal condition and peritonitis. He placed before the Society, in a revised form, the special points of diagnosis of fibrinous separation as occurring (*a*) on the right side, (*b*) on the left side of the heart: he then noticed anew the condition favouring deposition. Under this head especially he named increased local heat of parts, involving large veins, as of extreme importance. For example, erysipelas, involving the skin over the lower extremities, was exceedingly dangerous. He was of opinion that the local increase of heat was in such cases sometimes the only just cause of danger. The increased temperature of blood in the veins acted on minute portions of fibrine, and the semi-solid little masses of fibrine formed were carried into the heart, to become nuclei or centres for the larger separations. More speedy, or sudden, general or systemic increase of heat, as in certain cases of apoplexy, led to separation in the larger vessels and in the heart itself.

The greater portion of the paper was devoted to the subject of treatment in cases of fibrinous deposit, and specially in cases *in extremis*. As soon as the symptoms of deposition had become developed, all influences that had a depressing effect upon the heart ought to be instantly withdrawn. Mental influences telling upon the emotions should be avoided. Sometimes the great distress exhibited by the sufferers—the distress of the dyspnœa particularly—tempted the practitioner to give opium. The practice was fatal, and could only be defended on the doubtful ground that all treatment was useless except to secure euthanasia. In cases of croup, it was often a question whether tracheotomy ought to be performed to relieve dyspnœa; it being uncertain whence the dyspnœa proceeded, whether from obstructed respiration or obstructed circulation. In such instances the diagnosis was simple; and, when it was clear that the dyspnœa was cardiac, the operation was useless, and was better avoided. But in mixed cases, or in cases of doubt, Dr. Richardson was inclined to give the patient the benefit of the operation. In purely defined instances of fibrinous separation, the practitioner, having determined what should not be done, had to settle the question, What shall be done? The first element of treatment, especially where the separation was on the right side, was to give absolute rest of the body in the recumbent position, for the heart working under embarrassment could bear no undue fatigue, and at the same time every active motion increased the danger of loosening the fibrinous mass, and of allowing it to float into the pulmonary artery. Rest secured, there should be given as much food as the stomach would bear without distension from flatus; milk, rendered slightly alkaline by lime-water, and charged with a little Liebig's extract of meat, being on the whole the best food. The body, if cooling, should be kept warm by external dry applications. Sand-bags were the best when they could be easily procured; and the temperature of the air should be sustained at 60 deg. Fahr., or even 70 deg.; the air, also, being kept dry. As to internal remedies, the author had first inclined to the free administration of alkaline solutions, especially ammonia; but in a case in which, several years ago, he carried out this treatment, using the bicarbonate of ammonia, and which terminated fatally after several days, although the concretion was found to have greatly softened and broken up, the blood was reduced to such an extreme solubility, and the corpuscles so extensively destroyed, that he had found the remedy as serious as the malady. He had suggested the injection of ammonia by the veins in these cases, but had held back for the reason stated above from following out the idea. He had tried inhalation of ammonia, but without sufficient success to warrant enforcing the plan. Lately, seeing the all but invariable fatality that followed the fact of depression, he returned to the use of ammonia as a remedy, by administering it in large and repeated doses, in combination with iodide of potassium; using, not as before, a salt of ammonia, but the liquor ammoniæ of the *Pharmacopœia*. To an adult he had administered ten-minim doses of the liquor ammoniæ in ice-water, every hour, with from three- to five-grain doses of the potassium iodide every alternate hour. This treatment had been followed by a degree of success which he had never anticipated. Nothing could be more remarkable than the fact of the quantity of ammonia that could thus be administered without danger, except the fact of the degree of fluidity of blood and of blood-corpuscles that could be recovered from. In proof of this, he detailed two cases in which this treatment had been followed out with the effect of entirely relieving the heart when death seemed all but certain. One of these cases had ended in slow but entire recovery, and the other had now progressed favourably for nine weeks.

The addition of alcohol to the treatment in the management of these cases was then discussed. The direct effect of alcohol in these cases was unfavourable when taken alone, but with ammonia it might be given with advantage whenever the heart was commencing to fail in action. The solution of ammonia in alcohol might then be substituted for the aqueous solution, or brandy might be given in half-ounce doses every hour. Alcohol, however, was only to be held in reserve as an adjunct rather than a remedy. The course of the symptoms during recovery, the dangers that appeared, the changes of blood, and the risk of secondary pathological modifications in remote organs, and especially in the spleen, were described and subjected to practical comment. In conclusion, the author stated that prognosis was much more favourable when fibrine had separated on the left than on the right side of the heart; the breaking away of the fibrinous mass on the left side being followed sometimes by immediate relief to the heart, and by ultimate recovery. He mentioned a case where he had been summoned from town to attend, and he left the patient apparently *in articulo mortis*, and he was only able to comfort the friends with the hope that the concretion might possibly break away and the heart become relieved. Shortly after he had gone, the event thus hoped for actually occurred; the semi-conscious patient was almost immediately relieved, and, except for some temporary numbness of the lower extremities (for the concretion was carried into the abdominal aorta), recovery was

completed without an unfavourable symptom. Although a much larger experience was demanded to improve the work he had set forth, Dr. Richardson felt, nevertheless, that a distinct advance had been foreshadowed for a class of cases hitherto considered hopeless. He thus felt it his simple duty to lay this communication—instalment, as it was, and nothing more—before his fellow-practitioners of the healing art.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 19TH, 1872.

JOHN HILTON, Esq., F.R.S., President, in the Chair.

Repair after Removal of the Astragalus.—Mr. BELLAMY showed a specimen. Several years ago the patient suffered from compound dislocation of the astragalus. The specimen showed that the tibia and fibula had become adapted to their new position. The tibia had become united to the os calcis.—Dr. GOODHART referred to a case which he had seen lately, in which the cartilages were present, and the tibia was bound to the calcaneum by fibrous bands.

Gordian Worms in Lungs of Sheep.—Dr. CRISP exhibited Gordian worms from the lungs of sheep, for the purpose of showing that the *Strongylus filaria* in the white elevated masses on the surface of the lungs had been mistaken by Drs. Sandy, Pedly, and himself for a gordius; that he had traced these gordians through their different stages of growth, and he had every reason to believe that they were immature forms of the *Strongylus filaria*.

Abscess of the Liver.—Dr. W. MOXON showed a specimen of abscess of the liver, which was large and single, although the patient had never been in a tropical country. The question raised was, whether it was right to recognise a tropical form of abscess of the liver distinct from the pyæmic abscess due to dysentery, etc., and especially whether large size and singleness of abscess was a distinctive mark of the tropical form. Dr. Moxon enumerated ten cases of pyæmic abscess which had come in succession under his notice. In four of these the abscess was single and large; in one other there were three abscesses so close together that they would soon have broken into each other; in another case the abscesses were gathered in one circumscribed part of the liver. The rest of the cases showed scattered abscesses, but they were all cases of general pyæmia from amputations of limbs and injuries to the head, and in them the disease had proved rapidly fatal, whereas the cases of single abscess were of long duration. He thought that the large size and singleness of the abscess, which often marked the tropical cases, was due to the longer time they lasted as compared with the swift course of general pyæmia, such as produced multiple abscesses. The tropical cases were insidious and slow, and the abscesses, at first multiple, had time afforded them to break through into each other, and form those enormous collections of pus which Annesley figured, in which indeed there was comparatively little of the liver-tissue left. While speaking with very great respect for Dr. Murchison's opinion to the contrary, he could not but believe that almost all tropical abscesses were secondary to dysenteric or other ulceration, and that primary suppuration of the liver was at least as doubtful as primary suppuration of the brain.—Dr. MURCHISON said that the opinion that a connection existed between abscess of the liver and dysentery was not correct. The cases of abscess without dysentery were not to be explained by supposing that the scars in the bowel had been missed. In one set of cases—viz., abscess from impaction of biliary calculi—the abscesses were certainly multiple.

Acute Interstitial Pneumonia.—Dr. W. MOXON exhibited specimens of acute interstitial pneumonia, or purulent inflammation of the lymphatics of the lung. The specimen shown consisted of the thoracic viscera from the body of a woman. She was admitted into hospital in an almost dying state. In both lungs a moderate extent of early pneumonia accompanied these changes; but the pneumonia was in the outside of the lobules, evidently extending from the interlobular suppuration. The lower lobe of the right lung was in a state of chronic atrophic induration. The proper tissue had wasted nearly away, and there was only a moderate increase of flabby fibre.—Dr. POWELL asked if there was any history of previous disease on which acute disease had been superadded. He had seen the lymphatics enlarged, but in chronic disease, not in acute. He thought the name was faulty.—Dr. MOXON said that last week he had seen a similar acute case with the same suppurating lines of lymphatics.—Dr. GREEN said there was old disease of the base of the lung. Last year he had brought a similar case, but chronic. Was there any exudation into the vesicles in this case?—Dr. MOXON said there was a change in the neighbourhood of the walls of the air-vessels.

Innominate Aneurism.—Dr. DOWSE showed an aneurism of the innominate artery, involving the aorta, from the body of a woman aged 60.

Spinal Disease.—Dr. DOWSE also showed the spinal column of a child aged 9. There was no curvature of the spine and no pain on pressure, yet after death the spine was found extensively diseased. The disease appeared to begin in the intervertebral cartilages, and was most marked about the seventh rib, where an abscess seemed to have pointed, though at the time there was no discharge. The rib was carious.

Sarcoma of the Liver.—Mr. NUNN showed a specimen of large-celled sarcoma of the liver. The patient had had her breast extirpated for a large myxomatous tumour. The wound was large, and before it quite healed the disease returned as a fungous growth growing from the scar. This was removed by the cautery and zinc paste. The bone became necrosed at the spot and came away. He tried transplantation at the part, and the wound healed. She was again admitted with pain on the right side and much difficulty of breathing. At last she died, when there was found sarcoma of the right lung not connected with the scars. It was a large-celled sarcoma. Referred.—Mr. HULKE said that in 1862 he removed a spindle-celled sarcoma of the choroid. Two years ago the patient showed signs of disease of the liver. Death recently followed, when the liver was found large and full of spindle-celled growth. The spindle-celled growth of the choroid, that of the liver, was partly melanotic, the reverse of what usually happened.

Scleroderma.—Dr. TILBURY FOX showed a microscopic specimen of scleroderma from India. The patient was a soldier. After exposure during night he was attacked by diarrhœa, and his skin began to harden. His favourite posture was sitting on the edge of his bed, and he died there. He was so stiff that his skin had to be cut to lay him straight after death. The appearances were those of ordinary scleroderma—increase of connective tissue, diminution of fat, and widening of the ducts in the skin.

Blood-Cyst.—Mr. GEORGE LAWSON exhibited a large blood-cyst which he had removed from the thigh of a gentleman that afternoon. The patient first noticed a swelling on the anterior part of the thigh about four years ago. It was without pain, and occasioned no inconvenience. From that time the swelling gradually increased, until it attained its present dimensions.—Mr. ARNOTT gave the following account of its microscopical appearances. The tissue forming the fleshy fasciculi projecting from the inner side of the cyst-wall was made up of cells and intercellular substance without any appearance of fibroid stroma. The cells were mostly of a spindle-shape, with plump oval nuclei, and were banded together in waving tracts. Some of these cells were very large, and of irregular form, containing many nuclei; others were smaller and oat-shaped. The majority were spoilt by fatty degeneration, mingled with these cells, and lying free in the fluid contents of the cyst; and in the solid remains of old clot filling some secondary cysts in the wall, were large numbers of crystals of cholesterine.—Mr. LAWSON remarked, with reference to the future of blood-cysts, that in one patient whose thigh he amputated on account of a large blood-cyst, there was a recurrence of the cysts in the stump, and the patient died four years afterwards of medullary cancer in the thorax. In another patient now under his care, he punctured a blood-cyst in the back three years ago, and in the site of the cyst there was now a large medullary tumour.—Mr. HULKE had had a similar case some years ago in a girl. The blood-cyst was easily removed, but the patient died of malignant disease.—Mr. NUNN said that in a case of his, also of blood-cyst, the patient died in the same way.—Mr. ARNOTT said that Mr. Shillitoe removed such a cyst in the Great Northern Hospital by amputating the limb. The patient died of bleeding. They found much spindle-celled matter in the limb, spreading up the thigh from the seat of the cyst.

Injury of Diaphragm.—Mr. DE MORGAN showed a specimen of perforation of the diaphragm from a fractured rib. The patient, a powerful man, when seen was emphysematous, and had fractured ribs, but seemed exceedingly comfortable. He was sick in the evening; next day his breathing was good, and the emphysema diminishing. That evening he suddenly became delirious, but got better, when suddenly he became collapsed and died. Seven ribs were found to be broken; the sixth, perforating the lung, diaphragm, and ileum, was found sticking in the spleen. From the wound of the spleen free bleeding had taken place, and the abdomen was filled with blood. The rib had partly returned to its natural position, but not altogether. He supposed that the spleen had been wounded in his delirium.

Fracture of the Skull.—Mr. COOPER FORSTER exhibited a specimen of fracture of the bones of the skull. The man was thrown out of a window, and had his occipital bone fractured. His lower limbs were paralysed; he was delirious, and he had lost the sense of taste. There was no vomiting after the first day, but he ultimately died, some weeks afterwards, of cystitis and bed-sores. His liver was lardaceous, and he had empyema. The fracture of the skull divided into two parts; one part

was covered by a thin plate of bone at the apex, which gaped widely. The brain was inflamed. The tenth and eleventh dorsal vertebræ were injured; here repair was advanced, though, ninety days after the receipt of the injury, there was no repair in the skull.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

First Meeting.

P. D. Handyside, M.D., and afterwards J. Matthews Duncan, M.D., in the Chair.

1. *Pathological Specimens, etc.*—Mr. Annandale showed a Malignant Tumour of the Femur, commencing in the stump of a previous amputation. He had reamputated at the hip-joint, and had good hopes of a favourable result.—He also showed a Scirrhus of the Mamma, two Heads of Femora excised for Disease of the Hip-joint, and a case of Sacculated Hæmatocele.

Dr. Matthews Duncan showed a large Calculus which he had recently removed from the Bladder of a female who had been long under treatment for irritable bladder. A projecting portion of the calculus lay in the urethra.

Mr. Joseph Bell showed the parts concerned in a recent case of Suicide by Cut-throat. The box of the larynx was completely divided through the cricoid cartilage, and the ends were separated for more than an inch. The fibrous sheath of the œsophagus was opened, and the muscular coat exposed; and the sheath of the left common carotid artery was also exposed. The patient died on the sixth day, of acute intralobular suppurative pneumonia.—Mr. Bell also showed Dieulafoy's Pneumatic Aspirator, and explained its principle of action with reference to the cases in which it should be used.

Dr. T. G. Stewart showed a man who had recovered from Paralysis after the use of a spinal support.—He also showed the parts from a case of Perforating Ulcer of the Stomach. The patient had survived five weeks after the symptoms of perforation came on, and was nourished by enemata.

Dr. P. Heron Watson showed a specimen of Malignant Disease of the Upper Jaw, which he had excised. The patient had suffered intense pain, and also had numerous simple polypi in both nostrils, which made the diagnosis difficult.—Dr. Watson also showed a Penis which he had excised for Epithelial Cancer, and in which he had performed the operation which he has devised and executed for preventing the usual retraction and contraction of the orifice of the urethra—viz., dissecting up the corpus spongiosum for at least an inch, and bringing it through an aperture in the skin.—He also showed several specimens of Calculi removed by Lithotomy and Lithotrity.

Dr. Batty Tuke showed the Skull of a Congenital Epileptic Idiot. The brain weighed sixty ounces—only four ounces less than that of Cuvier, and was much above the average. The cranial capacity was 112 cubic inches, 95 being the average. The skull was remarkably unsymmetrical. The cerebellum was deformed, the left half showing numerous abnormal convolutions.

II. *Papers. Case of Hypospadias.*—Dr. Handyside read a communication from Dr. Graham of Paisley regarding a case of hypospadias. The child was a pauper orphan, and resided in poorhouses till the age of fourteen, dressed as a girl. It was found that the penis and scrotum were both cleft; that the right testicle was large, but the left very small. The pubes was hairy. A plastic operation was attempted, but failed. The patient is now dressed as a boy, and works on a farm. The case was illustrated by a cast. Dr. Handyside referred to a similar case which he had described in the 123rd number of the *Edinburgh Medical and Surgical Journal*, where the individual had been supposed to be a female for thirty-three years.—Dr. Matthews Duncan remarked on the great difficulty often experienced in settling the sex of such cases, when in the female, the labia majora were strongly adherent and the clitoris was large and free on its lower surface, or when, in the male, the penis was small in size or adherent at its lower surface, or still more specially when the penis, or penis and scrotum, were cleft.—Mr. Lister and Dr. Keiller made remarks.—Dr. Watson reported that he had once operated for hernia, and found an ovary with cystic degeneration in the labium.

Circumcision.—Dr. Cadell read a paper on the advantages of circumcision from a surgical point of view. After a sketch of its history, he detailed the disadvantages of a long or adherent prepuce, and the advantages of being without one, at the different periods of life—in infancy, boyhood, adult life, and old age. In infancy, it was a cause of urinary irritation, discomfort, and even death; in boyhood, of epilepsy, masturbation, etc.; in adults, a predisposing cause of gonorrhœa and chancres; and in old age it was related to cancer of the penis.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Thursday, October 10th, 1872.

G. H. Philipson, M.D., President, in the Chair.

Prevalent Diseases of the District.—The usual discussion on the prevalent diseases of the district took place, in which Drs. Charlton, Hutchinson, Arnison, Denham, Burnup, and Humble, and Messrs. L. Armstrong, H. E. Armstrong, and Hawthorn took part.

Aneurism of the Aorta.—Dr. Foss exhibited an aneurism of the aorta from a man aged 41. For eighteen months he had suffered from faintings, malaise, etc. A month ago, he expectorated a quart of florid blood; and, a fortnight afterwards, brought up about two quarts of blood, and died immediately. There were black cretified masses of arrested tubercle at the apex of the left lung; the right lung was healthy. The pericardium was adherent everywhere to the heart, of which the muscular structure was soft. The ascending portion of the aorta was converted into a large and irregular sacculated aneurism, which was adherent to the right pleura. At the posterior and upper part of the sac was a serrated longitudinal rupture three-fourths of an inch in length, opening into the lung. There was no sign of atheroma.

Intestine after Typhoid Fever.—Dr. Peart exhibited portions of small intestine six years after typhoid fever, with much adhering of the coils.

Latent Pericarditis.—Dr. Byrom Bramwell described a case of latent idiopathic pericarditis in a girl aged 17. The only symptoms were pain in the epigastrium and slight sore-throat. After death, which took place suddenly, the pericardium was found distended with serum, in which were flakes of coagulated lymph. The adjacent surfaces of the heart and pericardium were covered with a thick layer of recent lymph.

Rupture of the Heart.—Dr. Byrom Bramwell exhibited a specimen. The rupture, which allowed the passage of a silver probe, was situated in the posterior wall of the left ventricle, close to the septum, two inches from the apex.

Strangulated Inguinal Hernia.—Dr. Byrom Bramwell introduced a patient who had been twice successfully operated upon for strangulated inguinal hernia within two months—the first time on May 8th, the second on July 4th, 1872.

Bony Deposit in Aorta.—Dr. Charlton exhibited, for Dr. Tinniswood of Norton, a specimen of bony deposit in the aorta, pressing upon the left coronary artery. Death occurred by rupture of the aorta. The subject, a young woman, had been exposed to some violence. A brother had died suddenly from the same complaint; and a sister was supposed to be affected with it.

Large Gall-Stone.—Dr. Tinniswood sent a gall-stone an inch and a half long.

Three patients were exhibited by Mr. Luke Armstrong, Surgeon to the Newcastle Infirmary. The following is a summary of the notes taken by his clinical clerk, Mr. Percy Watson.

1. *Double Amputation.*—J. G., aged 20, a porter, was admitted to the hospital on August 6th, with both lower extremities terribly crushed by a train of coal-waggons passing over them. Chloroform having been administered, both legs were amputated; the right three inches below the knee, the left above the ankle. Wire sutures were used, and the stumps were dressed with carbolic oil. Slight sloughing of the flaps having occurred, twenty-one grafts were taken from a newly amputated limb, and applied, nineteen of which adhered. The stumps were quite healed by September 25th.

Compound Dislocation of Ankle-Joint.—T. C., aged 30, a carman, was admitted to the hospital on July 30th. He fell from a wall twelve feet high, a large stone falling upon his ankle at the same time. The inner malleolus was broken off; the tibia projected through a large opening in the soft parts; and the fibula was fractured about three inches from the lower end. The ankle-joint was laid open. The wound was drawn together with silver wire sutures, and dressed with carbolised oil; and the limb was placed on an outside splint with a foot-piece. Bags of ice were constantly applied for seventeen days. The sutures were then removed, and the wound dressed with zinc lotion. The wound rapidly healed, and he left the hospital on October 1st with a movable joint.

3. *Compound Dislocation of Ankle-Joint.*—W. R., aged 13, was admitted to the hospital on June 8th. He caught his foot in the wheel of a stationary engine, which jerked him into the air. On falling, he fell astride a projecting tap, which ruptured the urethra. When he was admitted, a large wound was found over the outer ankle. The tibia and fibula both projected, the foot being turned up on the inner side. The foot was put in position, a splint being placed on the inner side. The wound was drawn together with wire sutures and dressed with carbo-

lised oil. A catheter was introduced into the bladder, where it remained some time. At the end of fifteen days, the wound was opened and dressed with zinc lotion. Skin-grafting was had recourse to when the granulations would admit of it. The boy went out well with a movable joint, on November 4th.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, NOVEMBER 28TH, 1872.

FREDERICK KIRKPATRICK, M.B., President, in the Chair.

President's Inaugural Address.—The PRESIDENT referred to the prosperity of the Society, which was now entering upon its fortieth session. He alluded with regret to the resignation of Dr. Charles Benson, who for thirty-five years had devoted his services, as secretary, to the welfare of the Society. In the death of Dr. Thomas E. Beatty they had also experienced a great misfortune. An accomplished physician, a polished gentleman, a constant unchanging friend, Dr. Beatty had been for many years one of their secretaries ; and had ever formed a bond of union between the Colleges of Physicians and Surgeons, of both of which learned bodies he had been president at different periods, an honour of an unexampled kind. Dr. Kirkpatrick then addressed himself to the question of the impropriety of meeting with homœopaths or other irregular practitioners, a subject which had been taken up many years before by Richard Carmichael. He quoted an ordinance of the Royal College of Surgeons, passed in August, 1861, in which fellows and licentiates of the College were strictly forbidden to pretend to cure disease by homœopathy, mesmerism, or other form of quackery. Sir Benjamin Brodie had expressed himself warmly on the subject. Surgeons were especially liable to be called in to see the patients of homœopaths on an emergency, in case of hernia, hæmorrhage, and such like affections ; and they should take care to make their own conditions, and to see them adhered to. He concluded by expressing his confidence that the coming session would be in no wise unworthy of its predecessors.

Warty Ulcer of Marjolin.—Mr. CROLY showed a specimen of this affection, which he had removed from the cicatrix of an extensive burn on the arm of a man. The accident happened thirty years before the growth appeared.

Melanotic Sarcoma of Cornea.—Dr. JACOB exhibited an eyeball of a man, aged 68, which he had extirpated for this disease. Six months ago, an appearance like a bit of leaf was noticed over the white of the eye. There were phosphenes and loss of sight, but no pain. When first seen by Dr. Jacob, the upper part of the cornea looked as if it were covered with a layer of velvet ; and there was bulging of the ciliary processes. The melanotic character of the affected part was probably due to the disease having commenced in the pigment-layer of the choroid membrane. The cornea was rarely the seat of this disease.

Tuberculous Affection of Bone.—Dr. STOKER showed the leg and part of the thigh of a girl aged 9. The cancellated tissue was infiltrated with tuberculous and scrofulous deposit.

Epithelioma of back of Wrist.—Mr. CROLY showed a specimen.

Cystitis.—Mr. CROLY exhibited the penis and bladder of a man, 89 years of age, who had sunk after suffering from retention of urine. There was enlargement of the middle lobe of the prostate ; the bladder was columnar, thickened, and sacculated ; and the kidney was sacculated and congested.

Ether versus Chloroform.—Dr. MORGAN read a paper on this subject. He commenced by briefly reviewing the history of anæsthetics generally. Deaths from chloroform might be divided into three classes ; 1, those that were unavoidable, in which, after a few inhalations, the heart's action suddenly and unexpectedly ceased ; 2, avoidable cases ; and 3, cases fatal by mischance. Dr. Morgan then quoted English and American statistics of the mortality from anæsthetics, which showed that ether proved fatal once in 23,204 cases, chloroform once in 2878, cases ; a mixture of chloroform and ether, once in 5,588 cases ; and bichloride of methylene, once in 5,000 cases. It was worth considering also, whether statistics of mortality after ovariotomy were not much influenced by the anæsthetic used during the operation. Ether appeared to be safer than chloroform ; it acted merely as an intoxicant. The inhabitants of Draperstown, co. Derry, had amongst them habitual drinkers of five or six ounces of ether at a time. The Chloroform Committee of 1864 had determined that ether was a stimulant to the heart's action, for the mercury in the hæmo-dynamometer was kept up under its use until respiration ceased ; it having first become slow and deep. The objections alleged by the same committee against ether were based on its disagreeable odour, the slowness of its action, and the greater excitement caused by it. The first objection Dr. Morgan looked upon as a matter of opinion. Insensibility might safely be produced by ether within from one to five minutes—generally in three minutes ; and excitement probably arose from the admixture of air with the vapour. He believed that air should in all cases be excluded, and that the patient should draw in the ether from an inhaler. He had employed this anæsthetic in various difficult and protracted operations ; amongst others, in thirty-two eye cases in the practice of Dr. Jacob. In one operation both feet being amputated by Syme's method, the patient was kept insensible for one hour without bad effects. Dr. Morgan maintained that ether was not slower in its action than chloroform ; that it did not generally, or indeed often, cause nausea ; and that, as a rule, there was no excitement under its administration. If excitement did occur, it was best met by a full dose (fifteen grains) of bromide of potassium. Ether had a tendency to determine to the head, and, therefore, the patient might safely sit up during the operation. If laryngeal snoring should set in, the mouthpiece of the inhaler was at once to be withdrawn.—The postponement of the debate on Dr. Morgan's paper was moved by Dr. R. MC DONNELL, and seconded by Mr. HENRY WILSON.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, NOVEMBER 1ST, 1872.

RALPH GOODING, M.D., President, in the Chair.

Treatment of Psoriasis.—Dr. TILBURY FOX read a paper on the treatment of psoriasis. In the author's opinion, the treatment of psoriasis by arsenic internally and tarry preparations externally was erroneous, and much too generally employed. For his own part, he had almost entirely given up this plan of treatment, except in certain chronic cases and where there was a syphilitic taint, when he found Donovan's solution of great value. In all other cases, he relied mainly upon soothing applications locally—viz., wet packing, alkaline and sitz baths, and oily preparations ; and internally, remedies in accordance with the constitutional diathesis. This plan of treatment was especially successful in acute cases occurring in young children. Dr. Fox laid great stress upon psoriasis being treated on the same principles as other diseases, with due regard to constitutional and other causes likely to affect and modify it.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEDICAL MEETINGS.

THE next meeting of the above Branch will be held at the Greyhound Hotel, Croydon, on Thursday, December 19th. The Chair will be taken at 4 P.M. by Dr. CARPENTER.

Papers, etc., are promised by Dr. Aveling, Dr. Bristowe, Dr. Adams, the Honorary Secretary, etc.

Dinner at 6 P.M. Tickets 5s., exclusive of wine.

HENRY T. LANCHESTER, M.D., *Honorary Secretary.*

Croydon, December 10th, 1872.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ORDINARY MEETING.

THE second meeting of the session was held at the Midland Institute, Birmingham, on Thursday, November 14th, at 3 P.M.: present, THOMAS EBBAGE, Esq., President, and fifty members and visitors.

New Members.—The following members of the Association were elected members of the Branch :—Mr. T. H. W. Croft (Snitterfield) ; Mr. W. Hammond (Nuneaton) ; Mr. Maberly (Birmingham) ; Mr. A. W. Read (Coventry) ; and Mr. A. G. Waters (Ombersley).

Mr. LAWSON TAIT said, in reference to the election of Mr. Croft of Snitterfield as a member of the Branch, that it was extremely unadvisable, for the establishment of a precedent, to move any formal vote of sympathy with him in his trouble. He very much regretted this, but his silent admission on the part of the members would express their feeling that Mr. Croft had been guilty of no moral wrong. To express any active sympathy would open the way for the demand of any practitioner, not a member of the Association, for assistance from them in the hour of trouble. Mr. Croft had made an application to the Executive Committee, charged with the arrangements for the Birmingham meeting, for permission to bring his case forward in August last ; but he (Mr. Tait) had moved and carried the refusal of the request on two

grounds: that it was not a matter for the Executive Committee, and that Mr. Croft was not a member of the Association. Much as he sympathised with Mr. Croft, and much as he desired to help him, he could not listen to a proposal which would really defeat the aims of the Association; and he wished very much that he had the means of impressing every practitioner in the three kingdoms with an idea of the advantages he might derive from being a member of such an organisation as the British Medical Association, should he be ever as unfortunate as Mr. Croft had been.

Communications.—The following communications were made to the meeting.

1. *Chancre on the Finger.*—Mr. Jolly showed a diagram of Hunterian chancre of the right index finger, occurring in a woman aged 55. It was clearly ascertained that she had not been exposed to any contagion, except that of following her occupation as a midwife. In due course of time the sore was followed by secondary symptoms, in the form of roseola in the abdomen, chest, neck, arms, and well marked ulcerated throat.

1. *Pathological Specimens, etc.*—Mr. Lawson Tait showed the following specimens and instruments. *a.* A small Calculus removed from the Bladder of a woman by Lithotomy. That method was selected on account of the diseased and hypertrophied state of the bladder. *b.* A large Calculus removed from a very young child. The peculiarity in this case was, that on the first touch of the forceps the stone flew into minute fragments, so that the result was more like that of lithotrity than that of lithotomy. *c.* An inch and a half of the Cervix Uteri removed by the *écraseur*, in order to gain access to a fibroid polypus, the cervix being much elongated and intolerant of dilatation. *d.* A case of Soluble Medicated Intrauterine Bougies and cloth plugs for cervical medication, with holders for each, made for Mr. Tait by Salt and Son, Birmingham. *e.* New Sponge-tents, of compressed sponge treated with cocoa-butter, made by Salt and Son. *f.* A large unilocular Ovarian Cyst recently removed, which weighed altogether over a hundred pounds. *g.* A new Ovariotomy Trocar. *h.* A fœtus removed by abdominal section in a case of Extrauterine Gestation, followed by recovery of the mother.

3. *Excision of the Upper Jaw.*—Mr. Bartleet showed a patient from whom, a month ago, he had removed the upper jaw. A linear cicatrix in the mesial line of the lip was the only remaining indication of any operation, the appearance of the face being exactly similar on both sides. Mr. Bartleet also showed the bone removed, with a non-malignant epulis growing from the floor of, and filling up, the antrum.

4. *Menstruation and Nervous Diseases.*—Mr. Lawson Tait read a paper on Diseases of the Nervous System influenced by Menstrual Irregularities and Suppression, and their Treatment. In this the author included chiefly "Uterine Epilepsy," a title which he took from Sauvage and Prichard. He classed the disease in three varieties: (*a*) Moliminal Epilepsy, the most common and most curable; (*b*) Climacteric Epilepsy, generally incurable; (*c*) Epilepsy from (1) Uterine Atrophy, rarely curable, and (2) from Superinvolution, a variety which generally yields to treatment. He also spoke of the varieties of insanity influenced by menstruation, especially melancholia.

5. Mr. Hickenbotham read a paper on Force in Midwifery.

CORRESPONDENCE.

CLOT IN THE HEART AND CEREBRAL EMBOLISM.

SIR,—Two cases have lately come under my notice, which bear upon the subjects of Dr. George Johnson's interesting paper in the JOURNAL of November 30th. The first was that of a woman aged 50, suffering from ovarian dropsy. She was an in-patient at the New Hospital for Women, and was under the care of Miss Morgan. She had never been tapped; and, though the tumour was large, she was less cachectic than advanced ovarian patients commonly are. She had not had acute rheumatism; the pulse was good, and the heart-sounds were normal. Miss Morgan decided to tap her. I was present, and before the operation I remarked upon the cheerfulness and serenity of the patient. No anæsthetic was given. The operation was performed with a medium-sized trocar; the fluid flowed freely; but Miss Morgan was careful to stop the flow several times, to avoid any risk of syncope from emptying the tumour too quickly. No signs of distress appeared till the trocar had been withdrawn and the wound closed. While the bandage was being fastened, the patient suddenly became restless, springing up in bed and saying she could not breathe, and immediately afterwards became livid, with the lips and finger-tips of the deepest blue. After the first exclamation of distress, she was for an hour and a half too breathless to speak again, or to swallow even a few drops of stimulant. She was gasping and struggling for breath, and, though conscious, could not spare a moment for any other action. The heart's action was rapid but regular, and not very weak; we thought it markedly stronger than the pulse, which was feeble. We could not examine the cardiac sounds while the intense dyspnœa continued, as the patient was evidently somewhat easier when leaning very much forward, and we feared immediate death if we did anything in the slightest degree likely to increase the dyspnœa: in fact, death seemed so very imminent that our attention was engrossed with the effort to stave it off, to the exclusion even of such observations as we might possibly have made had we had leisure to think of making them.

It seemed clear to both Miss Morgan and myself that there was a clot in the heart or in the pulmonary artery; and that the one chance lay in stimulating the heart to contract, in the hope that the clot might thus be moved out of the main current of the circulation. As the patient could not swallow, we applied large and very hot flannel fomentations to the chest and back, mustard over the heart and on the legs, vigorous rubbing to the feet and hands, ammonia to the nostrils, and kept the hands in basins of hot water. I need scarcely add that in all this we were acting rather from a sense of its being right to do all we could, than with much hope of success. To all appearance, the woman was at the very point of death. At the end of about an hour and a half, however, the extreme general lividity and the deep blueness of the fingers and lips began to diminish; the dyspnœa was so far relieved as to permit the patient to swallow a few drops of stimulant; and from that time the alarming symptoms gradually subsided. Three hours later, she had recovered sufficiently to sleep a little, and the next day she could lie down without discomfort. She recovered without any further drawback. Miss Morgan still sees her occasionally, and she has ascertained that the dyspnœa has never returned.

It is, I think, impossible to doubt that the symptoms in this case were due to an obstruction in the right side of the heart or in the pulmonary artery, and I imagine that it was caused by a fibrinous clot. Whether the clot was an old one, then swept for the first time into the main current of the circulation, or whether it was formed in consequence of the heart's action being weakened by the slight shock of the operation, or by the removal of the pressure of a large quantity of fluid, and what became of the clot, are questions I confess myself unable to answer to my own satisfaction. It is difficult to imagine that a clot large enough to cause such intense dyspnœa could be carried into the lungs without giving rise to any lung-symptoms, or that it could be quickly broken up and dissolved.

Two other questions of a more practical kind arise. 1. The ovarian cyst is filling again; ovariotomy will doubtless be necessary at no very distant date. On the supposition that the clot is still attached to the right auricle or ventricle, but lying so as not to interfere with the current through the right heart or into the pulmonary artery, would not the administration of chloroform or any anæsthetic which weakens the cardiac contractions be attended with special danger? 2. In the presence of such symptoms, could anything more be done to prevent death than was done? We thought of nitrite of amyl, but had none at hand; and even if we had, I am not sure that we should have dared to use so powerful an agent, with which we had not much practical acquaintance, for a patient whose condition was so critical.

The second case was that of a girl aged 18, under my care in the same hospital. She had had acute rheumatism four years before, and was told then that her heart was affected. One year later, she began suddenly to suffer from left unilateral chorea. She was in good health, well nourished, and not anæmic when admitted into the hospital. The digestive and uterine functions were normal, and there was no cardiac murmur. Seven days before admission, she had for the first time a well-marked epileptic attack, in which the left limbs only were convulsed. On recovering, the chorea was worse than before the attack, and the left limbs were also numb. Sensibility quickly returned in the leg, where also the chorea was never so severe as in the arm. I had an opportunity of seeing her in a fit, and was able to confirm the statement as to the unilateral character of the convulsion. The anæsthesia of the left arm, though never complete, was well marked after each attack. She was put upon arsenic and bromide of potassium, and made an out-patient, and then, unfortunately, lost sight of.

The history of the case, the unilateral character of the chorea, the convulsion, and of the anæsthesia, and the order in which the symptoms showed themselves, seemed to me to point unmistakably to their being caused by embolism of one or more of the smaller cerebral vessels.

I am, etc.,

ELIZABETH GARRETT ANDERSON, M.D.

20, Upper Berkeley Street, November 30th, 1872.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL OFFICERS OF HEALTH.

SIR,—I am glad to perceive that my excellent friend, Mr. Hodgson, is fully alive to the necessity of nipping irregular proceedings in the bud, and, in the JOURNAL of Dec. 7, criticises the conduct of the East Kent District in regard to the Medical Officers of Health.

Permit me to assure him that his alarm is groundless, and that we have not, and never had, any intention of transgressing either "laws" or "bye-laws." First, we never proposed, as he assumes, to confer the "Honorary Membership of the Association" on any one, but simply to make Medical Officers of Health "Associates of the *District.*" Secondly, due notice was given of the proceeding, in accordance with our bye-laws. Thirdly, although the "resolutions" were carried unanimously in the "district," they will not be put into force till "the approval of the Executive Council of the Branch be obtained."

With regard to the "premature" publication of the "resolutions," allow me to observe that, in obedience to another bye-law, I was obliged to send an abstract of our proceedings on November 14, to the JOURNAL for publication. Moreover, I take it that the object of the JOURNAL is to keep every Branch and every District *au courant* with the proceedings of its neighbours, in order that simultaneous action might be taken by the whole Association in important matters demanding the united support of the profession.

In conclusion, allow me to express a hope that the Executive Council will approve our resolutions at an early date, so that we may put them in force on the first Public Health appointment within the district. I am, etc.,

CHARLES PARSONS, M.D., *Hon. Secretary*, East Kent District.
2, St. James's Street, Dover, December 10, 1872.

THE MORBID EFFECTS OF ALCOHOL.

SIR,—Your leader of last week upon the morbid effects of alcohol is little more than a repetition of criticism, the futility of which I have exposed. Persistently perverse, the writer will not be persuaded from attributing to me a foolish assumption, against which I have already protested, and which nothing I have ever said warrants, that among hospital patients are no drunkards except those who trade in liquor. I need not explain again to any one, except to the writer of the article, that my conclusions were based upon the comparison of more and less. I had supposed that no one could refuse to admit that potmen, draymen, cellarmen, and their like, getting drink for nothing, take more of it than their even Christian who has to pay the score. But the writer denies this. He "suspects that the consumption of alcohol may have been about equal in the two classes of cases"—a suspicion which, I think, will not be shared by those who have experience in the diseases of the potman tribe. In the one class, though back and side go bare, good ale and old is the one thing not wanting; in the other, the plentiful lack of money, as a preacher of temperance, must sometimes command attention.

I showed that in the one class cirrhosis of the liver was more than twice as frequent as in the other, and urged this fact as a mark of the greater intemperance of the liquor-trading class. Upon this he asks how it is that in the class which, to avoid the repetition of long phrases, I headed "non-alcoholic", there is *any* cirrhosis? The question is easily answered. Cirrhosis exists in this class for two reasons: first, because the class, as I have laboured to explain, is not entirely free from the effects of drink; and, secondly, because cirrhosis arises not only from drink, but from causes independent of it. Though alcohol is a leading cause of this disease, insomuch that drink and cirrhosis generally prevail together, yet it is certain that, were it possible absolutely to withhold this agent, the disease would be thereby diminished, not abolished. I have found the disease in children never suspected of inebriety; and there is even reason to believe that it is sometimes congenital. It is startling that a writer who assumes to speak with authority and from experience, should believe that cirrhosis of the liver owns no cause but alcohol.

By way of accounting for the prevalence of cirrhosis among traders in drink, the writer, since the exigencies of his argument will not allow him to assign it to excess of alcohol, is driven to attribute it to the kind, instead of to the amount, of drink. Thus the trader in liquor takes most ardent spirit; he who toils otherwise, and pays for his liquor, drinks most beer and wine, the sum of alcohol being about the same in both. This view is nothing less than preposterous. One would suppose from this that the tinker was a judge of the vintages of port, while the hodman solaced his mid-day leisure with a glass of sherry and a sandwich.

Potmen and their class are catholic in their potations. They all drink beer largely—draymen in deluges. They drink spirits frequently, and wine not unfrequently. It will be remembered that the series comprises cellarmen, barmen, and tavern-waiters, with whom wine is continually present. Does the average labourer, artisan, domestic servant, or small tradesman, drink more beer than the draymen, or more wine than the retailer of sherry? I trow not. Perhaps he would if he could, but he cannot get it; wine, as a costly luxury, he can seldom aspire to. Butlers, as having access to their masters' cellars, were excluded from the tabulation.

After such arguments, the writer tells us that he is not a prophet, and the disclaimer will be readily allowed. At the same time it must be regretted that, having no pretension to the prophetic character, he should have adopted the style. Let us hope that the investigation to which he refers, as contrasting teetotallers and drunkards, may soon be given to the world. I will promise to consider it in a fairer spirit than he has brought to bear upon my investigations. To him as an anonymous critic I have said my last word. In conclusion, I beg all who are interested in the question to turn from his criticisms to my paper, and judge between him and me. I am, etc.,

W. H. DICKINSON, M.D.

*** Dr. Dickinson, having set himself the task of proving that the influence of alcohol as a cause of renal disease has been much overestimated, endeavours to do this by tabulating the results of *post mortem* examinations, which, extending over a period of thirty years, may be safely assumed to be more or less wanting in modern precision and in uniformity of plan. Then, knowing little or nothing of the habits of these dead men, he assumes that occupation alone may be taken as a test by which to separate them into an alcoholic and a non-alcoholic class. In spite of Dr. Dickinson's vehement protests and withering sarcasms, we are "persistently perverse" enough to adhere to the opinion that the time and labour bestowed upon the investigation are in this form simply wasted.

SIR,—The question raised by Dr. Dickinson, as to the effects of alcohol in inducing renal disease, is one which ought not to remain unsettled; and you have done good service by ventilating it in the columns of the JOURNAL.

While fully admitting the truth of Dr. Dickinson's statement of the frequency of Bright's disease in the temperate, I concur in your opinion, that he has not proved his case by the statistics which he has adduced in support of it.

As this question can only be settled by an appeal to facts, the value of which will depend on the exactness of our information respecting the habits of patients, it must be obvious that the experience of private practice will afford more trustworthy data than the case-books of London hospitals.

In this view, I beg to offer an analysis of all the deaths from Bright's disease occurring in my practice during a period of thirteen years; and in distinguishing the temperate from the intemperate, I think I have adopted a more practical division than by attempting, with Dr. Dickinson, to compare traders in liquor with persons otherwise employed. Out of twenty-six deaths from albuminuria, fourteen occurred in persons who had indulged freely in fermented liquors, and twelve in persons who were temperate without any being abstainers. Of the twenty-six deaths nine were of women, and of these only two were known to be intemperate. The result of this comparison, so far as it goes, strikingly confirms Dr. Dickinson's view; but, as the number of observations is too small to justify any conclusions being drawn from them, I hope that others will be induced to contribute their experience, and by so doing to accumulate a mass of evidence which would determine this interesting question.—I am, etc., HENRY TAYLOR.

Guildford, December 11, 1872.

OBITUARY.

GRIFFITH HOOPER GRIFFITHS, M.D.

DR. GRIFFITHS was a pupil of the late Mr. Charles Fowler, Senior Surgeon of the Cheltenham Hospital, from whose tuition he proceeded to St. Bartholomew's. Here, in 1848, he gained the Botany Prize presented by Dr. F. J. Farre, and the Wix Prize for the best essay on the connection between the Study of Ancient and Modern Literature and the Studies of Medical Science. Having completed his medical education in 1849, he was for eight years sole medical officer of the large union of Leominster, consisting of eighteen parishes; obtaining there the high approbation of the guardians, and the confidence and

affection of his patients. In 1862 he became a Licentiate of the Royal College of Physicians of Edinburgh, and a Doctor of Medicine of St. Andrew's. He retired from the profession in 1867 through failing health, and afterwards devoted himself entirely to science. He was for four years Honorary Secretary of the Worcestershire Naturalists' Field-Club, and an Honorary Member of the Leeds, Worcester, and Birmingham Scientific Societies, to all of which he sent contributions either of papers or specimens. A work on *British Bryology* was in course of preparation, but his labours were suddenly arrested by the increasing malignity of his disease. He died of cancer in the head on November 19th, aged 49, at his native town of Cheltenham.

GEORGE CLEMENTS, M.R.C.S.

WE regret to have to record the untimely death of Mr. George Clements, of the Chorlton Union Hospital, at the age of twenty-eight. After a somewhat distinguished career as a student at the Middlesex Hospital, he came to Manchester, where he was appointed successively Physician's-Assistant and House-Surgeon to the Manchester Royal Infirmary. This latter post he held until his election by the Poor-law Guardians as Resident Medical Officer to the large hospitals of the Chorlton Union at Withington. Here his work lay, until symptoms of tubercle manifested themselves about eighteen months ago, which compelled him, after obtaining a year's leave of absence from the guardians, to take a voyage to China. He returned in the spring somewhat better, and resumed his work; his strength, however, failed from day to day, and he at length decided to go to sea again. This decision was, unhappily, taken too late; for he only reached Port Said, to be carried on shore, and placed on board a homeward bound steamer. He died when three days from port, and was buried in the Bay of Biscay.

From the day that Mr. Clements came to Manchester in 1866 to the moment of his death, he probably never made an enemy. He was widely and deeply loved by his friends, and in their hearts he will long live as one who never wounded another's feelings, as one "who spoke no scandal—no, nor listened to it," and as one whose gentle, genial, and refined nature endeared him to all who knew him.

MEDICAL NEWS.

SCOTCH SCHOOLS OF MEDICINE.

THE following is a numerical statement of the entries of medical students at the Scotch University Schools of Medicine.

	First Years.	Total.
Aberdeen University	32	240
Edinburgh University	196	649
Glasgow University	80	324

UNIVERSITY OF LONDON.—B.S. Examination, 1872. Pass List.

First Division.

Cane, Leonard, University College
Godlee, Rickman John (B.A.), University College
Greenfield, William Smith, University College

Second Division.

Wall, Alfred John, St. Mary's Hospital

M.S. Examination, 1872. Pass List.

Aveling, Charles Taylor, St. Thomas's Hospital

B.S. Examination, 1872. Examination for Honours.

First Class.

Godlee, Rickman John, B.A. (Gold Medal), University College } equal
Greenfield, William Smith (Gold Medal), University College }
*Cane, Leonard, University College

* Obtained the number of marks qualifying for a Gold Medal.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 5th, 1872.

Deacon, Henry Pelham, Clapham
Hickman, Richard, Newbury, Berkshire
Juler, Henry Edward, 115, Holborn, E.C.

The following gentlemen also on the same day passed their primary professional examination.

Alldin, John Horatio, London Hospital
Arthur, Walter, Westminster Hospital
Butler, George Bleeck, St. Bartholomew's Hospital
Gilmour, John Henry, St. Thomas's Hospital
Mahony, John Robert, Royal College of Surgeons, Dublin
Winkworth, Frederick Sydney, University College

As Assistants in compounding and dispensing medicines.

Bishop, Charles Henry, Woolwich
Cunningham, Thomas, Chelsea

UNIVERSITY OF GLASGOW.—The following gentlemen have been admitted to their degrees.

Degree of Doctor of Medicine.—Charles Auld, M.B.C.M., Scotland; Robert Brown, M.B.C.M., Scotland: James Glen, M.B.C.M., Scotland; Thomas Livingstone, M.B.C.M., Scotland; William Wilson, M.B.C.M., Scotland.

Degree of Master in Surgery.—William Duncan, M.B., England; James P. Heeney, M.D., Ireland.

Degree of Master of Arts.—With first-class honours in Mental Philosophy:—John M. Brown, Scotland; Alexander S. Macphie, Scotland. With first-class honours in Mathematics and Natural Philosophy:—James C. Mactaggart, Scotland. With second-class honours in Mathematics and Natural Philosophy:—James Henderson, Scotland. Ordinary Degree:—Jervis Coats, Scotland; James Hamilton, Scotland; John M'Dougall, Scotland; Alexander Marshall, Scotland; Henry Wilson, England,

The Certificate in Engineering Science has been conferred on William Maberlye Llewellin, C.E., England.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ADDENBROOKE'S HOSPITAL, Cambridge—House-Physician: £65 per annum, board, and residence.
ALDERBURY UNION, Wilts—Medical Officer and Public Vaccinator for District No. 6: £80 per annum, and extra fees.
BALLYSHANNON UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Churchill Dispensary District: £50 per annum, and fees.
BOARD OF TRADE—Medical Inspector of Emigrants: £300 per annum.
CARNARVON—Admiralty Surgeon and Agent for.
CARNARVON UNION—Medical Officer for the Workhouse; £45 per annum.—Medical Officer for the Llanrug District: £60 per annum.
CHORLTON UNION, Lancashire—Resident Medical Officer for the Workhouse Infirmary: £260: 10 per annum.
CLINICAL HOSPITAL and DISPENSARY FOR CHILDREN, Manchester—House-Surgeon: £60 per annum, residence, and board.
COVENTRY AND WARWICK HOSPITAL—House-Surgeon: £80 per annum, board and lodging.
CRAIGNISH, Argyleshire—Parochial Medical Officer.
DERBYSHIRE GENERAL INFIRMARY, Derby—Assistant House-Surgeon.
DORSET LUNATIC ASYLUMS, near Dorchester—Assistant Medical Officer for the Forston Asylum: £100 per annum, board, and apartments.
DOWNPATRICK UNION, co. Down—Medical Officer for the Strangford Dispensary District: £80 per annum.
GERMAN HOSPITAL, Dalston—Honorary Assistant-Physician.
GRANARD UNION, co. Longford—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Finea Dispensary District: £100 per annum, and fees.
HERTS REFORMATORY, Hertford—Medical Officer.
HOWDEN UNION, Yorkshire—Medical Officer and Public Vaccinator for the Newport District: £40 per annum, and extra fees.
INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.
INISHOWEN UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Buncrana Dispensary District; £90 per annum, and fees.
ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY—Resident Medical Officer: £85 per annum, rooms, attendance, cooking, coal, and gas.
LAMBETH, Parish of St. Mary—Medical Officer for District No. 7: £70 per ann.
LEXDEN and WINSTREE UNION, Essex—Medical Officer and Public Vaccinator for District No. 9: £90 per annum, and fees.
LISMORE UNION, co. Waterford—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cappoquin Dispensary District: £100 per annum, and fees.
MANCHESTER ROYAL INFIRMARY—Senior House-Surgeon and (if present junior be appointed senior) Junior House-Surgeon: £84 and £63 per annum, respectively, board, and residence.
MEATH INFIRMARY, Navan—Apothecary, Secretary, and Registrar: £52: 13: 8 per annum, furnished apartments, coal, and gas.
MERIDEN UNION, Warwickshire—Medical Officer for the Fillongley District: £30 per annum.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Assistant-Physician.
NAVAL MEDICAL SERVICE—Assistant-Surgeons.
NENAGH UNION, co. Tipperary—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Portroe Dispensary District; £100 per annum, and fees.
NEWPORT (Mon.) INFIRMARY AND DISPENSARY—Resident Medical Officer.
OLDHAM, Borough of—Medical Officer of Health: £400 per annum, offices, stationery, etc.
ROYAL COLLEGE OF SURGEONS, Ireland—Professor of Surgery.
ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon: £75 per annum, board, residence, and washing.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Lower Seymour Street—Physician and Surgeon for Out-Department.
WATERFORD UNION—Medical Officer for the South Division of the Waterford Dispensary District: £100 per annum, and fees.
WEST DERBY, Lancashire, Local Board of—Medical Officer of Health: £100 per annum.
WORCESTER GENERAL INFIRMARY—House-Surgeon: £100 per annum, board, and lodging.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BARBER, Oliver, Esq., appointed Assistant House-Surgeon to the General Infirmary, Sheffield, *vice* B. B. Floyer, Esq., resigned.
*BEVERLEY, Michael, M.D., appointed Assistant-Surgeon to the Norfolk and Norwich Hospital, *vice* *T. W. Crosse, Esq., resigned.
*JONES, John T., Esq., appointed Surgeon to the Corris Slate Quarries, ne Machynlleth.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M. — Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.— Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Farquharson, "A Case of Traumatic Pericarditis"; Mr. H. Royes Bell, "A Case of Tumour of the Forearm"; Dr. J. T. Dickson, "A Case of Traumatic Epilepsy treated successfully by Trephining." Other communications by Messrs. Adams, R. B. Carter, and Davy.

TUESDAY.—Pathological Society of London, 8 P.M. Report by Morbid Growth Committee on Mr. Nunn's Tumour of the Liver. Dr. George Johnson: Aneurism of the Aorta associated with Paralysis of the Vocal Cords. Dr. Robert King: Stomach from a Case of Poisoning by Hydrofluoric Acid. Dr. Way: Specimens from a Case of Poisoning by Carbolic Acid. Dr. Vandyke Carter: Drawings of the Fungus-Disease, Mycetoma of India. Dr. Vandyke Carter: Drawings of the Eruption in Leprosy. Dr. Crisp: Heart-Clot from a Case of Sudden Death. Mr. Wagstaffe: A Milk-yielding Tumour of the Breast. Mr. Gay: A Varix—an unusual form of Femoral Hernia. Mr. Charles Carter: Supernumerary Pulmonary Valve. Dr. Cayley: Syphilitic Tumour of the Gall-Bladder associated with Peritonitis.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

IF Dr Charles Kidd will send us the references to the deaths from ether, of which he speaks, we shall be happy to publish his communication.

DR. C. P. COLLINS (Leamington) would, we think, be justified in placing the matter in the hands of a lawyer, as he suggests. He is, at any rate, entitled to a full explanation of the circumstances.

THE *Homœopathic Review* replies at length to a recent discussion of the question of consultations with homœopaths, in an article which, by its style, is as much beyond the pale of respectable literature as its matter is beyond the pale of legitimate medicine. It admits the early fallacies of psora and dynamisation, and justifies the later frauds of the use of aperients, venesection, opiates, etc. *Cadet quæstio.*

A POOR-LAW MEDICAL OFFICER (Herts) is right in thinking that Poor-Law Medical Officers ought to be adequately paid for any work done for the purposes of the Public Health Act, whether as titular deputy health-officers, or health-officers in fact, but without the title. This point was urged by the recent deputation of the South-Eastern Branch, as it had been by Dr. Rumsey, Dr. Stewart, and the speakers at previous deputations of the State Medicine Committee to the President of the Local Government Board. Mr. Stansfeld has fully admitted the justice of the claim; and recently intimated that he had brought the subject, as involving expenditure of public money, before the Cabinet. Mr. Henley, at the county meeting of Boards of Guardians which he has judiciously addressed, suggested that, as the work of the deputy health officers would be a certain relation to the work of the same gentleman as poor-law medical officer, the salary at *the outset* ought to be estimated at twenty or thirty per cent. on the present receipts. Perhaps medical officers would inform us how far this suggestion would meet their individual views, and whether it would work equitably and satisfactorily. The suggestion seems well conceived. On the other hand, some are induced apparently to prefer a system of payment for work done according to scale. We shall be glad to hear from correspondents, especially in Oxfordshire, Warwickshire, and Buckinghamshire, what their views may be. In any case, we advise poor-law medical officers not to undertake sanitary work as part of their present work, or unless adequately remunerated for it. They will find it very unpleasant, invidious, and damaging, to their private practice—work, in short, that ought to be well paid.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

WRITTEN replies can only in very rare instances be given to correspondents. It is requested, therefore, that stamped envelopes for reply be not forwarded to the Editor.

EDINENSIS.—We concur in our correspondent's observations as entirely as he does in ours. The reviews in the *Edinburgh Medical Journal* are as a rule able and impartial; and the surgical reviews especially so. They are remarkable exceptions, in this respect, to much of the fulsome laudation commonly published as medical reviews, which he agrees with us in regarding as generally discreditable and mischievous.

A MEDICAL "TERTIAN" (Aberdeen) is referred to the BRITISH MEDICAL JOURNAL for July 23rd, 1870, in which appears a report on the Aberdeen Royal Infirmary. Allusion is there made to the question of clinical teaching, referred to by the correspondent in the *Aberdeen Medical Student.*

CAPSULES OF PHOSPHORISED OIL.—We have received the following from Messrs. J. J. Graham and Co., State Apothecaries, of Westmoreland Street, Dublin.

We have observed in your valuable JOURNAL a communication relative to the best means of administering phosphorus. We believe that a solution of the drug in oil, enclosed in membranous capsules (as first recommended by Dr. Eames of this city), will be found most useful and least likely to disagree with the patient. We have prepared a series of these capsules, Nos. 1, 2, and 3, containing respectively one-tenth, one-twentieth, and one-thirtieth of a grain of phosphorus, samples of which we enclose. The nauseous taste of the drug is in this way avoided, and eructations are less liable to occur.

DOCTOR OR MR.

SIR,—A correspondent, at p. 596, asks for an explanation of the habit of calling a physician Mr. and a surgeon Dr., which, though common in Cockneydom, is not confined to it, but extends generally in the North of England, and probably elsewhere. I do not think it arises from any feeling of disrespect towards surgeons, but from the etymological meaning of "doctor" being unknown, and the word having come to signify one who doctors—*i. e.*, sets things to rights; and is applied to a surgeon rather than to a physician, because he is a more palpably active putter of things to rights. In confirmation of this view, I may mention that there are inanimate doctors—*e. g.*, the sheet of steel used to scrape superfluous colour off a roller for calico-printing is called a doctor; and so also is the movable sheet of iron used as a blower to increase the draught of a stove; they set things to rights; they doctor, and are therefore called doctors. The common use of the word as a verb shews that it is applied in this sense; "to doctor" is not understood to mean to be learned, it is a verb active, and has become rather widely separated from its etymology, as is the case with many other words.

I am, etc., P. H. HOLLAND, M.R.C.S.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Dec. 7th; The Manchester Guardian, Dec. 11th; The Ulster General Advertiser, Dec. 7th; The Scotsman, Dec. 9th; The Bath Express, Dec. 7th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. J. Matthews Duncan, Edinburgh; Dr. Cheadle, London; Dr. C. Theodore Williams, London; Mr. T. Annandale, Edinburgh; Mr. T. H. Bartleet, Birmingham; Dr. W. Alexander, Halifax; Dr. Bradbury, Cambridge; Dr. George Johnson, London; Mr. R. T. Manson, Howden; Mr. P. H. Holland, London; Dr. Samelson, Manchester; Mr. T. Moir, Glasgow; Mr. A. C. Johnstone, Kilkenny; Dr. Croft, London; Mr. R. M. Mann, Manchester; Dr. A. Mackintosh, Callington; Dr. J. J. Phillips, London; Dr. J. W. Langmore, London; Our Dublin Correspondent; Dr. Joseph Bell, Edinburgh; Dr. Rolleston, Oxford; A Correspondent; Dr. Dickinson, London; Dr. C. Kidd, London; Mr. James, Snitterfield; Mr. Whitehead, Manchester; Mr. Wanklyn, London; Mr. Copeland, Staindrop; Mr. Baker, London; Dr. Charlton Bastian, London; The Secretary of the Pathological Society; Mr. Hughes, Middlewich; Dr. Rogers, Rainhill; Mrs. Maugham, Carnarvon; M.D.; Mr. Metcalfe Johnson, Lancaster; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Lanchester, Croydon; The Rev. John Fyfe, Aberdeen; Dr. Habershon, London; Dr. Tilbury Fox, London; Dr. William Roberts, Manchester; Mr. Hinde, Liverpool; Mr. Renshaw, Ashton; Mr. R. Harrison, Liverpool; Dr. Broadbent, London; Mr. Moore, Belfast; Mr. Jones, Llanfyllin; Mr. Southam, Manchester; Mr. Barber, Sheffield; Dr. Cobbold, London; Mr. Liebreich, London; Mr. Teevan, London; Mr. Fairlie Clarke, London; Dr. Wardell, Tunbridge Wells; Mr. Bowman, London; Dr. Cotton, London; Mr. F. Mason, London; Mr. Gaskoin, Lendon; Mr. Savory, London; Mr. P. Hewett, London; Mr. A. T. Norton, Lonhon; Dr. F. T. Roberts, London; Dr. S. Fenwick, London; Dr. Morell Mackenzie, London; Dr. Clifford Allbutt, Leeds; Mr. Henry Morris, London; Mr. Richard Davy, London; Dr. George Harley, London; Dr. Douglas Powell, London; Dr. T. L. Brunton, London; Dr. C. F. Moore, Dublin; Mr. E. Bellamy, London; Dr. Thorowgood, London; Mr. Haynes Walton, London; Dr. Philipson, Newcastle-on-Tyne; Dr. Hughlings Jackson, London; Mr. T. Holmes, London; Dr. W. A. Hollis, London; Mr. Pridgin Teale, Leeds; Dr. Lauder Lindsay, Perth; Mr. Priestley Smith, Birmingham; Mr. Wood, Gateshead; Dr. Charlton Bastian, London; Dr. Tilt, London; Dr. Theodore Williams, London; Dr. Symes Thompson, Mr. G. I. Mackesy, Waterford; Mrs. Barclay, Edinburgh; Dr. Wilks, London; Mr. A. Burrell, Edinburgh; Dr. Dickinson, London; Mr. Haddon, Manchester; Dr. Ransome, Manchester; Mr. Clover, London; Dr. Parsons, Dover; Dr. C. P. Collins, Leamington; Mr. Dunkley, Stoke-on-Trent; Dr. Wade, Birmingham; Mr. Hitchcock, Greenwich; etc.

CLINICAL LECTURE

ON

CHRONIC BRIGHT'S DISEASE, WITH CONTRACTED KIDNEY

(ARTERIO-CAPILLARY FIBROSIS).

Delivered at Guy's Hospital, June 6th, 1872.

BY SIR WILLIAM GULL, BART., M.D., D.C.L.,
Physician Extraordinary to the Queen; Consulting Physician to Guy's Hospital.

[*From Notes by* MR. HENRY CLARKE.]

THE subject I have chosen for your attention to-day is one for which the clinical wards of Guy's Hospital are particularly famous. To use an expression of our German friends, Guy's Hospital is the "fatherland" of this disease. It was here that Dr. Bright pursued those investigations which have made his name immortal. "Bright's disease" is, however, but a generic expression, and appertains to many affections of the kidney, which, though more or less allied by the character of their morbid anatomy, so far as the kidneys themselves are concerned, are probably distinct in their cause and clinical history. It has long been felt that the term "Bright's disease" must either be discontinued, or be more strictly limited to one given pathological state.

The object which I have in view on the present occasion is to make some remarks on that general condition which is perhaps more properly Bright's disease, and which is associated with one form of fibroid contraction of the kidneys. And here it should be observed that the kidney may undergo fibroid contraction and disorganisation, and cause death by uræmia, without being associated with that change in the heart and arteries upon which I desire to discourse in this lecture. In such cases, the renal disease is probably due to some hereditary or congenital defect in the kidneys themselves, and is, more strictly, a local affection; and although the results, so far as the kidneys are concerned, may be very much like, or even apparently identical with, the more morbid conditions arising under other circumstances, what constitutional accompaniments there are are widely different from such as occur in the disease now spoken of.

The form of chronic Bright's disease, with contracted kidney, now under discussion, is, it would seem, a more general affection: it occurs chiefly at or after the middle period of life. Some of its various phases were, no doubt, recognised by the physicians of former times, and vaguely assigned, even so early as the Greek physicians, to special epochs of life, denominated by them "climacterics". It is chiefly between what they would have termed the seventh climacteric and the ninth—that is, between the forty-ninth and sixty-third years—that this morbid condition occurs. I do not quote these terms to give any support to the idea that there are climacteric epochs; but I may affirm that the state of which I am speaking is a mode of decline from the climax of health and vigour of a special kind.

As the facts of disease came to be more and more the objects of inquiry over mere symptoms at the bedside, and as morbid anatomy in support of such clinical observation was pursued more accurately after death, there would naturally be at first a tendency, with increased precision, to a somewhat narrow pathology: for instance, the investigations of the intestines in typhoid fever led Broussais and his followers, as we know, to maintain that fever was a local intestinal affection. A similar error seems to have been committed in respect of this form of chronic Bright's disease. The common change in the urine during life, and the morbid state of the kidneys after death, have so closely confined the attention of physicians, that they have often looked no further than the kidneys and their failing function for the grounds of their pathology, and their pathological views have been limited to the line thus indicated. Now, though no one will deny the almost paramount importance of keeping fully in view the results on different parts of the organism of defective renal excretion, and the tendency to death by uræmia, still we believe it can be no less maintained that the fundamental clinical facts of the disease in question are not included in such limited causation, and cannot be understood by the conditions of a merely renal pathology.

The constitutional form of chronic Bright's disease, with contracted kidney, or, as Dr. Sutton and myself have desired to designate it, "arterio-capillary fibrosis", is, it would appear, a primary and general change in the capillaries and arterioles of the body, and corresponds, therefore, in its seat in the adult to the "area vasculosa" in the embryo. And as it is the object of the embryologist to elucidate the changes through which the ovum proceeds upwards, to the perfect development of its tissues and organs, so it may be broadly stated to be the object of the pathologist to set forth the steps which lead downwards to death. There are occasions which make it advantageous for the pathologist to enlarge the scope of his considerations by admitting this comparison; for it is obvious that what is generally expressed by the term "vis formativa", whose resultant changes we see in development, is represented by the "vis conservatrix" in the adult, which failing, we have senility and death.

Apart from accidental disturbances in the course of life, we might, perhaps, with due knowledge of the inherited forces, be able to predicate somewhat of the course of their failure. The curve of the ascent and the curve of the decline would, in other words, have some more or less exact correspondence, and we should be able to realise fully the truth that there is not only "a time to be born" and "a time to die", but death might be predicted for a given individual to come in a certain time—say of any particular organ or of any particular system: for instance, we might be able to foretell that the failure would first appear in the nervous, or the vascular, or the secreting system. The form of chronic Bright's disease, with contracted kidney, is, it seems to us, one example of such (senile?) decadence.

Its clinical history varies in every case, according to the organ which suffers most and earliest. In one case, sleeplessness, headache, and other slight brain-disturbances, may be the first symptoms complained of; in another, the altered condition of the heart may first draw attention; in a third, loss of appetite, dyspepsia, sickness, and failing digestion, are most prominent; in a fourth, diuresis; in a fifth, a liability to bronchitis, with attendant emphysema; in a sixth, a state of general *malaise*, loss of strength, some emaciation, etc.

These various phases, separately or in combination, constitute the earliest ailments for which the physician is commonly consulted. They are for the most part vaguely referred to a gouty condition; and it must be admitted that the general morbid state of which we are speaking, though distinct from gout, is especially common in those whose ancestors have been gouty. It is often more erroneously referred to suppressed gout. This is less appropriate, since, except the vague flying pains to which such patients are liable, and the occasional deposit of uric acid or urates in the urine, there have often been no phenomena which could properly be termed gouty.

In a large number of cases which come daily before the physician, no doubt the disturbances in question are no more than a mere variation in the general equilibrium of nutrition, which, by due care as to diet and exercise, and the other general conditions of health, are easily corrected; but in a considerable number of persons they are the early signs of a general change in the vascular area, of which disease of the kidneys may or may not be an early and prominent part.

And here I may refer to the evidence supplied by the urine at the outset of chronic Bright's disease, with contracted kidney. Hitherto it has been the habit of the clinical physician to take the specific gravity of the urine, and to test it for the presence of albumen: should the specific gravity be normal (1020 to 1024), and should no change in the fluid be produced by heat and nitric acid, whatever ailments have been present, they have not been referred to the early stages of Bright's disease, but have been explained, as I have said above, by reference to some gouty condition, or to some limited change—functional or otherwise—in the part complained of: for instance, if in the stomach, to the food taken; if in the chest, to catarrh from cold. If flying pains have been complained of, they have been referred to neuralgia or rheumatism; if headache, to overwork, etc. But, assuming that we have to do with a case of coming Bright's disease in so early a stage, the following may be considered as not uncommon clinical conditions. The heart may be even already thickened, so far as to produce an increased impulse over an increased area. These signs of hypertrophy are somewhat more obvious, as already there may be a loss of subcutaneous fat, and, although not very marked, a further distinct loss of weight.

In a case that lately came before me, the patient, a gentleman aged 53, although he made no mention of emaciation, yet, when questioned, said his weight had declined within a year from fourteen stone eleven pounds to thirteen stone eleven pounds. Cardiac hypertrophy under these conditions may have no connection with valvular disease. Indeed, at an early stage both the loss of weight and the hypertrophy of the heart may easily be overlooked; the hypertrophy especially, as the

cardiac sounds may have undergone no change, or only a slight loss of distinctness in the first sound.

The examination of the urine at this stage gives varying results. For the most part, there is no discoverable change from health, or only the presence of a faint and doubtful opalescence, after boiling and the addition of nitric acid. Even this change may be absent altogether till later on in the disease; or, before it becomes constantly present, we may find albumen only in the urine passed after food. The presence of albumen may also alternate with the deposit of urates or uric acid. Albumen is often altogether absent when these deposits are present; but the relations of albumen to the deposits of uric acid and urates of soda and ammonia are by no means constant. These deposits and the albumen may occur together in the earlier stages of fibrosis of the kidney. It is by no means uncommon for even careful observers to overlook or lightly estimate the early indications which the urine thus affords of commencing fibroid cachexia.

Although the renal change is probably but part and parcel of a general state of morbid changes, the clinical value of the evidence afforded by the urine in the early stages in many cases is most important. It is desirable to examine the urine passed at different times of the day. The early morning urine may be normal in colour and weight (specific gravity, 1018 1022). That passed at noon may be still without deposits on cooling (1022-1024), with or without a faint opalescence after heat and nitric acid. That passed at 6 P.M. (assuming the dinner to be a late one) may be nearly the same as that at noon. That passed on going to bed may deposit urates, sometimes with, sometimes without, faint change from albumen by heat and nitric acid (specific gravity, 1024-1026). It is at this early stage that the symptoms are vaguely referred to disorder of the liver or stomach.

Those physicians whose minds are made up as to the cause of the cardiac hypertrophy in chronic "Bright's disease," may insist that even already there may be such a defective excretion from the kidneys as so far to interfere with the physiological relations of the blood to the tissues, that it cannot pass through the systemic capillaries without an increased impulse from the heart, and that the hypertrophy is so caused. But the assumption of such an altered state of the blood as a true cause of the hypertrophy is entirely unsupported by any observations on the blood itself, and is not supported by evidence on the side of the urine itself. The specific gravity, as stated above, may be normal; the quantity and colour may be normal; the cold urine treated with nitric acid may become as usual nearly solid with nitrate of urea; and the only change, and this but occasional, may be a faint opalescence, under heat and nitric acid, due to the presence of albumen. No doubt in a more advanced stage the uric acid and the urates may cease altogether to be deposited as the urine cools. The urine loses colour and specific gravity, and is considerably increased in quantity, though still in general free from all deposits of desquamated epithelium; as the albumen increases, it contains very transparent fibrinous casts, which are complementary of the albumen of the liquor sanguinis, and equally due with it to mere passive transudation. When these changes in the urine have become more marked, and the general cachexia is advanced, the renal affection is set down naturally, if the case is seen at this stage for the first time, as a primary cause of all the attendant changes, cardiac and capillary. But such a view seems to my colleague and myself to be an erroneous one, and to have arisen from a deficiency in our early clinical knowledge of such cases. Nor can this deficiency be easily supplied from hospital practice.

Poor men who are dependent upon bodily labour for their livelihood do not so often present themselves at hospitals in the early stages of disease. It is in private practice that we have to make good our wants in these particulars, and even here the scientific cultivation of medicine suffers by the readiness to explain away the causes of ailments down to the comprehension of the uninformed. It is, besides, to be noticed, that even when our hospitals afford evidence it is indistinct. In an early stage of fibroid cachexia, persons are apt to die of acute disease in the brain or lungs before the amount of renal change is enough to give it any recognised clinical significance. These early deaths take away from us the opportunity of observing the further course in such cases of the renal degeneration which, apart from such accidents, might soon have become a prominent clinical feature, though it escapes attention when less marked; and the subject is dismissed, with only this recognition, that the kidneys are coarse. I do not see how we could easily have escaped from the trammels of a narrow pathology, and, if I may be permitted to say so in respect of the matter under discussion, from its vicious influence on practice, if our observations had continued to be limited to the more prominent lesions of advanced "Bright's disease," as they present themseives at the bedside, and even on the *post mortem* table.

[*To be continued.*]

HIPPOCRATES: HIS LIFE AND WRITINGS.

An Inaugural Address delivered before the Royal Medical Society of Edinburgh on the 8th of November, 1872.

BY J. WARBURTON BEGBIE, M.D., F.R.C.P.Ed.

MR. PRESIDENT AND GENTLEMEN,—I am going to ask your attention at this time to the life and labours of one of the greatest men connected with our profession in any age or clime. And, although his name is the very earliest name of distinction in Medicine, a careful consideration of his character and work, as these are unfolded to us in his writings, will satisfy all candid minds that we owe a great debt of gratitude to the "Father of Medicine," and that much in the way of instruction and encouragement is to be gathered by us from a diligent perusal of these writings.

In the four hundred and sixtieth year before the birth of Christ, according to very general belief, Hippocrates was born. Whether the date now given was the exact year of his birth or not, is not a matter of much importance. We know, on the authority of Aulus Gellius (who flourished in the second century), in the twenty-first chapter of the seventeenth book of the *Noctes Atticæ* (so called because the work was composed by Aulus Gellius in a country house near Athens during the long winter nights), that Hippocrates and the illustrious Socrates (although born later) were contemporaries. "Itaque inter hæc tempora nobiles celebresque erant Sophocles ac deinde Euripides tragici poetæ, et *Hippocrates Medicus*, et Democritus philosophus: quibus Socrates Atheniensis natu quidem posterior fuit; sed quibusdam temporibus iisdem vixerunt." That Hippocrates attained a very considerable age appears sufficiently ascertained, but in regard to the exact time of his decease there has arisen a difference of opinion. The years of his life have been fixed at 85 by some; at 90, 99, 104, and even as many as 108 by others. Which of these statements is correct, we have no proper grounds for determining. We know, however, that the period of the greatest activity of Hippocrates, when his reputation reached its greatest height, was the earlier part of the fourth century before the birth of Christ. Flourishing, therefore, in the time of Pericles, besides the greatest of Athenian statesmen, Hippocrates had for his contemporaries Socrates, Democritus, Herodotus, Thucydides, also Plato and Xenophon, the distinguished disciples of Socrates. Among poets too he had his birth; Æschylus, Sophocles, Euripides, Aristophanes, and Pindar flourished at the same time. Phidias, moreover, the "Sculptor of the Gods," the architect, at least superintendent of works, of the Parthenon, the sculptor of the Olympian Jove, was his contemporary. Hippocrates thus came into the world under circumstances which must have co-operated with his own remarkable genius in raising him to the extraordinary eminence which during his lifetime he attained, and which his name has in all subsequent ages retained. In the words of Celsus, as true now as when penned by him in the first century, that is, four hundred years after the death of Hippocrates, in alluding to his separation of the study of philosophy from medicine, "Hippocrates Cous, primus quidem ex omnibus memoriâ dignis, ab studio sapientiæ disciplinam hanc separavit, vir et arte et facundiâ insignis."

You have all heard of Æsculapius (Ἀσκληπιός, in Greek)—the god of the medical art, or of Medicine. Homer makes no mention of the origin of Æsculapius; but you will remember his sons Machaon and Podalirius, who were medical men as well as commanders of troops in the Greek army during the Trojan War. Although Homer does not refer to Æsculapius as a divinity, but merely as a physician—styling him "ἰητὴρ ἀμυμών" "the blameless physician"—he was worshipped as a god over the length and breadth of Greece. His temples (Ἀσκληπια) were, however, not only places where the god was worshipped, but were resorted to by numbers of sick people, who received treatment in them, and were therefore to be compared to hospitals in modern times. Hippocrates has generally been regarded as the lineal descendant of Æsculapius. Putting aside the fabulous, there can be no question that he belonged to the family of the Asclepiadæ, the name given to the supposed descendants of the god. The genealogy of Hippocrates is given as follows by Tzetzes, the learned but self-conceited Greek grammarian of Constantinople in the twelfth century, after the manner of an infinitely more exalted genealogy which we have in a still more ancient book. "Æsculapius, who was the father of Podalirius (him of Troy), who was the father of Hippolochus, who was the father of Sostratus, who was the father of Dardanus,

who was the father of Crisamis, who was the father of Cleomyttades, who was the father of Theodorus, who was the father of Nebrus, who was the father of Gnosidicus, who was the father of Hippocrates the first, who was the father of Heraclides, who was the father of Hippocrates the second, commonly styled the Great Hippocrates." Thus, the Father of Medicine was fifteenth in descent from the Greek God of Medicine. The belief in the lineal descent of Hippocrates from Æsculapius was one generally entertained by his countrymen, and also that which ascribed his origin on the female side to Hercules.

The island of Cos, now commonly styled Stanchio, was the place of his birth. On this island, then remarkable for its salubrity and for the delicious nature of its climate, there was erected one of the most distinguished of the temples of Æsculapius. I may mention, in passing, that the original and most renowned of the Æsculapian temples was founded at Epidaurus in Greece, from which temple the worship of Æsculapius was introduced into Rome at the command of the Delphic Oracle or of the Sibylline books, 293 B.C. The principal seats of the Asclepiadæ in the time of Hippocrates were at Cos, Cnidus, and Epidaurus. On the former (an island) was erected, as I have just said, a famous Æsculapian temple, in which, inheriting as he no doubt did from Heraclides his father, and from his grandfather Hippocrates the first, a distinguished position, we can readily understand that in assisting his father in the management of the sick, and in the access he had to the stores of observation, such as they were, collected and treasured in the temple during several centuries, Hippocrates enjoyed the greatest available advantages in the acquirement of professional knowledge. Having, it may be supposed, acquired the usual information which the ordinary observation of diseases and their treatment in the temples afforded, Hippocrates—against the advice, it may reasonably be imagined in defiance of the entreaties, of the Coan Æsculapian priests—determining to judge for himself as to the merits of the very different and rival system of the Gymnasia, entered as a pupil to Herodicus of Selymbria, in Thrace, and from him received instructions in the application more especially of gymnastic exercises in the maintenance of health and for the cure of diseases, as well as of those means which were ordinarily employed in the Gymnasia. Lastly, Hippocrates studied philosophy under the sophist Gorgias of Leontini in Sicily, and he also received instruction in the polite literature and philosophy of the age from Democritus, who, in addition to his philosophic attainments, had devoted much attention to the study of medicine, comparative anatomy, and physiology, such as these sciences then were. From Democritus he no doubt acquired a knowledge of the peculiar views entertained by the early philosophers in regard to medicine. Having received all the instruction in the principles of medicine, and concerning its practice, which the education of the Æsculapian temple, the Gymnasia, and the schools of the philosophers were capable of extending, Hippocrates, there is little doubt, commenced the practice of his art in the Asclepion of Cos, as his father and grandfather, if not other forefathers, had done. Why he afterwards left the place of his birth and early education, visiting many different places, cannot now, and never has been, satisfactorily determined. Probably that conjecture is nearest the truth which supposes him, dissatisfied with the domestic instructions of Cos, to have sought for a more complete and careful medical education. Certain it is that he travelled in Asia Minor, Thrace, Macedonia, Thessaly, and many other countries. Indeed, from his writings we gather that Hippocrates visited the principal cities of Europe and Asia, entering into discussion with philosophers, examining critically the Gymnasia, and extending professional assistance to those who sought his aid; collecting, moreover, assiduously many observations on the different diseases which he encountered, on the epidemic constitution of maladies, on climate, regimen, and the manners and customs of foreign nations. The cause of Hippocrates leaving Cos was ascribed by Soranus (not the biographer of Hippocrates—there seem to have been several distinguished men bearing this name) to a dream, in which he had been commanded by the god to go into Thessaly and there to remain. Another, and in the highest degree improbable, reason for his departure has been assigned by Andreas; namely, his having set fire to the library at Cnidos—in the famous Æsculapian temple—in order that he might enjoy a monopoly of the knowledge which he had previously extracted from its records: a base calumny, which, in the words of the late Dr. Adams of Banchory, not the least distinguished of the modern biographers of Hippocrates, "is more than sufficiently refuted by the veneration in which his memory has been held by all subsequent generations." Numerous are the traditions of what Hippocrates effected on his travels or accomplished at different periods during his long life. What amount of credence is to be attached to the various stories which have been handed down to us, has been at different times keenly argued, and cannot now be at all satisfactorily determined. The account furnished by Soranus of the cure which Hippocrates wrought in the case of Perdiccas, son of Alexander, King of Macedonia, is copied, without any exception being taken, by Le Clerc, the French, and by Sprengel, the German, historians of medicine; and, although the eminent Dr. Greenhill, writing in Dr. Smith's *Classical Dictionary*, has shown that an absurd absence of correctness in dates throws extreme improbability on the narrative, it was given in Daremberg's first edition of the Hippocratic works, but removed from the second, and is to be found in the *History of Medicine*, by the late Dr. Dunglison of Philadelphia, edited by his son, and very recently published. Having made this reference to the story, which in itself is an interesting one, although incorrect in so far as Hippocrates' connexion with it is concerned, I may give it to you. One day, among others, he was summoned to visit the royal patient—*i. e.*, Perdiccas, conjointly with Euryphon, another physician, but who had attained a much greater age. Perdiccas was supposed to suffer from a slow fever. Hippocrates soon perceived that the mind of the youthful patient was more at fault than his body; and, in attentively observing all the actions of the invalid, having remarked him to change colour in looking at Phila, then in attendance upon him, he decided that Perdiccas was in love, and found means to cure him by informing the lady that she had been the unwitting cause of his malady.

The name of Hippocrates has been associated with the great plague which visited Athens; and its contagious inroads he is stated to have arrested there, as in other places, by kindling fires. This circumstance, so very generally credited, is thus referred to by Galen: "Pestilentiam ab Athenis, abegit Hippocrates per totam urbem varias pyras ex materiâ aromaticâ extruens." The commentators on Hippocrates have experienced considerable difficulty in determining whether the great physician really was at Athens during the occurrence of the plague; and, presuming him to have been there while such prevailed, what was the particular epidemic during which his useful counsels were given, and his advice found so signally successful that, according to one authority, he was honoured, by a solemn decree of the people, with a crown of gold, and initiated into the solemn mysteries of Ceres and Proserpine. The circumstance of the illustrious Athenian historian Thucydides, who in striking characters has depicted the plague at Athens, not having mentioned Hippocrates and his services in his account, while he states decidedly that the skill of the physicians could do nothing to mitigate the severity of the malady, is, for certain reasons which are well expressed by Dr. Adams in his edition of the Hippocratic works, no valid objection to the truth of the story; while the only serious doubt which can be brought against it is the want of contemporaneous evidence in its support. Supposing Hippocrates to have been actually called upon to administer professional assistance, it must have been during one of the attacks which occurred some years subsequently to the great plague chronicled by Thucydides. Although the name of Hippocrates may not have been heard at the commencement of the fatal visitation, and thus his services have passed unnoticed by the Athenian historian, it is not at all unlikely that, after he had risen to the head of his profession in Greece, as we know he subsequently did, he should have been publicly consulted regarding the treatment of by far the most formidable disease then prevalent. What adds an appearance of truth to this opinion is, that several of the genuine works of Hippocrates, which were probably published during his lifetime, relate to the causes and treatment of epidemic and endemic diseases. Upon a careful investigation of this portion of the life of Hippocrates, we can have no hesitation in agreeing with the learned commentator already mentioned, that, although his visit to Athens, and the fact of his having been consulted by the magistracy of the city, is not determined by any contemporaneous evidence, it is by no means devoid of probability; while the objections to it, which have been started by modern authorities, have not so much weight as is generally supposed.

One other circumstance in the life of Hippocrates is mentioned by Soranus—namely, his refusal to go to the court of Artaxerxes (surnamed Longimanus) when invited to pay a professional visit. This story, as it has reached us, is as follows. Persia happened to be ravaged with the plague. The governors of Asia Minor wrote to Artaxerxes to inform him of the high reputation of the Coan physician. The king, in replying, desired the governors to make the most liberal offer, in order to induce Hippocrates to visit his vast dominions. The governors forwarded the letter of the king, and, in doing so, promised in his name every reward and honour which he could wish for or at all desire. The physician, however, refused, and returned answer in these striking words which, to use the language of a modern French writer, ought to be engraved on the memory of all those of his successors who can think and who can feel. "I have in my own country the food, the clothing, and the habitation I require. As Greek, it would be unworthy of me to aspire to the riches and grandeur of the Persians, and to serve the foes of my country and of liberty." This haughty and memor-

able answer nearly plunged Hippocrates into trouble; but, when demanded by Artaxerxes to deliver him up, in order that punishment for his insolence might overtake him, the inhabitants of Cos dared the great king, and refused to deliver up a fellow-citizen of whom they had so much reason to be proud, and to whom they owed so much. The firmness of the attitude which these patriots assumed, and the unity by which at that time the different Grecian states asserted their common independence, averted in all probability a Persian invasion, which at first appeared to be all but imminent. Now, in regard to this story, just as respects the one already mentioned of the Greek plague, Dr. Ackermann, in his account of Hippocrates in Fabricius, *Bibliotheca Græca*, Dr. Henderson, and other modern scholars, affect to treat it with disbelief; why or wherefore they do not very clearly state. As opposed to this view, we have the opinions of the accomplished Cabanis and of Dr. Adams, who, while readily admitting that the letters in the Hippocratic collection which relate to this story (these are from the first to the tenth inclusive) can scarcely be received as genuine, find no proof that the event upon which they are made to turn is also devoid of truth. It is evident, indeed, that the ingenious and shrewd French author to whom I have alluded, attached very considerable credit to the anecdote, for he has quoted it in both of his well-known works, offering the following apology for the repetition: "I have already cited it in my essay, *Sur la Certitude de la Médicine*, but may perhaps be allowed to repeat the quotation at a time when certain writers seem to be using their utmost efforts to stifle all free and generous sentiments."

Such, gentlemen, are the stories connected with the life of Hippocrates most worthy of our regard, on account of the probability of their dependence upon truth. Others there are, but these so manifestly inaccurate or false as to be altogether unentitled to consideration. Already during his lifetime Hippocrates had much honour—indeed, unequalled renown, in his profession. The habit of calling medicine the art of Æsculapius was gradually lost, and learned men as well as the people generally spoke of it as the science of Hippocrates. I have briefly alluded to all the particulars of importance in his biography which have reached us. After a long life, which must have been essentially a happy one, because spent unreservedly in the service of his fellow-men, "pallida mors", from whose fell grasp for a time he had been instrumental, under Providence, in rescuing very many, "æquo pede" reached him, and at Larissa in Thessaly he died. He was buried between that city and Gyrtona. His tomb, according to local tradition, was for a long time covered by swarms of bees, whose honey persons came from great distances to gather, on account of the peculiar efficacy it was found to possess in the aphthous disorders of childhood. "He has left", writes Dr. Adams, "monuments of his genius more durable than the marble statues of Phidias his contemporary, and as enduring as the tragedies of Sophocles, and the Olympic odes of Pindar."

I have now to offer you some observations on the writings of Hippocrates; and the first remark I have to make is one with the truth of which many among you are probably already familiar—that only a portion of the works which pass under the name of Hippocrates, and which are contained in the Hippocratic collection, were written by Hippocrates. There can be little doubt that some of the immediate descendants of the Father of Medicine, and more especially his sons, Thessalus and Draco, and his son-in-law, Polybus, as well as others not so closely related to him, continued to publish their own observations and writings under his name, in order to secure honour for that name, and, therefore, increased respect for his memory; or, and no doubt this feeling often prevailed, to obtain more weight for their own opinions and precepts. Further, the practice which they followed was one which had long existed among the families of the medical priesthood. The causes now enumerated rendered it very difficult, at no long time after the death of Hippocrates, to distinguish his works from those of his sons and disciples. A difficulty, thus originated, has continued to increase, as the texts became impaired through the ignorance or inexactness of copyists, and, still more, owing to the bad faith of book-mongers.

Hippocrates lived at a time when paper or papyrus was very scarce among the Greeks. It is true that after the reign of Amasis, King of Egypt—one hundred years or thereby before Hippocrates—who, having married a Grecian wife, had permitted the formation of Grecian colonies on the banks of the Nile, the art of preparing the papyrus had been known to the Greeks, but the use of it was but little diffused throughout their country before the time of Alexander the Great—that is, a hundred years after the birth of Hippocrates. The papyrus or papyrum, the paper reed, is referred to by Pliny: "Papyrus ante Alexandri tempora fuit cognita." And again: "Papyrum ergo nascitur in palustribus Ægypti aut quiescentibus Nili aquis."

The Father of Medicine, however, recorded his observations in a very concise style upon tablets (δέλτοι, in Greek) coated with wax, or upon skins of animals (διφθέραι)—[a Greek root, with which the world in general has of late years, unhappily, become only too familiar, since Bretonneau, the distinguished physician of Tours, about forty-five years since, applied it to indicate the peculiar appearance of the throat, as if coated by a skin—hence diphtherite and diphtheria]. According to Galen, it would appear that not a few of the writings of Hippocrates were never intended for publication, but solely for the author's own use. That many of the works, according to the practice of the great writers of antiquity, were published separately during his lifetime, is in the highest degree probable. Horace, Martial, and Cicero, acted in this way, so also did Plato and Aristotle, in an age not far removed from that of Hippocrates; and, in addition to the proof which these facts bring with them, there is this still more decided ground to go upon—that Galen makes observations and draws inferences clearly implying the publication of certain of the works *before*, and of others *after*, the death of Hippocrates. There exist now no proper data for determining the order in which the different works of Hippocrates appeared. The book of "Aphorisms", however, being made up in great measure of conclusions and observations recorded in other of his works, we have every reason to infer, says Dr. Adams, that this important work was among the latest of his literary labours.

The following works have been uniformly regarded as undoubtedly composed by Hippocrates, and from the first have received the sanction of his name. 1. The Prognostics; 2. The Epidemics (first and third books); 3. The Aphorisms; 4. On Wounds of the Head; 5. On Regimen in Acute Diseases; 6. On Air, Water, and Places. Nothing, writes Dr. Adams, but the most lawless spirit of criticism can lead any one to doubt the genuineness of the works now enumerated. This list does not comprise the fourth part of the entire Hippocratic collection. Thus reduced, however, the portions known to have been written by Hippocrates still suffice, when we consider the age in which they were composed, to justify the enthusiasm of his contemporaries and the admiration of posterity. During many ages, authors confined themselves very much to acting as commentators on the Hippocratic writings. In his *Cours sur l'Histoire de la Litterature des Sciences Médicales*, the very learned French author, M. Daremberg—whose recent death, at the comparatively early age of 53, all who are interested in the study of medical history must keenly deplore—gives a list of commentators on the Hippocratic writings extending to fifty, forty of whom flourished antecedent to Galen—that is, before the second century. Allow me in the little time which is available for the purpose to direct your attention to the undoubtedly genuine writings of Hippocrates; and, first of all, to the Book of Aphorisms, the authorship of which has, from antiquity, been invariably regarded as authentic.

The title of "Aphorisms", "Aphorismi", "Ἀφορισμοί" in Greek, literally *definitions*, "short pithy sentences" or precepts, clearly expresses the nature of its contents. Than this book of "Aphorisms" no medical work of antiquity has had a more gigantic reputation. Physicians and philosophers have continually vied with one another in paying to it the admiration and awarding to its author the veneration which a careful study of its contents has never failed to excite. Of it Suidas, very eminent as a lexicographer in the seventh century, says that "it is a performance surpassing the genius of man". "These Aphorisms", writes Renouard, a distinguished French historian of medicine, "were long regarded as the crowning glory of the medical scientific edifice, as the most sublime effort of medical genius. Only a few years back, the Faculty of Medicine in Paris required of the aspirants to the doctorate to insert a certain number of the Aphorisms in their theses; and perhaps nothing less than the political revolution in France was sufficient to overthrow this old relic of superannuated adoration."

I am inclined to think that the neglect which within a comparatively recent period has been shown for ancient medical literature, and the manner in which medical authority of a like age has been discarded, have in no particular been more unjust and injurious than in overlooking the sterling worth and proof of the author's amazing power of observation which the Aphorisms contain. Were I asked to give advice as to the time when a study of the Hippocratic writings generally, but more especially of the book of Aphorisms, would prove most serviceable to the student of medicine, I should say that, to the young practitioner familiar with the writings and observations of modern physicians and surgeons, whose judgment is becoming gradually ripened by experience, the study of the Aphorisms is invaluable; but, unlike Renouard, I can conceive no time and no period of the education of a physician when the hours spent in the attentive perusal of the Hippocratic writings can with any propriety be considered as lost, or otherwise than most profitably employed.

The language used by Hippocrates is generally concise; sometimes on this account it may be considered a little obscure. Dr. Black has well described his language as "close and compressed, and his diction

as adorned with great majesty". In watching the progress of diseases, we have in the Aphorisms a proof of how vigilant he was, and how indefatigable; no less remarkable was he for the profundity and the singular correctness of his judgment. Not only does a perusal of the Aphorisms lead the reader to the conclusion of his having to deal with the most observant of physicians, but the conviction of their author having been a profound philosopher is also forced upon him. You all know, gentlemen, how apt we are to judge of the excellency of any work by the manner in which its opening occurs. I will venture to say that no medical work of any age begins in a more majestic manner than the book of Aphorisms. Take it in the original Greek, in Latin, or in our own language, the effect it produces on the mind is eminently grand.

"'Ο βίος βραχὺς, ἡ τέχνη μαχρὴ, ὁ καιρὸς ὀξὺς, ἡ πεῖρα σφαλερὴ, ἡ κρίσις χαλεπὴ. δεῖ οὐ μόνον ἑωυτὸν παρέχειν τὰ δέοντα ποιέοντα αλλὰ καὶ τον νοσέοντα, καὶ τοὺς παρέοντας, καὶ τα ἔξωθεν."

"Vita brevis, ars longa, tempus præceps, experimentum periculosum, judicium difficile; opportet autem non solum se ipsum exhibere quæ decent facientem, sed etiam ægrotum et præsentes et quæ externa sunt."

"Life is short and the art long, the occasion fleeting, the experiment dangerous, and judgment difficult. The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants, and externals co-operate."

"The exordium of this work", says Dr. Adams, "bespeaks at once the reflective philosopher and the practical physician. It commences by contrasting the shortness of human life with the extent of the medical art, the facts of which, as Theophilus the commentator remarks, are diversified, and some of them require long and tedious investigation. 'The occasion is fleeting'—that is to say, the season during which remedies may be successfully applied is soon past; as the poet says, 'Fugit irreparabile tempus.' The last part of the aphorism evinces how well he had apprehended the difficulties which beset the practitioner of medicine, who must be not only acquainted with the part which he himself has to act, but also possess the talent of making the patient, the assistants, and all around co-operate with him in the performance thereof."

There are expressions in this first Aphorism which have made it almost universally known. "Ars longa", "tempus præceps"—these are in every person's mouth: and do we not recognise the *very* sentiment of the old Greek physician in the beautiful lines of America's foremost living poet?

"Art is long, and Time is fleeting,
And our hearts, though stout and brave,
Still, like muffled drums, are beating
Funeral marches to the grave."

And may we not say of Hippocrates, in the words of the same poet—

"Lives of great men all remind us
We may make our lives sublime,
And, departing, leave behind us
Footprints on the sands of Time."

[*To be continued.*]

THERAPEUTIC MEMORANDA.

ANODYNE COLLOID.

I BEG to send herewith a bottle of a new colloid, which I have prescribed for some time as a topical anodyne application. It has given me very satisfactory results in neuralgia, sciatica, lumbago, all muscular pains, etc. It relieves local pain for the time, and procures a good night's rest, while, of course, the internal treatment appropriate to each case is carried on. I should wish to see its usefulness more extended. It contains—Hydride of amyl, ℥j; aconitia, gr. j; veratria, gr. vj; and ethereal collodion to ℥ij. The amyl, by its rapid volatilisation, often produces, almost instantaneously, the desired result; but, should the pain continue, the alkaloids can be brought into activity by applying a piece of moist spongio-piline over the collodion film. The amyl hydride is the only new ingredient; but I think the colloid is a clean and elegant preparation.

M. H. LACKERSTEEN,, M.D.

29, Queen Anne Street, W.

ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION IN 1873.—The Arrangement Committee of the metropolitan members have considered that the fine building of King's College would, by its site and structure, afford the most convenient place of meeting. Their application for its use has been promptly and kindly acceded to by the Council of the College.

AN ADDRESS

ON

THE SCIENTIFIC AND SOCIAL VALUE OF THE BRITISH MEDICAL ASSOCIATION.*

By RICHARD C. SHETTLE, M.D.,
Physician to the Royal Berkshire Hospital; President of the Reading Branch.

GENTLEMEN,—From the very able address delivered at our last annual meeting by our President, Mr. G. May, you were made intimately acquainted with the working of the British Medical Association during the period of its past existence. It will be my endeavour, to-day, to sketch out a few of the benefits that ought to accrue to the medical profession generally from such an Association, provided the principles upon which it is supported be sustained upon a broad and right basis. Nor does it appear to me to be necessary that I should make any apology for bringing the affairs of the Association so soon again before you; for there are, I believe, but few amongst us who give much attention to the general working of this or similar institutions. And, indeed, such apparent (though not real) indifference to these matters cannot cause much surprise; for surely the energy and mental strain of the daily routine of ordinary practice are quite sufficient to occupy the attention of men upon whom the grave responsibility rests of ministering to the relief of the bodily and mental infirmities of their fellow-men, and whose time is seldom at their own disposal for other matters. Under such circumstances, I take it, these annual meetings ought to tend to very much good, inasmuch as it is on occasions like the present that members can quietly consider and discuss any subjects which may have presented themselves to them as individual members during the previous year, and which may then, if considered advisable by the Council of the Branch, be brought prominently before the Parent Society.

It must be premised that the chief benefit derived from such institutions consists, as the name implies, in associating members of the profession together, not only for the purpose of framing laws and making rules for the guidance of the members generally, but also for the far more agreeable and pleasurable occupation of spending some few hours—and it may be days—once a year in the recreation of the mind, in the society of many of the most enlightened, intelligent, and necessarily liberal-minded, of the medical profession. But, in whatever aspect we regard the Association, we cannot lose sight of one great fact—that the chief aim and object is to consolidate the members of the profession into one great body, so that each member may act in concert with others, and it might, and should also, be added, that no member may suffer without the whole body being affected. We are well aware that the whole Association is built up upon a tolerably strong and right basis; and although there may be some defects in the general management, which some members might wish to see placed upon a more substantial and better footing, I would venture to point out that the purity of principle upon which the body is working is not materially affected injuriously (at any rate, to any great extent) by those defects, which will undoubtedly either be remedied or removed ere long. Moreover, we are quite certain that we have an executive guiding us, under whose watchful care and influence we shall be directed aright, and that, as circumstances and events occur, experience of the past will give us that prescience of the future which will undoubtedly, if we are true to ourselves, tend to solidify and perfect the British Medical Association.

It is not, however, to be supposed that this or any other society can be worked to the satisfaction of all its members; but, as a rule, I believe that, if we value the Association in a proper spirit, we ought either to seek to investigate and bring before the Council of the Parent Society those matters upon which we are not satisfied; or, if they be of a minor nature, to believe that they will right themselves. Under any circumstances, I would strongly urge upon members not to leave the Society for any grievance, unless the individual points of such grievance have been previously thoroughly investigated in all their aspects by the cool judgment of the Council of the Branch. We know full well that union is strength, and that it is by the united efforts of individual members that good can be effected which, as units only, they would be perfectly powerless to accomplish; and it is quite certain that, if we, as a pro-

* President's Address delivered at the Annual Meeting of the Reading Branch.

fession, are to take our proper stand in this, as in any other country, and desire to evince the power which we undoubtedly possess—that power, be it remembered, whose very existence consists in trying to work good and destroy evil—we can only attain it by the undivided exercise of such, in our endeavours to work for the common good as the great aim we have in view. The larger the number of good honest shoulders we can bring to the wheel of our Association, the more surely, the more certainly, and the more rapidly shall we cause that wheel to revolve, and carry our profession to that position in the State which it has a right to occupy.

Having thus touched very lightly upon the general principles upon which the Society is worked, I would now direct attention to the benefits that may be derived from the general annual meeting of the Association, both in a scientific as well as a social point of view; nor do I believe we can too highly value these gatherings, although I am persuaded that it is only by attending them, and throwing ourselves well into the work done, that we can fully estimate their benefit.

First, in a scientific point of view, we have the address delivered by the President, and the medical and surgical addresses of the year—addresses which, as a rule, embody all the improvements which have been effected in either branch of the profession during recent years, and which have had the most careful and attentive consideration of the lecturers. We also find that the work to be done is properly divided into sections, in each of which highly interesting subjects belonging to the particular branch are brought forward and discussed, for the most part, by men who have made the topic their own special study. For instance, there are sections in medicine, surgery, midwifery, medical psychology, public medicine, etc. Now, if all such matters are thus brought forward, and the various modes of treatment properly laid open and discussed, surely no one can question the fact that great benefit must arise from the friction of minds of men earnest and solicitous for the elucidation of truth, and seeking to effect that end by calmly and deliberately working for truth's sake, judiciously and quietly pointing out error in a brother's opinion where such error exists; but ever remembering that future investigations may cause them not only to modify their own opinions, but absolutely to regard their previous work from a completely different point of view from that which they now entertain, and by which they may be seeking to overthrow the opinion of another individual. In proof of this change of opinion, it is only necessary that I should point to the action of digitalis and belladonna. Until about two years since, it was generally believed that these medicines were simply and purely remedies which depressed the action of the heart. Now it is well known that they act as stimulants to that organ and the capillary circulation generally; and, indeed, the Hastings Gold Medal was awarded in 1870 to Dr. Fothergill for his admirable essay on the action of digitalis. Dr. Richardson, again, one of the most earnest and valuable workers we have of our time, wrote a long treatise some years since on the cause of the coagulation of the blood. At a later date, it is true that further investigations, both by himself and others, caused him to revoke the opinions for which he had obtained the Astley Cooper prize. Nevertheless Dr. Richardson, although proved to be in error, was well known to have honestly worked, and worked hard, in his endeavour to elucidate the truth respecting that most important operation of life. Surely, gentlemen, all such efforts after truth ought to be commended, even though they fail; and, indeed, it must be obvious to all, that none of these meetings could be held, no discussion take place upon points of vital importance, and a bar would be laid upon all scientific exploration were it otherwise; for who would dare to enter the field of investigation and discovery, if the only return he obtained for his hard work was to have the general stigma of his professional brethren thrown upon him if, perchance, he failed to perfect his work? It was only a few days since that I heard Dr. Wilks declare, in the Address on Medicine which he delivered at the late meeting at Birmingham (an address which was considered, I believe, by all who had the good fortune to hear it, as one of the best that had ever been given), that he had no conservative feelings in respect to bygone doctrines, but a strong faith in progression in medicine, as in other things. If so, then very probably the information we possess to-day may be superseded by information of a higher character to-morrow; and this information—this progress in the science of medicine and surgery—I am of opinion, is best to be attained not only by men quietly working in particular fields of the profession which they have made their own by long and patient working, but more especially by the ventilation of such subjects at the annual meetings of the Association; for it is by such means that various topics are brought prominently under the consideration of other truth-seekers, discussion is invited under different and enlarged auspices, and fresh facts brought to light which again cause the matter to be regarded in a still wider range, and thus rendered more comprehensive, better understood, and consequently of more value to the profession generally. Under all these circumstances, I think we cannot fail to perceive the beneficial tendency of these annual gatherings in a scientific point of view.

In now referring to the benefits that may accrue from the annual meetings in their social aspects, it is unnecessary for me to say much upon this part of the subject; for there can be, I should imagine, few persons who would not confess that a medical man, of all others, absolutely requires a certain amount of rest and relaxation, as a general rule, once in a year. Medical education has latterly embraced a greater knowledge of many of the collateral sciences, and is daily becoming more exhaustive in the work required; and a certain knowledge and dexterity in the use of the microscope, and even of the sphygmograph, etc., will, I believe, shortly be demanded, to say nothing of electricity and magnetism. But, independently of all such knowledge that has to be acquired, if we are desirous of keeping our information on a par with that of others, the very nature of the medical profession entails upon us an amount of mental strain and work which exeeeds that of any other profession; for we must bear in mind the fact that, if the clergyman, the barrister, or the lawyer, have to work hard during their periods of work, they have also the long vacation, or more or less frequent holidays as times of rest, all of which are denied to the medical profession. To medical men, even the Sunday is frequently and of necessity as much a day of labour as any other day, so that the mental strain is often continued from year's end to year's end, without any brief interval of repose. Were it only, however, with mental fatigue that the profession had to cope, it would be bad enough; but it is quite certain that excessive mental work must be accompanied by physical effects which tell upon the structure of the brain itself. It is, however, quite unnecessary to do more than just refer to these effects here, as we are all intimately acquainted with them and their results; but I think I have said enough to prove the fact that the members of the medical profession are as much in need of rest and refreshment both of mind and body as any other members of the community, if not more so. The annual meetings certainly tend to promote and facilitate the opportunities for this change of scene and relaxation, and are, for the most part, held in such localities as possess attractions in many ways, and are thus likely to prove interesting, whilst, at the same time, they are capable of accommodating a large number of visitors. Facilities are thus given us of forming new acquaintances, and even friendships with some of the celebrities of the day—friendships which may be renewed year after year, with all those delightful interchanges of thoughts and ideas which cannot fail to be beneficial to those who have the pleasure of thus associating, and who, but for these annual meetings, might never have had the opportunity of being brought together.

At the recent gathering at Birmingham, upwards of five hundred members, I believe, were present. The reception given to the Association by the local members was exceedingly warm and cordial, and the various manufactories of the town and neighbourhood were thrown open for inspection to any one producing the card of the Association. I believe it is generally admitted that few things so open out the mind, and give us such a practical knowledge of the resources of our country, as a visit to some of our principal manufactories; for my own part, I am ready to confess that when I visited the pen-making establishment of the Messrs. Gillott, my first thought was, what could become of all the pens; for it seemed as if they had facilities for making more in one week than would suffice all the scribes in the world for a year at least. Again, on seeing the work done at the small arms manufactory at Small Heath, near Birmingham, one would be induced to suppose that all the world was going to war, and the certain destruction of all the pen-wielders was imminent. Now, when we remember the number of the manufactories for only those two branches of our trade that are at work in this kingdom, a visit to them must surely tend to enlarge our views and ideas with regard not only to the resources, but also to the requirements of the present day, and is calculated to remove some of those contracted notions we are so apt to entertain when confined only to the routine of our usual sphere of occupation for any length of time together. Last year, the Association held its meeting at Plymouth, at which time the members met with an equally kind welcome both from their professional brethren and the authorities of the three towns. Places of the greatest beauty were visited; mansions and grounds were thrown open, to which excursions were made; a Government boat was always in readiness to convey members to the Eddystone Lighthouse, or to one of the numerous men-of-war in the Sound, where gun-drill and experiments in the explosion of gun-cotton were gone through specially for the benefit of the Association; and many other advantages placed at their disposal for the recreation of mind and body.

In thus pleading for holidays for the medical profession, I have been dwelling more especially upon the cases of individuals like myself, who

I am bound to confess, are liable to become wearied with work, and who consequently find moderate relaxation a great boon ; but all are not so constituted. There are giants in these days, even as in days of yore—giants in science and giants in mind—who can go on pursuing the same course, and getting through a large amount of work without fatigue or sensation of weariness, and who would feel it rather a bore than otherwise to get away from home. To these, gentlemen, what can we prescribe better than an increase of work, by taking charge of the patients of those among us who desire to absent themselves for a while, and so mutually to increase each other's pleasure? There have been times when medical men have feared to leave their patients, knowing that undue influence and rivalry have often prevailed amongst them ; but we must hope those days are fast disappearing, and all such unworthy conduct will be for ever set aside ; and I believe the more this Association is heartily supported and friendly intercourse kept up, the more liberal-minded and generous-hearted will the profession become, and the greater will be the endeavour to work harmoniously, not only in our own locality, but in a wider field ; whilst the golden rule of doing to others as we would they should do to us will be better understood and more perfectly acted upon. With such principles actuating us, we shall be better able to combat all those trials and annoyances so often met with, when even our best intentions and efforts for good are misinterpreted and but little understood, as is now too frequently the case.

CLINICAL LECTURE
ON
CHOREA, AND ITS TREATMENT.

Delivered October 28th, 1872.

By WILLOUGHBY FRANCIS WADE, F.R.C.P.Lond.,
Physician to the General Hospital, Birmingham.

GENTLEMEN,—We have such a vast number of cases of chorea in this hospital, that no doubt your attention has been already attracted to it, and you have observed its ordinary and funny characteristics. You will have noticed that the great majority of these cases are those of children from six or seven up to fourteen or fifteen years of age. Cases are sometimes, but not often, seen above this age ; and of those which are above twenty, most are instances of chorea developed during pregnancy.

With regard to the pathology of the disease, some very able and trustworthy physicians believe that it consists of definite disease of the corpus striatum, of an hæmorrhagic or embolic nature. Those who, with myself, are not prepared to admit that this explanation of the disease is proved, have no other alternative explanation to offer, and consider that its pathology is at present unknown. The fact that chorea is frequently associated with rheumatism and with rheumatic disease of the heart, lends support to the embolic theory, because the rheumatic vegetations which form on the valves of the heart may be, and undoubtedly sometimes are, detached therefrom, and carried by the moving blood up to the arteries of the brain, where they are arrested. On the other hand, we see many cases of chorea where, so far as we know, there are no vegetations to be detached. We see every possible relation between chorea and rheumatism—rheumatic fever or subacute rheumatism, preceding chorea, or succeeding it, either immediately or at some considerable interval, developed during the existence of chorea ; or chorea developed during the existence of rheumatism, either acute or subacute. We see both forms of rheumatism, and also valvular disease, occurring in children of a suitable age, without any subsequent chorea, and chorea without any subsequent rheumatism. I am much disposed to think that the connection is accidental. Birmingham is a very rheumatic place ; and feebleness is a common precursor of rheumatism, as it also is of chorea. In other places, the association of rheumatism and chorea has not always been noticed.*

There are many other interesting features about chorea—such, for example, as the frequent presence of oxalate of lime in the urine, which is often of a high specific gravity—a noteworthy fact, considering the symptoms which are often associated with oxaluria in the adult. But these I will not enter into, because I want to occupy the time at our command with the treatment of the disease.

Like all other diseases which are not necessarily fatal, cases of chorea may be primarily divided into those which die in spite of all treatment, those which recover without any treatment, and those which are favourably affected by judicious treatment ; the last class comprising those which would have died, or suffered more severely or longer, without treatment. And there are also three classes of practitioners—those of an enthusiastic and self-applauding credulous disposition, who are invariably satisfied that, had they not done exactly what they did do, and exactly at the moment it was done, the result would have been very different—*i. e.*, much less satisfactory. This is a most enviable disposition, for it is a source of inexhaustible happiness to its possessor throughout his life. It is also the most unphilosophical conceivable disposition, and almost fatal to self-improvement. There is a second, much smaller class, though now-a-days too numerous, whose excess of incredulity leads them always to think that all efforts to treat disease by drugs are futile, and that things would have gone on just the same without their treatment as with it.* This disposition, which is often not without a considerable admixture of vanity, is not truly philosophical. If you would be found, as I hope you will, in the third class, you must remember that many cases get well of themselves ; that in many cases the drugs we administer do not affect the course of the disorder ; that you cannot do a thing and let it alone ; that in no case in which you have interfered can you say with absolute certainty what would have happened without your interference. You must carefully watch the apparent effects of remedies, and endeavour to determine whether the effects are apparent only, or real. To do this, you must eliminate from your minds the vanity which leads every one to commend his own efforts, and the envy which leads every one to disparage the efforts of his neighbours. And you must ever remember that judgment is a faculty which, above all others, requires to be assiduously and continuously cultivated. You cannot brutalise it in small things and cultivate it in large. If you will only bear these things in mind, you will, instead of ignoring or aping philosophy, become philosophers.

The first question you should ask yourselves, if you are called upon to treat a case of chorea, is, whether it is so severe that the patient may die from it ; and secondly, whether, although not likely to be fatal, it is so severe as to make it desirable, for the patient's comfort, to reduce it to what we may call ordinary dimensions. If so, there are several drugs which I have found of great service, though I do not think that they will cure the disease. These are opium, chloral hydrate, bromide of potassium (the two latter generally best in combination), and tincture of cannabis Indica, which I introduced into use for this purpose whilst house-physician of this hospital. It is also of great importance that nutrition should be attended to ; and the condition of these patients often necessitates the use of fluid nutriment only. In some instances, alcohol may be indicated ; but I have not thought that, as a rule, its use is beneficial.

It is also of the greatest importance that the patient should be secluded, and spared all mental emotion or excitement. Two cases occur to my mind as illustrating the evil effects of mental excitement. When I was senior physician of the Queen's Hospital, a young pregnant woman was admitted under my care with so severe an attack of chorea that I scarcely thought she could survive it. Nevertheless, in a little time the symptoms subsided so much that she was almost well. Unfortunately, a medicine-bracket with several bottles on it, which was affixed to the wall just by the head of her bed, fell down, and the crash so startled her that the symptoms immediately returned in all their intensity, and, in spite of all treatment, she died in a few days. In another case, which came under my notice when physician to the Dispensary, a young man aged eighteen went up to the top of St. Philip's Church and out into the balcony which surrounds the tower. He immediately felt that horrible pang or shock which affects many people, myself among the number, under such circumstances, an idea of which it is impossible to convey by words to those who have not felt it, and of which those who have would rather not be reminded. He came down and went home, not feeling any particular effect from it. This was on a Saturday. The next day, at dinner, his mother noticed that, in helping himself to salt, he twitched the spoon and spilt the salt. As he had had an attack of chorea some years before, she recognised the meaning of this accident, and said, "You are getting the dance again." The symptoms increased rapidly, and before the end of the week he was dead.

I repeat, then, that in severe cases of chorea you are throwing away a great chance unless you secure the patient as far as possible from emotional excitement. I will not dwell on the details of the treatment applicable to this class of cases, because you will doubtless have an opportunity of seeing some such actually treated during the period of your attendance here.

[*To be continued.*]

* An anæmic constitution affords a frequent predisposition. The rheumatic predisposition noted by English medical men, was rarely traceable in the cases that have presented themselves to my observation.—Romberg on *Diseases of the Nervous System* (art. Chorea), vol. ii, p. 64 (Sydenham Society's translation).

* "The spirit of medicine is easy to be caught ; you study through the great and little world, and let things go on in the end as it pleases God."—(Mephistopholes in) Goethe's *Faust*.

DISLOCATION OF THE PATELLA ON ITS EDGE.*

By GEORGE SOUTHAM, Esq., F.R.C.S.,
Surgeon to the Manchester Royal Infirmary.

THE patella, though possessing great freedom of motion, is not very liable to dislocation; but, when it is displaced, it is generally to the outer or inner side of the condyles of the femur. There are, however, instances of the bone being dislocated vertically, or on its edge, described in the different treatises on surgery; but this variety is so rare, that I trust a short account of a case which came under my notice about twelve months ago will not be deemed unworthy the attention of my professional brethren.

A young gentleman aged 20, in robust health, and well formed in the limbs and joints, was wrestling with some companions in a first-class railway-carriage, and thereby caused a wrench of his right knee, which was immediately followed by excruciating pain and complete rigidity of the joint. Fortunately, the accident occurred near to the station, in the vicinity of the young man's residence. His friends found considerable difficulty in removing him from the carriage; and, as the pain increased in severity, they sent a messenger for Mr. Farr, surgeon, at Swinton, who arrived about half an hour after the accident took place. This gentleman soon discovered the nature and extent of the injury, and attempted forthwith to replace the bone, but was obliged to desist, so intense were the pain and distress occasioned by even the slightest manipulation or movement of the limb. After some deliberation, it was resolved that Mr. Farr should accompany his patient to my residence, a distance of four miles from the station. They were conveyed in a private brougham; the surgeon sitting on the seat opposite to the patient, with the foot of the latter resting on his shoulder—the only position which seemed to produce any alleviation of the pain.

I placed the patient on a couch, and administered chloroform; and, when he was completely under its influence, proceeded to examine the limb. The nature of the injury was soon apparent. The patella I found to be in a vertical position; its outer border resting on the upper and outer side of the external condyle; the inner presenting so sharp a prominence under the skin, and so tense, that it seemed as if the slightest pressure would force the bone through the integuments. As the trochlea of the femur was not encroached upon, and there was very little swelling of the surrounding parts, the two facets of the bone could be distinctly traced—the under surface, with its central projection, looking towards the internal condyle of the femur; the outer appearing almost continuous with the side of the external condyle. The extensor cruris muscle and the ligamentum patellæ were so stretched that any movement of the bone was impracticable. I therefore endeavoured, but without success, to replace the patella by pressing firmly on its outer side; Mr. Farr at the same time holding up the limb for the purpose of relaxing its muscular connections. We proceeded next to bend the knee, but with great caution, to prevent undue tension of the skin over the upper edge of the bone; and, as soon as the leg was brought to about a right angle with the thigh, the bone suddenly slipped into its place. Lint moistened with spirit-lotion, and a bandage, were then applied, and the young man was removed to his own home. Considerable swelling of the adjacent parts ensued; but this was soon reduced by evaporating lotions and complete rest. At the end of three weeks, the patient was allowed to use the limb; and, as the patella was rather more easy of motion than its opposite neighbour, an elastic knee-cap was worn until all traces of the injury had disappeared.

On referring to the few cases recorded of this variety of dislocation, I find that the details of some are so imperfect that it is difficult to determine whether they ought to be classified or not with the one now described.† All, however, show that, when the patella is twisted on its axis, or placed obliquely on one of the condyles of the femur, or fixed on its edge, the displacement is accompanied with excruciating pain, and the reduction very difficult in general to accomplish.

Most of the cases on record having, however, occurred antecedently to the discovery of chloroform, the patients had none of the advantages of that agent, which not only has a powerful influence in causing relaxation of the muscles, but seems especially adapted to relieve the severe pain, which probably formed the chief obstacle to reduction.

My own experience in this case, and the information derived from the perusal of others, lead me to suggest that no attempt be made to reduce this form of dislocation until the patient is completely under the influence of chloroform. The extensor muscles should then be well relaxed by raising the thigh towards the body, when, by bending the knee, the bone will probably, through the resistance offered by the ligamentum patellæ, be drawn into its proper place. Should this plan not succeed, the knee should be extended and bent again, and pressure applied to each side of the bone in a direction corresponding to its natural position.

ON A CASE OF MOLLUSCUM CONTAGIOSUM.

By HENRY EAMES, M.D.,
Physician to Mercer's Hospital, and Lecturer on Practice of Medicine in the Ledwich School, Dublin.

As the contagious properties of the above malady are still a subject of debate, I think the following series of cases may be of interest. A clear line of distinction must of course be drawn between molluscum simplex seu contagiosum and molluscum fibrosum, to which latter contagious properties have never been assigned. The pathological conditions of these affections are quite distinct. The fibromata of molluscum fibrosum vary in size from a millet-seed to the bulk of a man's head. They are also always soft, differing in this from kindred growths. The younger nodules consist mainly of round and spindle-cell tissue. The tumours which have existed for a considerable time are fibrous in structure, but never arrive at the toughness of cicatricial tissue. In these we find a network of thick trabeculæ of connective tissue with fibrous fasciculi stretching across. In the younger tumours, fissures containing fluid occupy the positions afterwards filled by the trabiculæ, connective tissue being gradually formed. The morbid anatomy of molluscum contagiosum is very far apart from the above. In it the sebaceous follicle is the starting point of the malady, the connective tissue of the papillary body playing but a secondary part in the hyperplastic process. The tumour rarely is larger than a split pea, but may reach the size of a hazel-nut. It resembles a drop of wax on the skin or a soft wart. From this last it differs in having always in or about its centre the orifice of a sebaceous follicle. That the origin of the disease is an obstruction of the gland-duct is not correct, as in many of the tumours the orifice is found gaping and patulous, the contents being readily squeezed out. A section exhibits fibrous bands running between numerous cells, which vary greatly both in shape and size. In some of these cells, the contagium is supposed to reside. The following series of cases occurring in the same family lends, I think, some support to the opinion of those who believe in the communicability of the disease.

Mrs. F. presented herself at the Skin Disease Dispensary of Mercer's Hospital on December 4th, with a little girl, aged 8. She was a bright looking child, with blue eyes, fairly nourished, and had no enlarged glands or signs of struma. On her chin, right cheek, and the right side of her neck were several tumours, exhibiting all the characters of molluscum contagiosum. On inquiry, we learned that the first of these "warts," as the mother called them, appeared six months previously, and that she had "taken" them from her brother. On examining the mother, we found that she had two tumours; one on her nose, the other on her cheek. She then told us that two of her children at home (a little boy and a girl) were similarly affected. On the following Wednesday, the girl, aged 14, came to the Dispensary. She had nine spots on her face and two on her left arm. On Friday, being much interested in the cases, I went to their home. I there saw the entire family, with the exception of the father, who was only at home at night, and was said to be unaffected with the disease. There were four children, the two whom I had already seen and two others, both boys, aged respectively six years, and two years and nine months. The elder boy had no trace of the malady, whilst the younger, who first became affected thirteen months previously, and was the first of the family to exhibit the disease, had a number of shrivelled tumours on the right side of his chest and neck. The mother believed that the child had been "infected with the disorder" by a woman who then lived with them, and who, she affirms, had numbers of such spots on her face and hands.

The order in which the family exhibited the disease was—first the boy, aged now two years and nine months; then the girl, aged fourteen years; next the mother; and lastly the girl aged eight years. The family do not appear scrofulous, and are fairly cleanly. They inhabit, however, a single room, which is on the third storey in a narrow street. The children all sleep in the same bed; the father and mother do not sleep with them.

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* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

† See H. Mayo, *Medical Gazette*, vol. ii, 1828; Wolff, *idem*, vol. iii; and Rust's *Magazin*, 1829; Welling, in Sir A. Cooper on *Dislocations and Fractures*, second edition; Curling, *Medical Times and Gazette*, February 1862; Meade, *idem*, 1862; Valentine, *idem*, 1862; Pentland, *Cyclopædia of Anatomy*, vol. iii, p. 74; Eazzam, Gross's *System of Surgery*, vol. i, Philadelphia, 1866; Vincent, *Observations of Surgical Practice*, p. 73.

CASE OF LONG-STANDING DIARRHŒA CURED BY THE SURGICAL TREATMENT OF AN ULCER OF THE RECTUM.

By THOMAS ANNANDALE, F.R.S.E.,
Surgeon to the Edinburgh Infirmary, and Lecturer on Clinical Surgery.

Dr. ——, aged 50, applied to me on the 28th of March, 1872, on account of persistent dysenteric diarrhœa. He had recently returned from India, where he had resided continuously since May 1847. For the last three years he had suffered from constant diarrhœa, which had resisted many remedies carefully tried. He also suffered from much irritation of the rectum, which was supposed to be due to piles. It was an usual thing for Dr. —— to have four, five, or six motions daily, and he had had no "formed" motion for three years. Having made an examination of the rectum, I ascertained the presence of an ulcer, which was situated about one inch above the anal orifice. This ulcer was on the posterior wall of the rectum, was of the size of a fourpenny-piece, and had a depressed surface, with hard edges. It was only slightly painful when touched.

On April 22nd, I made a free incision through the sphincter and base of the ulcer, and this was followed by a decided improvement in the symptoms. On the 21st May, finding that the sore, although much smaller, still presented an irritable appearance, I again divided its base freely. Some inflammation and suppuration of the lymphatics passing up towards the groin followed this second operation; but on the 29th, eight days after its performance, a most marked improvement in the dysenteric symptoms took place. On June 1st, the patient had no motion at all; and on June 2nd, one "formed" motion, the first for three years. Since then, the patient's progress has been perfect towards recovery, and he writes me that he has gained one stone four and a half pounds in weight since the end of March, and is quite well. On examining the rectum a few days ago, I found that the ulcer had quite disappeared, and in its place was a small puckered cicatrix.

During the progress of the case, milk diet only was allowed, but the patient can now take animal food with benefit.

Remarks.—This case is an illustrative example of a class of cases which are by no means uncommon, but the true nature of which is not always determined, for it is not the first one of the kind which has come under my surgical care after medicine has failed to afford relief. It is important to note that in such cases the operation is not always followed by immediate relief to the diarrhœa, but that some weeks may elapse before improvement occurs. In another case of the kind under my care, it was several months before an improvement in the symptoms was observed. I have also noticed that the first effect of the operation in these cases may be to cause a temporary cessation of the diarrhœa; but this result is not permanent, the final relief only taking place after some weeks or months.

It will not, I think, be doubted that the ulcer of the rectum in the case just reported was the cause of the dysenteric symptoms, for its removal gave the relief which careful medical treatment had failed to afford. The patient, a gentleman of high standing in the Indian medical service, has himself no doubt in regard to this point, and will, I feel sure, bear testimony as to the value of surgical treatment in cases such as his own.

ON MECHANICAL AND FORCIBLE DILATATION OF THE CERVIX UTERI.

By HENRY BENNET, M.D.,
Late Obstetric Physician to the Royal Free Hospital, etc.

I have read with interest the articles of Dr. Matthews Duncan on the mechanical dilatation of the cervix uteri, as also the subsequent remarks of Dr. Atthill and of Dr. Aveling. I quite agree with the latter writers, that Dr. Matthews Duncan has made a valuable contribution to the mechanics of the subject, and has added to our knowledge of what is actually done when *force* is used to introduce a sound or bougie into the cavity of the uterus, either for mere uterine examination or for dilatation of the os internum. I am surprised, however, that none of these gynæcologists have noticed or discussed the doctrinal points which I brought before the British Medical Association in a paper read at Birmingham last August, which was published in this Journal in October; yet these doctrinal points are at the base of the entire question of cervical dilatation. In this paper I merely reproduced the views brought before the profession in 1848, in the second edition of my work on uterine inflammation, and which I have repeated, with the authority of increasing experience, in each subsequent edition. I maintain, founding myself on anatomy and physiology, that the os uteri internum is normally closed during life, by a vital contraction of the circular fibres, which prevents, in healthy women, the easy entrance of the uterine sound *at all*, except in some women, not in all, a day or two before, during, and a day or two after, menstruation. In these healthy women force has to be used to pass it; and this force, Dr. Matthews Duncan tells us, is, in his experienced hands, equivalent to four pounds, an amount of force that would bend a metal sound if exercised at the handle.

Dr. Duncan does not speak of healthy sound women; but I believe his remark applies to them, as he appears entirely to ignore the fact that in healthy women the os is vitally closed physiologically, and evidently considers this healthy vital closure a morbid state, as did Sir James Simpson, from whom he has evidently taken this view.

The os uteri internum is actually open so as to admit the uterine sound or an equally large bougie, only, as a rule (to which, however, there may be exceptions), in morbid uterine conditions. It may be thus open in chronic inflammatory disease of the mucous membrane lining the cervical canal or the cavity of the uterus, in enlargement of the body of the uterus from whatever cause, from fibroid tumours, from chronic inflammation, or from non-involution after pregnancy. In any of these states the circular fibres at the os internum *may* relax (they do not always do so), and may allow a free passage to the sound or bougie. To these states I would add that of some women of very lax fibre, with relaxed vulva, vagina, and abdomen, and with general flabbiness of tissue.

In healthy women, I repeat, as a rule, the os internum during life is closed vitally by contraction of the circular fibre. To consider this condition a morbid one is an error—anatomical, physiological, pathological. Practically, it is a most pernicious error, for it renders nearly every healthy woman who is examined liable to be considered as suffering under morbid closure. Such an erroneous idea leads to unnecessary, unjustifiable surgical interference, to cutting, to forcible dilatation with four pounds' pressure, to dilatation of all sorts and kinds, and that without real necessity.

This is the question that we ought first to discuss—What is the natural state of the os uteri internum? What is the amount of contraction that requires dilatation at all? These points I endeavoured to decide in the paper alluded to, recently published, so I shall not here revert to them, but refer to the essay itself.

I would only add that it is indeed necessary that these questions should be settled when men in the position of my friends, Dr. Matthews Duncan of Edinburgh, and Dr. Greenhalgh of London, entirely ignore the physiological condition of the os internum—do not even allude to it. At a meeting of the Obstetric Society in 1866, at which I was present, in the discussion of a paper by Dr. Tilt on "Undue Surgical Interference in Uterine Disease", Dr. Greenhalgh told us that in less than two years he had divided the os internum, with his metrotome, in more than three hundred cases in his own study. I should have liked to know what proportion these cases of division bore to the cases of uterine disease thus seen in the course of the two years in which division was not practised.

CASES ILLUSTRATING THE USE OF THE PNEUMATIC ASPIRATOR.

By T. PRIDGIN TEALE, Esq, F.R.C.S.,
Surgeon to the General Infirmary, Leeds.

As Mr. Jessop has called attention to the use of the pneumatic aspirator—an instrument highly valued by my colleagues and myself at the Leeds Infirmary—the following additional illustrations of its employment may not be without interest.

Diagnosis of Multilocular Ovarian Tumour.—In the summer of 1871, I was requested by Dr. Bealy of Harrogate to examine a case of abdominal tumour of doubtful character. A large, apparently solid tumour, of uneven surface, in which fluctuation could not be detected, filled the lower part of the abdomen, and percussion of the hollow viscera did not give very decided aid in the diagnosis. Seeing that the tumour, if ovarian and non-malignant, was probably polycystic, and that, if it were polycystic, no two cysts would be likely to contain exactly similar fluid, I introduced the needle of the aspirator—first in one prominent part, and then in a second—and drew off in the first instance an ounce of turbid viscid fluid, and in the second clear limpid fluid. Thus was proved the existence of multiple cysts varying in their contents—a condition, I believe, exhibited by no other kind of abdominal tumour than ovarian.

Lumbar Abscess.—The following two cases are almost identical in character.

CASE II.—Joseph Leach, of Bradford, was admitted into the Leeds Infirmary on January 5th, 1872, having suffered for some time from frequency of micturition, attended with pain and irritability of the bladder and discharge of pus in the urine. He also complained of pain in the back and left loin, which had commenced shortly before his admission. On examination, obscure fluctuation was detected in the left loin, which induced me on February 1st to introduce the needle of the pneumatic aspirator, by which half an ounce of pus was removed.

February 8th. Six ounces of pus were removed by the aspirator, and on February 15th five and a half ounces. The patient was relieved by these withdrawals of pus, the pain and vesical irritability being diminished. As the relief, however, was but temporary, the operation was not further repeated. The patient continued to lose strength and to suffer more pain; and, leaving the hospital on April 15th, died a month after his return home.

CASE III.—Mrs. —, aged 30, is at present in the hospital, complaining of pain and irritability of the bladder, and pain in the right loin; the urine containing large quantities of unaltered pus. Fluctuation can be detected on deep pressure, both in front and behind the right kidney. On December 5th, the needle of the aspirator was introduced into the back of the loin at the edge of the erector spinæ, and six ounces of fœtid pus withdrawn.

December 9th. Since the operation, she had suffered rather more pain in the loin, and had had no diminution of irritability of the bladder; but for three or four days the quantity of pus in the urine was much diminished.

In both these cases, the question of the existence of fluid and of pus was settled by the aspirator; and in both instances the abscess in the loin appeared to communicate with the kidney or ureter; and the pus, entering the bladder, set up a most distressing form of vesical irritability. The relief, however, obtained by the withdrawal of the pus, was in the one case so doubtful, and in the other so transient, that I do not feel encouraged to continue the use of the aspirator as a means of further treatment in such cases.

ON MOLLUSCUM CONTAGIOSUM.

By DAVID FERRIER, M.D.,
Professor of Forensic Medicine in King's College; Junior Physician to the West London Hospital.

IN the eighth volume of the *St. Bartholomew's Hospital Reports*, Dr. Dyce Duckworth gives a very careful analysis of the facts for and against the contagious nature of this affection, as well as of the various theories as to its production. That the disease is in some measure contagious, appears to be satisfactorily established. A case which has just come under my notice at the West London Hospital would confirm this view.

A. H., aged nine months, had numerous mollusca, twenty-two in all, situated on the lips, cheeks, and neck, some pedunculated, others sessile, varying in size from a pea to a millet-seed, the largest being on the lips. Two others were situated on the buttocks. They began to appear five months ago. Some had fallen off of their own accord, and had been succeeded by others. The mother of the child had two well marked mollusca on the left breast; they had existed for some time, and, as far as could be learned, came after the appearance of the tumours on the child's lips. The mother attributed the affection to contagion from a little girl, the daughter of a neighbour, who had "warts" on the face and different parts of the body, who used to frequent the house and kiss the baby. This girl I could not trace, as she had left the district. Whether the primary affection were strictly traceable to contagion or not, the case appears to establish the communication of the disease from the child to the mother, as has been recorded in other instances. The tumours speedily disappeared on being evacuated and touched with perchloride of iron.

The chief interest of the case to me was, that it afforded me an opportunity of carefully investigating the parasitic theory of the disease, propounded first by M. Hardy, and subsequently by Mr. Balmanno Squire. M. Hardy describes, among the well known elements of the follicular contents, spores and branched mycelium containing spores. Mr. Squire describes spores resembling those of the *achorion Schönleinii*, large and facetted; but no mycelium. To the irritation caused by this fungus he attributes the hypertrophy of the follicles and their secretion. I have made repeated examination of the expressed follicular contents with a view to determine the question; at the same time being favourably disposed to this theory, as most satisfactorily accounting for the contagiousness of the disease. When the secretion was treated with caustic potash, and examined under the microscope, it gradually became clear from saponification of the fat, and the outlines of the epithelial cellular contents became sharp and distinct. In the secretion so treated, especially the soft central part from the large tumours, I have seen one or two unmistakable torula-cells in the act of germination. They did not differ in size or otherwise from the torula-spores of penicillium. But, in addition, a great many other spore-like bodies were to be observed in the angles of the cells, apparently multiplying by germination, and even lengthening out into mycelium. They were of various sizes and forms, and had a peculiar vacuolate aspect. They may readily be mistaken for true spores. I have come to the conclusion that they are, however, artificial products of the action of the caustic potash on the fatty matters. I mention these appearances in order that the deceptive effect of the action of reagents may be guarded against. In the contents of the follicles, after several days' maceration in ether, I have failed to detect any spore-like bodies; nor have I been able to produce any appearance of such by treating them subsequently with caustic potash. In the small and still firm tumours, before they have undergone central fatty degeneration, I have not been able to satisfy myself of the existence of any true spores by any method of treatment. In order to determine whether they might exist in a form undiscoverable by the microscope, I adopted the method of cultivating the secretion in Pasteur's solution, consisting of materials favourable for the growth of fungi. In the soft secretion so treated, after a fortnight's cultivation in a closed tube guarded against external contamination, I have found, along with very beautiful specimens of *sarcinæ*—derived, no doubt, from the blood, in the manner which I have on a former occasion shown—a copious development of torula-cells in no respects differing from those of penicillium. Some of these may have had their origin in accidental introduction into the tube; but the mode in which they were developed in and around the fatty secretion indicated that there was considerable multiplication of elements existing in the secretion. This, however, I look upon merely as an accident, and do not regard these spores as having any connexion with the causation of the disease. It would be more remarkable not to find such fungi, considering their cosmopolitan nature and the possibility of their access to the contents of the follicle through its orifice.

The existence of a vegetable parasite as the cause of this disease appears to me to be entirely negatived by the result of my investigations. What the real cause of the disease is, remains yet to be discovered.

CASE OF POISONING BY ACONITE TREATED BY DIGITALIS: RECOVERY.

By WILLIAM DOBIE, L.R.C.S. & P.E., Keighley.

I WAS requested one morning, between 12 and 1 A.M., to visit a veterinary surgeon who was supposed to have taken poison. The place where he lodged was scarcely a hundred yards from my house, and only a few minutes elapsed before I saw the patient. He was stupidly drunk in bed, and unable satisfactorily to answer questions. His landlady, however, informed me that he returned home the worse for drink about midnight; that he went direct to his surgery, took out a bottle of medicine, and went up stairs to bed; that shortly afterwards he rang the bell, and said he had taken a large dose of poison, which was certain in a short time to prove fatal. There was a two-ounce bottle, with its lable defaced, lying by the bedside. The bottle contained about half a drachm of a brown-coloured liquid, a portion of which I applied to my tongue, and was satisfied, by the characteristic tingling induced, that it was aconite. Up to this time there were no symptoms of the patient having taken poison. There had been no vomiting, the breathing was natural, the pulse of fair volume and strength, and the extremities were warm. An emetic was prescribed; and, in conjunction with my late partner, Dr. Ramsay, I visited the man again in less than half an hour. By this time he had vomited freely; a considerable discharge had also taken place from the bowels; there was evidence, too, of failing circulation; the pulse was rapid and feeble, and the feet and hands were getting cold. The use of stimulants was clearly indicated; and, in order to give ammonia and brandy, we raised the patient's head. This brought on alarming prostration; the breathing became laboured; the pulse, at the wrist, irregular, intermittent, and finally imperceptible; there was a quantity of frothy mucus discharged from the mouth and nostrils; the skin became dusky; a cold clammy sweat bedewed the face and forehead: in a word, the patient was dying. We quickly replaced his head upon the pillow, and, as he was unable

to swallow, injected subcutaneously twenty minims of tincture of digitalis, and then applied galvanism to the cardiac region, and continued its use for about twenty minutes, at the end of which period the patient began to rally, and in a few minutes more was able to swallow a mixture of ammonia, brandy, and a teaspoonful of tincture of digitalis. Marked improvement followed the administration of the mixture, and it was twice repeated within an hour, by which time the breathing had become easy, and the circulation re-established. We remained with him about half an hour longer, and, before leaving, gave him a cup of strong coffee, which, however, was vomited. I saw the patient again the following morning, when he expressed his surprise at being alive, as he had taken, he said, an ounce of Fleming's tincture of aconite.

REMARKS.—I sent what was left of the aconite to Messrs. Harvey and Reynolds, chemists, Leeds, and they informed me it had been prepared with "cleaned" methylated spirit, and was of rather more than the average strength—that is to say, two minims of it killed a young sparrow in three minutes and a half, while the same quantity of a fresh specimen took half a minute longer to accomplish a similar result.

The case seems to afford decided evidence regarding the action of digitalis. While making due allowance for the combined influence of the electricity and stimulants, it is difficult to conceive if the doctrine, which is far from obsolete, be true, that digitalis is a cardiac depressant, why its administration in this case should not have rapidly proved fatal. Such a conclusion carries with it the force of a demonstration. The old view which prevailed as to the action of digitalis seems to have been the result of an erroneous interpretation of facts. Diminished frequency of the pulse followed the administration of the drug, and it was therefore rashly concluded that the heart's action was thereby weakened. The fallacy consisted in believing that pace meant strength. A slower pulse is not necessarily an evidence of weakened circulation, but generally of the opposite.

It is but fair to state that the idea of using digitalis in this case was probably due to a conversation that we had had a short time before with Dr. J. M. Fothergill, the author of the Hastings Prize Essay for 1871.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORT ON THE TREATMENT OF SICK-HEADACHE.

IT is nearly twelve months since we published in our Hospital Reports the results of the experience of a large number of leading British physicians regarding the treatment of this distressing affection. The substance of the report amounted pretty much to this: that the relief afforded by the medical man was, as a rule, so trifling, that the patient took the matter into his own hands, and found by experience the best way to obviate or alleviate the attack, or made up his mind that the affection was incurable. Bromide of potassium was, however, noticed as a drug occasionally capable of affording relief. Dr. Williams, of the Sussex Lunatic Asylum, also recorded the experience, at that institution, of Indian hemp as a remedy, and stated the opinion of his colleague Dr. Greene and himself, that this drug was worthy of extended trial. Since the appearance of our report, guarana or paullinia powder, a remedy for sick-headache which has been employed in France and elsewhere for some years, was brought prominently before the notice of the profession in this country by Dr. Wilks, in a communication published in the JOURNAL of April 20th. Dr. Latham of Cambridge, Dr. Samelson, and Mr. Bradley of Manchester, have, since that date, contributed in these pages to our knowledge of the drug. With the view of bringing this remedy more prominently before the profession, and in the hope that a more extended trial of guarana will result, we present our readers with a few notes collected from those who have had experience of its use. The results obtained are very various, and show that our knowledge of its *modus operandi* is most incomplete. An extended trial of guarana, and a careful observation of the class of cases in which it is of value, will probably ere long lead to a more definite knowledge of its therapeutical value. We are glad to have the opportunity of recording the views of Dr. Wilks on guarana and the other remedies which his special attention to the subject has led him to employ since the publication of his first paper in the JOURNAL of January 6th. The opinion entertained by him regarding the value of cannabis Indica is shared by another of the writers in the report. Indian hemp seems deserving of a full trial. We shall be glad to receive further communications on the treatment of sick-headehe by guarana.

GUY'S HOSPITAL.

Dr. WILKS thus writes regarding the treatment of sick-headache. "As regards the treatment of headache, I have until late years been able to do little more than recommend to my patients the avoidance of all those circumstances which they know from experience would induce an attack. I allude, of course, to nervous headache, for I believe that this is almost the only form for which we are consulted; a temporary disturbance of the head arising from various causes, requiring no medicine, or but a casual dose. The connection of headache with gout has already been alluded to in the JOURNAL by several writers, together with the treatment which the association suggests. During the last three or four years I have been able, with others in my profession, to do something more positive than preach hygienic principles to my patients, having in our possession three remedies which have been doing eminent service in this terrible complaint. In the first place, there is the bromide of potassium, which is so valuable a medicine in many cases of sick-headache that it can scarcely be superseded by a better remedy. The patient, who is very often a gentleman, comes home with a splitting headache, fatigued and worried after a hard day's work; he takes fifteen or twenty grains of bromide of potassium, presently goes off to sleep in his easy chair, and wakes in an hour well. I have known this occur in so many instances, that I cannot hesitate in my belief as to the efficacy of this medicine. It is one which I always first employ, having seen such eminent advantages follow its use. I have known many patients declare, that the bromide was the first medicine they had taken in their lives which had had the slightest effect in relieving their headache.

"About two years ago, I commenced to use the cannabis Indica, and I have no hesitation in saying that in this drug we possess a most valuable remedy against headache. I have never given it in large doses with the object of counteracting the pain by producing an immediate effect, but have employed it in doses of a few drops three times a day, and continued for some weeks. In several cases where my patients were subject to constant headache, great benefit was experienced, several of them having written to say that they had got rid of their trouble, or it had been less frequent. In a large number of cases in which I have prescribed the remedy, I have not been informed of the result. I consider it superior to all other remedies in this respect that, if efficacious at all, it preserves the patient from his malady; whereas other medicines do little more than arrest the attacks when they have commenced. I have not given cannabis in the manner recommended by Dr. Williams (of Hayward's Heath), in the form of a dose of the extract daily.

"Thirdly, guarana has been introduced to our notice as a remedy for sick-headache, and here, again, we have a very valuable addition to our *Pharmacopœia*. In many instances, especially those of ladies, I have had the most positive assurance given to me of the power of this drug in arresting headache, so that not the slightest doubt can be entertained of its immense value. A dose is usually taken when the headache is approaching; and if this is not quickly successful in arresting it, a second powder is swallowed; after an hour or so, if the remedy is to be useful, the headache has disappeared. I know of several cases in which the greatest enthusiasm is expressed by patients as to its merits. At the same time, I am constantly hearing of cases where it has failed. I am now trying it in smaller doses by daily administration.

"I feel certain that these three drugs—bromide of potassium, cannabis Indica, and guarana—constitute a most important addition to our nervine medicines, and that in them we have remedies against a terrible complaint which, a few years ago, constituted the opprobrium of medicine. I might say that I know of cases where galvanism has very speedily cured a pain in the head; and I can call to mind the case of a lady, where the applicatian of the bisulphide of carbon invariably relieved the most severe headaches."

ST. BARTHOLOMEW'S HOSPITAL.

Dr. ANDREW has employed guarana in a few cases, and has found it successful with patients who had found relief in no other drug.

DR. HOLLIS writes:—"My experience of the exhibition of powdered guarana in the treatment of sick-headache is entirely personal and very limited. Suffering from a severe frontal headaehe a few days ago, with

tenderness upon pressure at the posterior part of the orbits, I took, four hours after breakfast, fifteen grains of the powder. The pain in the head was not much relieved after this dose, and the pulse was not much affected. The dose was repeated in the course of the day; an hour after the second dose the pain over the forehead was much diminished, and the pulse, which was 84 and small before the treatment, became 75, and improved in volume after it. I shall certainly take it again should there be a return of the headache. The powder is somewhat troublesome to swallow in a dry state, and I think that a confection might be with advantage made of it. In cases where habitual costiveness existed, the astringent effects of the powder (noticed by my friend Dr. P. W. Latham, JOURNAL, April 27th, 1872) would possibly be easily counteracted by giving it in conjunction with a laxative—such, for example, as the senna electuary."

ST. THOMAS'S HOSPITAL.

Dr. MURCHISON has used guarana as a remedy in sick-headache, but not extensively. His experience of its effects has not been so far very favourable.

THE MIDDLESEX HOSPITAL.

Dr. JOHN MURRAY has employed guarana in single doses of twenty grains each in attacks of sick-headache in several patients. Three of these cases have been under observation for from six to nine months. In the first case, that of a woman aged 33, who had suffered for about eighteen years at the catamenial period, but also at other times, he found guarana absolutely useless. The patient took repeated doses, one at the commencement of each attack, and several during their existence. In the second case, that of a woman aged 23, who had been very subject to sick-headache from childhood, and during the catamenial period since 17 years of age, the guarana proved at first of little avail. On several successive occasions afterwards, it afforded her marked and speedy relief, but soon again ceased to be of any value. In the third case, the patient, a female aged 50, had been subject to headache for thirty years, and most frequently at the catamenial period. During the last five years the catamenia had ceased, but the attacks of sick-headache had become more frequent, occurring about every ten days. This woman has found certain relief in an hour or less in frequent seizures during the six months she has taken the guarana powders, and she has never been sick during any of these attacks. It would appear that guarana is sometimes of great value in this distressing affection; at other times equally valueless. Experience will probably indicate the class of cases in which this remedy should be used. Dr. Murray says that, in some of the cases in which guarana had proved unsuccessful in his hands, tincture of cannabis Indica in ten-minim doses three times daily, and continued for some months, was followed by very gratifying results.

THE LONDON HOSPITAL.

Dr. LANGDON DOWN has employed guarana in one case, but the result was entirely negative.

THE GERMAN HOSPITAL.

Dr. HERMANN WEBER has employed guarana powders in eighteen cases of sick-headache with the following results: in 2 cases, given in four different attacks, always with some relief, more or less perfect; in 1 case in three attacks with relief; in 2 cases in two attacks with relief; in 4 cases in the first trial with relief, in later trials without; in 2 cases in the first two trials with relief, in subsequent without; in 1 case in the first four trials with effect, in subsequent without; and in 6 cases the trials from the first had no marked effect, although as many as four powders were taken in the course of some hours. Dr. Weber also tried, many years ago, doses of one to three grains two or three times a day, continuously for several weeks and months; in one case—a lady with neuralgia, as well as sick-headache—with good effect; in six cases without any.

[*To be continued.*]

ST. THOMAS'S HOSPITAL.

BRIEF NOTES OF CASES IN DR. MURCHISON'S WARDS.

Cancer of the Liver, etc, simulating Pyæmia.—In this case the liver and lungs were infiltrated with very rapidly growing cancer, secondary to a comparatively chronic tumour in the testicle. It is remarkable on account of the early age of the patient, and the occurrence of rigors, marked but irregular pyrexia, and other symptoms strongly suggestive of pyæmia. A carpenter, married, aged 24, was admitted on November 6th. He stated that six months previously he had suffered from an attack of pain in the right side, thought to be due to overstraining himself while at work, but it was not so severe as to attract much attention. It had occasionally returned since. Soon after the strain, he noticed an enlargement of the left testicle, which did not increase much. He had previously enjoyed good health; his family history was good. He continued at his work till six weeks before admission, when the pain in the right side became more severe, and extended over the abdomen. During the three weeks before admission he lost flesh rapidly; the pain increased; he had occasional diarrhœa and vomiting; during the last week he had two or three rigors, suffered from sweating at night and considerable thirst, and finally noticed that he was becoming yellow.

On admission, the patient was emaciated and distinctly jaundiced. He complained of dyspnœa and of pain in the region of the liver. Pulse 120; respiration 32. He had slight dry cough; vesicular breathing was audible over both lungs, but very weak; there were no *râles;* there was marked depression of the intercostal spaces. There was great fulness in the hepatic region; the lower margin of the liver extended almost to the brim of the pelvis; the upper margin of dulness was an inch and a half below the nipple. The surface of the liver was not tender, and apparently smooth. The left testicle was twice as large as the right, and hard.

After admission, the patient had wandering at night, but little sweating. He had a slight rigor on November 13th, and occasional vomiting, but no diarrhœa. His temperature varied irregularly from 100 to 103. The swelling in the right side increased. He gradually sank, and died on November 16th.

Necropsy.—The liver occupied the whole width of the abdomen in the epigastric regions, and measured twelve inches and a half vertically; its substance was infiltrated throughout with soft cancer. Both lungs were studded with nodules of similar deposit. The lumbar glands lying along the course of the iliac vessels on the left side and the glands in the portal fissure were greatly enlarged, and the left testicle contained a vascular tumour of the size of a cherry, which microscopical examination showed to be cancerous.

Gall-stones and Cancer of the Liver and Lungs.—The value of local irritation or injury—*e.g.*, of a blow on the breast—as a cause of cancer has been very variously estimated. Whether in the following case the gall-stones acted as an exciting cause of cancer is doubtful; their presence had, however, certainly influenced its local distribution. This case, as well as the last, illustrates also the difficulty of diagnosing cancer of the lung in the discrete form.

S. H., a married woman, aged 53, was sent up from Hampshire on November 4th. Until two months before, she had been strong and well. Her family history was good, and her habits had been temperate. Two months before admission, she was seized suddenly with violent pain in the epigastrium, in the region of the liver, and in the right shoulder. She suffered from rigors and vomiting, and after these symptoms had lasted for a week, jaundice supervened; on the appearance of which the pain and vomiting ceased, and did not recur, except for one day a fortnight subsequently. The jaundice, however, persisted and increased up to the time of admission, and the patient lost strength. On admission, she was deeply jaundiced, rather stout, but evidently depressed. Pulse 80, irregular, and intermittent. She slept well. Her appetite was fair, but she suffered much from flatulence. There was no pain anywhere, but some fulness and tenderness in the region of the gall-bladder, which could be felt projecting beyond the anterior margin of the liver. There were a little ascites, and some œdema of both legs.

After admission, the flatulence became more troublesome, the ascites increased, and the patient continued to lose strength. She died on November 26th, having been three weeks in hospital.

Necropsy.—The body was well nourished; there was much subcutaneous fat. Cancerous nodules were scattered throughout both lungs; none were larger than a pea. There were two gallons of fluid in the abdomen. The liver was not much enlarged, but the gall-bladder was greatly dilated. It was imbedded, as it were, in a large cancerous mass about three inches across, and involving the whole thickness of the organ; it was hard, and of a yellowish mottled appearance. There were smaller masses throughout the liver, all firm and fibrous-looking. The common bile-duct was much enlarged; the cystic duct was nearly obstructed. The gall-bladder contained a quantity of purulent matter, and more than twenty gall-stones.

[*To be continued.*]

LEEDS GENERAL INFIRMARY.

SPINAL APOPLEXY: PARAPLEGIA: RECOVERY.

By J. D. HEATON, M.D., F.R.C.P.; Senior Physician to the Infirmary.

JOHN HOLMES was admitted as an in-patient of the Leeds Infirmary, several years ago, on the 14th July, with the following history. He was of middle stature, rather spare, but muscular, aged 47, a widower with some children. In his early days he worked in a mill in Leeds;

but for the last twelve years he had led a hard life in Australia, where he had felled timber, and had had much hard riding. He had had many falls from horseback, and various hurts and bruises, but nothing which had left any permanent injury. He had always lived soberly. Landed at Liverpool on the 27th of June, having, by some misadventure, lost most of his savings, but being quite strong and well. He had since then been living with a relative at Leeds.

Four days before admission, while sitting in the house in his usual health, he began to shiver very much ; and, when he tried to rise from his chair, he found that he had lost the use of his legs, so that he could not stand, and the movement gave him severe pain in the bottom of the back, in the hips, and in the lower abdomen. The shivering left him after a time, but he remained paralysed, and continued to suffer much pain.

On admission, as he lay on his back, at rest in bed, he had much severe pain at the bottom of his back, and round the body and down the thighs, which was much increased by any movement of the body. He could slowly and with much effort move the legs in bed by bending the knee. He had tingling sensations in the legs, but the tactile sense of the surface was not deranged. He had reflex starting movements of the legs. There was no rigidity of the legs, no spasms, or convulsive movements. He had perfect control over urination and defæcation. There was no affection of the upper extremities, no pain in the head, nor other cerebral symptoms. The pulse was slow and quiet.

His treatment consisted in opium for relief of the severe pain, and iodide of potassium, cupping and blisters to the loins, and rest in bed.

During part of his stay in the infirmary, he had an attack of bronchitis and troublesome cough, which was only serious, as much aggravating the pain by the concussions of the body in coughing. There was no evidence of any tubercular mischief in the lungs. After a time he lost his cough, and he made gradual but slow improvement in the spinal symptoms. The pain subsided ; the use of his legs gradually returned, so that he could walk slowly across the floor with the help of a stick. He then took cod-liver oil and vegetable and mineral tonics.

He remained in the house three months, and was then made an outpatient, having gradually improved so as to be able to walk pretty well with the support of a stick. He was finally discharged cured.

Since then he has been frequently under my observation. Once he was readmitted for some return of weakness in the legs and pain in the back, but not so as to disable him from walking, and from which he soon recovered. He got occupation as a mechanic, and has for the most part continued steadily at work up to the present time. He has married a second wife, whom I have recently been attending professionally, and I have thus been reminded of her husband's case, and had the opportunity of informing myself of his present state. I find that he is now quite strong, has the perfect use of his limbs, and is regularly working in a machine-maker's works.

The peculiar feature in this case in the suddenness of the attack, without any premonitory symptoms ; I may add, also, its severity for a time, and the complete and permanent recovery. The hard life which the man led abroad, and his frequent falls from horseback, were not unlikely to injure the structure of the cord, or excite chronic inflammation of its membranes ; but, up to the time of the sudden occurrence of the attack, he had been to all appearance a sound man, without symptom of any spinal affection.

I know of only two pathological conditions which may probably occasion so sudden an invasion of severe spinal symptoms as we have recorded in this case : these are hæmorrhage and embolism. Hæmorrhage in the spinal canal might be the result of some severe injury received about the time of the commencement of the symptoms ; but, as occurring to a man who had suffered no such recent injury, and quietly sitting in his house at the time of the occurrence, it must have resulted from previous structural degeneration of the arteries, which would be expected to have caused some premonitory symptoms of functional imperfection, and to have been less susceptible of complete and permanent recovery, being itself the cause of softening of the cord, imperfectly nourished by the damaged arteries. Abercrombie reports several examples of spinal apoplexy, as proved by *post mortem* examination ; but in nearly every case either the hæmorrhage was the result of some injury received at the time of the occurrence, or there had been premonitory symptoms of spinal disease. His second case most nearly approaches to mine in its previous history, though the result was different. A gentleman, aged 61, on arriving in Paris after a long journey, experienced pain in the back, and, after a few hours, became paraplegic, with incontinence of urine and fæces ; shortly afterwards he died suddenly. Large extravasation was found under the membranes of the spinal cord.

Cerebral apoplexy does sometimes occur to persons apparently in good health previously—that is to say, without premonitory symptoms, the much larger volume of the brain admitting of the possibility of some partial lesion without perceptible deprivation of function ; but even here careful inquiry into the previous history will seldom fail to detect some warnings which, may have been disregarded prior to the occurrence of extravasation and its serious manifestations. Embolism of the vessels of the spinal cord, or its membranes, is a possible condition, but of its actual occurrence I have no practical knowledge. As a cause of obstruction of the cerebral arteries of the left hemisphere of the brain, it not uncommonly gives rise to apoplectic symptoms and hemiplegia. The direction of the left common carotid artery, as it springs from the arch of the aorta, favours its reception of particles propelled with the current of blood from the heart ; but there is no apparent structural proclivity to the diversion of cardiac emboli into the spinal arteries, derived from the vertebral branch of the subclavian.

On the whole, I am inclined to regard this as a case of spinal apoplexy, caused by rupture of some of the large vessels which ramify in the spinal meninges. Its fortunate termination affords no opportunity for ocular demonstration of its pathology ; but the history of the case is complete from commencement to termination, as there is now some years' experience of the permanence of the cure. The features of the case, as I have described them, are interesting and remarkable, and worthy of record.

REVIEWS AND NOTICES.

MECHANICAL GYNÆCOLOGY.*

Dr. Graily Hewitt's work on *Diseases of Women* is not only a highly respectable volume in every sense, but one evidently also much consulted, as its third rapidly produced edition testifies. We shall satisfy ourselves with thus expressing our appreciation of it as a whole, for it is impossible within the limits of space at our disposal to enter critically on the aspect which he gives to the numerous and varied subjects which he treats. But the book is specially remarkable as the latest, best, and most authoritative exponent of a well-defined bias that powerfully affects a zealous class of gynæcologists. The bias is not scientific, but almost purely empirical ; its influence is not towards an investigation of the mechanical causes of certain uterine disorders, so much as towards treating them by mechanical appliances. The disorders referred to are the very frequent so-called dis- or mis-placements of the unimpregnated uterus. They are admitted to be minor disorders, not grave diseases ; and it is their common occurrence that endows them with great importance. To this subject we shall, in a few paragraphs, direct the attention of our readers.

The frequency of these disorders was recognised in the end of last century, but it was not till the beginning of this one that they were regarded as of any importance. Then they were treated by mechanical appliances, which were intended to modify the position of the uterus without being placed wholly or partially inside the organ. About the middle of this century they became notorious, great interest being excited by the introduction of what are called intrauterine pessaries. Ever since then, and especially since the great and prolonged discussion in the French Academy of Medicine, their consequence has been, we believe, on the decline ; but Dr. Graily Hewitt comes forward as the abettor of their importance as diseases and of the value of the mechanical treatment.

The most eminent quality of the whole matter is utter unsatisfactoriness. To the man of science there is, if not chaos, at least such a jumble of falsities, discords, and truths, as leads to a feeling of disgust. The man of practice is very nearly in the same predicament ; but in him there is no room for disgust, as he must proceed to do his best for his suffering patients ; he must arrive, if not at a judgment, at least at a decision, for action or inaction. How shall he decide when there are such differences ?

Are these mere displacements worthy in themselves of the name of diseases ? Are they mechanical diseases, like herniæ ? If they

* The Pathology, Diagnosis, and Treatment of Diseases of Women, including the Diagnosis of Pregnancy. By Graily Hewitt, M.D., Professor of Midwifery and Diseases of Women in University College, etc. Third edition, revised and enlarged. London : Longmans, Green, and Co. 1872.

be mechanical diseases, is the fault in the uterus and its ligaments or supports? or is it in the retentive power of the abdomen, the *Druckverhältnisse* of Schatz? Is any efficient mechanical means employed in their treatment safe? Are they relieved, or cured, or aggravated, by such means? Speaking generally, we may describe Dr. Hewitt as taking the positive side of these questions; but, desiring to be as far as possible philosophical, and press aside the influence of mere authority, we assert that not one of them has been settled, not even satisfactorily discussed, though written about voluminously.

The minor displacements of the uterus have been long well known to all deserving the name of students of gynæcology; and when we say long, we do not speak of yesterday, but of last century—that is, before the last generation of gynæcologists was born. Early in this century, Schweighauser and Schmitt published chapters on them at great length, containing everything of practical importance that is known regarding them at this day, or, if not everything, at least nearly everything. The words of Jahn, written in 1787, are re-echoed with approval, we believe, by the great mass and by the great intelligent preponderance of modern physicians, to the effect that they are "too obscure and too unimportant to deserve the name of a disease".

Nor is it only the existence and frequency of these minor displacements that has been long known to students of gynæcology: diligent treatment was long ago recommended and pursued. Lallemand, Richter, Siebold, and other practitioners used means for the removal or treatment of these displacements of a kind like those used by Dr. Graily Hewitt. These instruments were not placed within the uterus partially, but were placed in the vagina, or rectum, or bladder, with a view to influence the position of the uterus favourably. However different in form, the principle and object of the instruments were the same. This treatment of course implies a divergence from the opinion of Jahn, which may be called—at least in a historical point of view—an advance upon Jahn. A change too unimportant to deserve the name of a disease would not be made the subject of treatment by ingenious and sometimes complicated instruments. But these users of instruments adduced no evidence sufficient to show whether or not their views as to the nature of minor displacements were correct, or their methods of treatment useful.

We may assume—and the history justifies the assumption—that many physicians had now quite given up the doctrine of Jahn, and believed the minor displacements to be important. Not only this, but the history further shows that they regarded these displacements as demanding treatment, if a safe and efficacious treatment could be found. Nay, still further, it shows that they did not think the plans of Siebold, Lallemand, and Richter, to be valuable or efficacious; for Velpeau and Amussat, somewhere about the third decade of this century, searched for a new treatment, and invented and used intrauterine instruments. But they were satisfied with trying them; they did not recommend them to their professional brethren.

Time slipped away till 1848, when the ingenious and adventurous Simpson, no doubt ignorant of the attempts of Amussat and Velpeau, stepped forward into the pages of the *Dublin Quarterly Medical Journal*, to state his views and propound his methods of cure. Simpson had already succeeded in attracting to himself all eyes: the discussion on the treatment of unavoidable hæmorrhage by separating the placenta was seething in that violent kind of ebullition which compels attention and wonder. Writing at this lucky moment, he at once gave this subject of the minor displacements of the unimpregnated uterus a place in the eyes of gynæcologists which it never previously occupied. The result has been a considerable gain to science, and also to therapeutics; but we fear the gain has been almost entirely of a negative kind.

We hail Dr. Graily Hewitt's work as the lineal successor to Simpson's. The displacements Dr. Hewitt still maintains to be in themselves of great importance; and the mechanical treatment, whether vaginal or intrauterine, to be the main reliance of the physician. Although Dr. Hewitt is admittedly the great defender of these theses, he is not alone: he has a few knights around his table. One at least resides in Dublin, one or two in Germany, perhaps some in London. There may be others. We attach little importance to the circumstance that these authors do not possess great scientific eminence, for we desire above all things to be guided by facts and arguments, not by authority or notoriety, or even general acceptance or acceptability. Truth is what we seek; and we repeat that we hail Dr. Graily Hewitt's work, even although we doubt the accuracy of his views, for he contributes to the movement of the torch of truth, which shines the more it is shaken.

The mechanical intrauterine treatment of uterine displacements proved to be very attractive: it was rapidly and extensively adopted. But it was soon found that the authors who recommended the treatment were, without acknowledgment of indebtedness, adopting the principle of the Jeddart justices—"Hang him first and try him afterwards". Many therapeutical proposals are launched on this principle, and their subsequent trial ends in a verdict of consignment to oblivion. But this treatment by metallic intrauterine instruments caused women so much suffering and death that—at least as then practised—it deserved the dignity of hanging, as well as the enviable repose of oblivion.

Since this treatment was first generally used, it has been variously, and perhaps advantageously, modified by Valleix, by Beatty, by Hewitt, and others. What success attends the use of the latest modifications we cannot pretend to say, nor perhaps can any one else; and, although we ardently hope for much, we expect only little. For many years now it is known to us that it is the practice of many gynæcologists to use all sorts of pessaries whenever the slightest occasion can be found, or even when there is none; and suffering women are often, at least, comforted: but general practice and advice are different. We believe that pessaries (not intrauterine) may in many cases be valuable and useful, as we are sure *Punch* believes regarding marriage; and to a young man about to introduce a pessary, we adminster *Punch's* first advice as to marriage—"Don't".

In conclusion, we quote from the work of the justly distinguished Niemeyer some remarks, which will command the greatest respect from medical men of all shades of opinion on this difficult subject.

"We have already said that total disappearance of a flexion must to a certain extent be considered as a physiological impossibility, as it is almost always accompanied by atrophy of the parenchyma of the uterus at the point of flexion. 'Flexion instruments', sounds, redressers, and intrauterine pessaries, which were for a time much used for flexions, do actually no good, but much harm. Scanzoni has stated plainly that in his large gynæcological practice he has never cured a flexion, and that he considers the use of flexion instruments as of no use, and dangerous. Tonics, also, whether used locally or internally, promise no benefit. The advice that patients with anteflexion should hold their urine as long as possible, so that the distended bladder may raise up the fundus, and that patients with retroversion should retain the fæces for the same reason, is given from theoretical grounds, and has not proved correct (Virchow says that anteflexion results from great distension of the bladder while the uterus is fixed). Most gynæcologists advise wearing a firm girdle around the pelvis and lower part of the abdomen, and many patients praise the result of this treatment. It is difficult to understand that, even in retroflexion, pressure on the lower part of the abdomen should relieve the patient. Perhaps their greater ease may be due to the compression of the uterus, and its consequent bloodless state.

"Little as we can do to remove the flexions, we may do much to relieve the sufferings of the patient if we treat the catarrh and parenchymatous inflammation of the uterus, which first call attention to the flexion, according to the rules laid down in previous chapters. Occasional abstractions of blood from the portio vaginalis are peculiarly beneficial, and are almost always effective in cases of flexion."

Natura e Therapia dell' Angina Difterica, del Dottor Oscar Giacchi.

On the Nature and Treatment of Diphtheria. By Dr. Oscar Giacchi. Pp. 23. Poppi: 1872.

This is a modest and apparently a very honest account of diphtheria in a country district—the agreeable hills which neighbour on the Arno in the earlier part of her course. A pure balsamic air distinguishes the country, with large growth of fir-tree and beech; no mephitic or marshy exhalation extends over it. But even here diphtheria rages epidemically. The robust peasantry are victims to it equally with the inhabitants of towns, thereby correcting the preconceptions of many writers on the etiology of the complaint. The only difference may be allowed, that, in the many cases seen by Dr. Giacchi, not once did paralysis ensue. The first part of this treatise is chiefly occupied with the question of the local or constitutional character primarily attaching to the diphtheritic exudation. Dr. Giacchi concludes for the former opinion. He allows its essentially parasitic constitution; distinguishes it from specific fevers; considers the paralysis to be a neurosis, and the albuminuria to result from parasitic infiltration. As prophylactic, he relies on the sulphites; but these have disappointed him in the promise of cure. Quinine in moderate doses; wines throughout the disorder, used as roborants; locally, phenic acid, a drachm in six ounces of water, with a little alcohol applied by means of a camel's hair brush, and lime-water pulverised by Siegle's apparatus—such is the treatment most approved by our author. Other caustics—even muriatic acid—he has found rather to torment than permanently to relieve.

NOTES ON BOOKS.

Dr. John Attfield's *Chemistry: General, Medical, and Pharmaceutical* (Van Voorst, London) reaches us in its fourth edition. Within five years, ten thousand copies of this manual have been called for. We have already pointed out its peculiar merits as a handbook for medical and pharmaceutical students. The introductory pages are devoted to a few leading properties of the elements. A review of the facts thus unfolded affords opportunity for stating the views of philosophers respecting the manner in which these elements influence each other. The consideration in detail of the relations of the elementary and compound radicals follows, synthetical and analytical bearings being pointed out, and attention frequently directed to connecting or underlying truths or general principles. The chemistry of substances naturally associated in vegetables and animals is next considered. Practical toxicology, and the chemical as well as microscopical characters of morbid urine, urinary sediments, and calculi, are then given. The concluding sections form a laboratory-guide to the chemical and physical study of quantitative analysis. In the appendix is a long table of tests for impurities in medicinal preparations—also a short one of the saturating powers of acids and alkalies, designed for use in prescribing and dispensing. It is only necessary to say of this edition that it contains such corrections and additions (altogether about seventy pages) as seemed necessary to present the latest developments of chemical science; also, a rewritten chapter on the general principles of chemical philosophy, and black letter headings to all paragraphs relating to the preparations of the respective pharmacopœias.

The Hygiene of Air and Water (London, 1872).—Dr. William Procter of York has brought out a very handy popular account of the effects of the impurities of air and water, their detection, and the modes of remedying them. The matter contained in the volume appeared originally in the York papers in a series of letters, and is now published in an enlarged form. It is intended only for popular reading, and therefore does not call for very rigid criticism.

SELECTIONS FROM JOURNALS.

SURGERY.

Excision of the Tongue.—Dr. Podrazki of Vienna, in the removal of cancer of the tongue, ties the lingual artery as a preliminary step. This has already been done by English surgeons. He reaches the vessel by an incision half an inch long a line or two above and parallel to the greater cornu of the hyoid bone. After the vessel has been secured, excision may be proceeded with in the course of three or four hours, without fear of hæmorrhage.—*Wiener Med. Wochenschr.*, December 14th.

Abortive Treatment of Furunculi.—As soon as on any part of the body there is perceived that characteristic redness, round in form and variable in size, with a culminating point in the centre, which, red at first, soon turns to a greyish white, pour into a little saucer a thimbleful of camphorated alcohol; dip three fingers of the right hand into the liquid, and gently rub the suspected part, especially the middle; moisten the fingers, and rub again in the same manner eight or ten times, for half a minute each time. After this friction, dry the place well, and cover it lightly by the finger with camphorated olive-oil, to prevent the evaporation of the strength of the alcohol applied. It is rare for a blind boil or furuncle, at the moment of lessening, to resist four applications of this kind. Often they have been seen to decrease in inflammation, to dry up and disappear, after only one application. When many applications are necessary, it is well to let a certain interval of time elapse between them—for example, to make them morning, midday, and evening. They never fail to take effect.—*L'Abeille Médicale.*

Double Aneurism cured by Digital Compression.—At a meeting of the Royal Medical Society of Vienna on November 22nd, Dr. Redtenbacher related a case of double aneurism of the left lower extremity, in which intermittent digital compression for six hours and ten minutes was completely successful. The patient was a man aged 54, who, on his admission into hospital on October 22nd, was found to have two aneurisms—one situated at the middle of the thigh, the other in the popliteal space. They were said to have commenced spontaneously a year previously. Pulsation was arrested by compressing the artery on the pubic bone. There were signs of atheromatous disease in the vascular system. Intermittent digital compression was applied during twelve days, from October 23rd to November 3rd, as follows: first day, for two periods of four to five minutes; second day, three periods, each of five minutes; third day, three periods, one of ten, and two of eleven minutes; fourth and fifth days, three periods of ten minutes each on each day; sixth day, thirty-seven minutes; seventh day, forty-five minutes (three applications); eighth day, two periods of fifteen minutes each; ninth day, thirty-one minutes; tenth and eleventh days, each thirty-five minutes; twelfth day, forty-one minutes. On each of the last three days, the pressure was applied during two periods, with an interval between them. On the twelfth day, the pulsation had entirely ceased, and there was not the least disturbance of the circulation. The patient was shown to the members present at the meeting. Both aneurisms were consolidated and reduced in bulk.—*Wiener Med. Wochenschr.*, December 7th, 1872.

Intrabuccal Resection of the Inferior Maxillary Nerve.—Dr. A. Menzel has described in the *Archiv für Klinische Chirurgie* (Band xiii) two cases in which a portion of the inferior maxillary nerve was successfully excised by the intrabuccal method, proposed in 1858 by Paravicini of Milan. One of the patients was operated on by Dr. Menzel; the other by Dr. Billroth. The incision was made along the anterior border of the ramus of the jaw; and, by tearing through some connective tissue with the finger, the nerve was reached at its entrance into the dental canal. Care should be taken to divide the nerve close to the bone, so that the lingual nerve may not be injured. Dr. Meusel also describes a somewhat similar case, in which he divided both the dental and the lingual nerves by the intrabuccal operation; and Dr. Menzel believes that these are the first instances in which the operation was performed on the inferior maxillary nerve in the living subject. The intrabuccal method is said to possess the following advantages: freedom from danger; the possibility of resecting the nerve at a higher point; the absence of cicatrix and of facial paralysis, and of salivary fistula; and the facility of the operation.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

DUNBAR'S SCOTCH WHISKY.

The famous Medical Declaration of 1871 on the Use of Alcohol contains the following opinion entertained by two hundred and fifty leading physicians and surgeons in England.

"They believe that alcohol, in whatever form, should be prescribed with as much care as any powerful drug, and that the directions for its use should be so framed as not to be interpreted as a sanction for excess."

It was felt at the time by many practitioners that the spirit of this declaration would be more easily carried out in a systematic manner, if the exact strength and character of a certain number of wines and spirits were known. It was also clear that, unless alcohol were prescribed in definite and known quantities, accurate therapeutical results could not be obtained.

It is with the view of in some measure obviating these difficulties that Messrs. Dunbar and Co., of No. 2, Gresham Buildings, London, have prepared blends of matured malt whiskies obtained from some of the best north and west country distilleries in Scotland. These blends are guaranteed to contain—DDD Blend 57, DD Blend 50, and D Blend 45, per cent. of absolute alcohol by measure at 62° Fahrenheit. The blending of these whiskies, and the maturity and strength of each of which is certified by the Excise officers, has been placed entirely under the supervision of Professor Dewar of Edinburgh; and other precautions have been taken which will, we believe, insure to the public these blends containing their proper percentage of alcohol. The blending in the samples under our examination has, we think, been most judiciously carried out to suit the taste of southern consumers; and Messrs. Dunbar have succeeded in producing whiskies of excellent quality. By the enterprise of these gentlemen, the profession have now within their reach the opportunity of prescribing alcohol as they are in the habit of doing in the case of other therapeutical agents, in known quantities, and, further, in a palatable and wholesome form.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1872.

MEMBERS who have not yet paid their subscriptions for the year now closing are reminded that they were due in advance on the 1st of January last. In accordance with the laws of the Association, the issue of the JOURNAL will be suspended in the case of all members whose subscriptions remain unpaid on the 31st instant.

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 21ST, 1872.

RETROSPECT AND PROSPECT.

As the year draws to a close, thoughts of the past and the future arise. The year now passing away has been one in which our Association has played a part of usefulness and of honour, of which all who belong to it may feel proud. Its chief public labours, as an united body, have been directed towards the improvement of the scheme of Public Health Legislation, in originating which it played a large part. As the parent of the Royal Sanitary Commission, it took an active interest in the Public Health Act which sprang from it. Our readers have received reports of the interviews with ministers, the repeated parliamentary conferences, and other means which were taken to give a satisfactory direction to some of the objectionable clauses of the Bill. These proceedings met with a considerable amount of success, and, by continuing to watch over the administration of the measure, and to watch the opportunities for its amendment, the Association will farther advance the public and professional welfare. Space will not serve us to discuss in detail this week the leading features of the work done at the great Birmingham annual meeting and in our numerous Branches: nor can we to-day refer to the efforts which the JOURNAL has made to advance medical interests and medical science during the year. Aided by writers such as Paget, Fergusson, Gull, Humphry, Acland, Stokes, Quain, Russell Reynolds, Murchison, Erichsen, Braxton Hicks, Maudsley, Lockhart Clarke, Burdon Sanderson, George Johnson, Alderson, Prescott Hewett, Savory, Callender, Bristowe, Stromeyer, Holmes, Gairdner, Le Gros Clark, Aitken, Alfred Baker, Henry Bennet, Fraser, Evory Kennedy, Matthews Duncan, Priestley, Henry Thompson, Jonathan Hutchinson, De Morgan, Arthur Farre, John Wood, Handfield Jones, Bastian, Wheelhouse, Henry Smith, Swayne, Hughlings Jackson, Annandale, Althaus, Grimshaw, Dalrymple, Stokes, Heaton, Mapother, Holthouse, Broadbent, Berkeley Hill, E. Long Fox, Simpson, Grainger Stewart, Cobbold, Furneaux Jordan, Dyke, Wanklyn, Aveling, R. Liveing, Cheadle, Dickinson, Crichton Browne, Atthill, Jessop, Green, Pemberton, Morell Mackenzie, Tilt, we have done our best to maintain the JOURNAL at the head of periodical medical literature; and we are informed that the effort is considered to have been entirely successful. It will this year be renewed—with what promise of support the programme for the year printed on another page will show.

The Association will meet next August in London. That meeting will be, it may be expected, a great professional event. The invitation has been extended by the profession in London with great cordiality, and on a scale which has no precedent in our history. The Association, which numbered little more than 2000 when last it met in London, now numbers nearly 5000 members, including the flower of the profession in every locality. The London meeting will probably be the greatest medical gathering which has yet taken place. Our metropolitan leaders of the profession, all of whom are members, and many of whom have held high office in the Association, are preparing to assist Sir William Fergusson in offering a reception worthy of them, and worthy of the hosts of distinguished visitors who may be expected. Everything leads us to anticipate that the Association—founded on a broad and completely democratic basis, yet claiming sympathy and fellowship with the highest—will continue to grow and to develope its power for the promotion of science, for the strengthening of brotherly union, and the advancement of the public good.

THE DURATION OF INFECTION.

AT a recent meeting of the Lancashire and Cheshire Branch of the British Medical Association, held in Manchester, Dr. Ransome read a paper on this important subject, in which the obscurity and the difficulties with which it is now beset were clearly set forth, and a very practical proposition was made for collecting information with a view to dispel them. Few subjects are indeed of greater importance than this to busy practitioners and to men of science. The hard-working general practitioner knows full well how often he is asked to decide and to prophesy concerning the duration of infection, and how sorely he is puzzled to satisfy his questioners.

Schoolmasters and schoolmistresses, again, know the difficulty of dealing with the conflicting interests of parents, owing to the want of exact knowledge respecting both the period of incubation and duration of infectious disease; and many clerks and warehousemen could tell of the losses which they have suffered from a cessation from work prolonged beyond all need by the fears of their employers, after attacks of small-pox, or diphtheria, or some other disorder. But these persons, who suffer most from the want of authentic and definite knowledge on the matter, are not likely to take up its investigation themselves; and thus we may perhaps account for the strange absence of information on the subject, and the almost utter silence respecting it in our medical text-books, and even in those treatises which especially deal with the subject of infectious disease.

That there is a very great degree of ignorance regarding the period when most of the infectious disorders cease to be communicable, will be evident enough to anyone who knows the differences between the opinions expressed by medical men high in the profession; and it is not surprising that this should be the case, when the only evidence on the matter is derived from a species of oral tradition which has descended from father to son, or from an old medical man to his apprentice.

There are doubtless not a few medical practitioners who, when they are asked questions on this subject, boldly confess their ignorance—a course which may raise them individually in the estimation of sensible people, but which will hardly raise the credit of medical science. Others, again, fix an extreme limit by way of being "on the safe side"; and a third class endeavour to come as near the truth as their own experience or that of their *confrères* will allow; naturally, there are great differences in these latter opinions as expressed to the public, and thus arises another source of the contemptuous opinion which is held of medicine by men of science.

It is only lately that any careful study of epidemics has been attempted. They have, up to a very recent period, been regarded as scourges in the hand of the Almighty to punish impiety and vice, rather than as the results of ignorance and neglect.

The duration of infection is a subject which could only be cleared up by the co-operation of many observers; and the organisation of the British Medical Association may be most worthily employed in assisting the investigation. The Lancashire and Cheshire Branch have accordingly appointed a Committee—of which Mr. Mellor is President, and Dr. Haddon, of Monkshall, Eccles, Manchester, Secretary—to inquire into the whole question. They have had circulars prepared and published for distribution to the profession, and have drawn up printed schedules for recording cases observed (see BRITISH MEDICAL JOURNAL, November 16th, 1872). The questions in the schedule and circular are exactly suggestive of the points to be observed. Copies of them can be had on application to the Honorary Secretary. It may be expected that surgeons to ships, schools, reformatories, asylums, etc., will be best able to prosecute this inquiry, and we would urgently appeal

to all of our medical brethren holding such positions to apply to the Honorary Secretary for copies of the schedule, and to fill them up as opportunities occur in their practice. Medical officers of the army, and of the royal navy, have especial opportunities for undertaking this useful inquiry. The medical directors of the army and navy have always shown themselves very ready to assist important inquiries of this kind; and we suggest to the Manchester Committee of our Lancashire Branch to address those authorities with a request for their assistance in bringing the schedules under the notice of the medical officers of the public service. We trust also that general practitioners, especially in the country, will be able and willing to lend a helping hand, and that they will apply to Dr. Haddon for the necessary forms on which to record their observations on the duration of infection in cases of small-pox, measles, scarlet fever, diphtheria, typhus, typhoid, whooping-cough, and mumps.

When these schedules are filled up and returned, the Committee will be able to classify the cases according to their nature and value; and, by the well authenticated and positive evidence, assisted by the doubtful or negative cases, they may hope to arrive at some conclusions which will give precision to our ideas on the subject. The value of such a result is quite apparent; the inquiry is one of large interest, and is strongly called for by our present want of knowledge on the subject. Almost every one who is willing to take the trouble can contribute some facts and observations—of little importance when isolated, but of great use when collected, marshalled, and collated; and it may be hoped that few of our readers will omit to take upon themselves individually the small labour of sending for and using the schedules. They may fully trust the able Committee which has prepared them to exercise judgment, industry, and dispatch in putting to a good purpose the information supplied to them.

MORE CHLOROFORM DEATHS.

VERY few weeks have passed lately in which our columns have not been compelled to bear mournful testimony to the perilous effects of chloroform administered as an anæsthetic, by the record of one or more deaths from the vapour; nor can this week figure as an exception, any more than the last. We hear to-day, from one of our hospital reporters, of another melancholy death from chloroform during the week on the operating-table of King's College Hospital. The retrospect of our columns during the last six months, in which we have directed earnest attention to the subject, affords materials of distressing amplitude for the indictment of chloroform as a deadly and dangerous agent of anæsthesia. Since August, we have had to place on record ten deaths from chloroform and two from methylene. The discussion which we have invited, and which has been ably maintained by Messrs. Morgan, Green, Jones, Couper, Butlin, Haward, Alexander, Clover, Greenway, and others, and the testimony furnished by the large experience of the surgeons of America and of Lyons, have concurred with remarkable unanimity in establishing beyond doubt the far greater safety of ether as an anæsthetic than of any other known agent excepting the protoxide of nitrogen. We feel a sincere gratification in having elicited this large and valuable contribution to medical knowledge.

So far as reliable statistics can go, it seems clear that ether is at least eight times as safe as chloroform, or, in other words, that seven out of every eight deaths that are now recorded as occurring from artificial anæsthesia, might be avoided if pure ether were used instead of chloroform. We feel assured that surgeons generally will be disposed to weigh well this important consideration, and that they will not be disposed to conceal its solemn bearings from themselves or from their patients. The fatalities from chloroform have been so numerous, so startling in their various and unexpected character, that the surgeon can hardly see a technically uninformed patient mount upon the operating-table, and submit himself at his bidding to the action of the vapour of chloroform, without asking himself gravely whether he is doing rightly in exposing that person to the excess of danger to life which is involved in the administration of chloroform rather than of ether or of nitrous oxide gas.

We have been very earnest, persistent, and even tedious, during the last few months, in again and again recurring to this subject, because the force of habit is so great, and the hold which choloroform had taken in this country was so strong and universal, that nothing less than a continuous and overwhelming exposition of facts and opinions sufficed to produce an impression and to obtain for ether the renewed trial which its greater safety and its proved convenience as an anæsthetic command. Administered freely and in the manner which our correspondents have recommended, it seems to produce readily all the best effects of chloroform. We are happy to hear this week that at the London Hospital, where Mr. Couper has for some time used it with completely satisfactory results, the whole surgical staff have resolved to give it an exclusive trial in the operating-theatre. Circumstances have prevented us from recording the successful results of the administration of ether at the Royal Infirmary at Edinburgh, the early cradle of chloroform, and at the Leeds Infirmary. We shall shortly do so; and we now repeat our appeal to British surgeons to give it a fair and extended trial in the method indicated in our past numbers, and to furnish the profession, in our columns, with a detailed record of their experience, whether favourable or unfavourable.

WE are glad to learn that, as regards small-pox, Lincoln has now a clean bill of health.

DR. APJOHN of Dublin has been appointed to the Prælectorship of Chemistry in Caius College, Cambridge.

DR. GREENFIELD has been appointed Medical Registrar, and Dr. Charles Creighton Surgical Registrar, to St. Thomas's Hospital.

MR. W. J. HARRIS of Worthing has lately been appointed medical visitor of private lunatic asylums in the district of West Sussex.

AT a meeting of the Council of the Birmingham and Midland Counties Branch, on December 12th, a numerously signed requisition from members was received and discussed, relative to the formation of a microscopical section. It was decided that steps should be taken for the formation of such a section. The Branch has, as our members are aware, already in active working a pathological and clinical section.

SMALL-POX is epidemic in Lisbon. The Society of Medical Sciences in that city has appointed a committee to consider what means should be adopted to arrest the spread of the disease; and specially, whether revaccination is expedient during its presence.

BY a decree dated November 17th, the King of Italy has placed the technical administration and disciplinary administration of the service of the health of the army in the hands of the medical officers. A month previously, the "commission of lazareths" had been suppressed in Prussia, and their powers given into the hands of the principal medical officer of each hospital.

FROM the report of an inquest in the *Eastern Morning News*, we learn that some chemists are in the habit of making a "Godfrey's cordial" which, unlike the proprietary medicine of that name, does not contain opium. It is sold "in cups", and is made of treacle, 4 lbs.; oil of sassafras, 40 drops; sweet spirits of nitre, 2 oz.; boiling water, 2 lbs. It would be very satisfactory if this should take the place of the opiate ordinarily sold under the same name, and largely used for drugging children.

MILK OF DISEASED COWS.

THE *Bulletin de la Société Protective de l'Enfance* contains a communication from Dr. Lycias Précy of Pourrain (department of Yonne) stating that foot-and-mouth disease is very prevalent among cattle in that department. The milk is scanty; and, if given to children, even when mixed with nine-tenths of healthy milk, produces emaciation and diarrhœa, which almost always prove fatal.

A TALE OF A NOSE.

THE readers of surgical works are doubtless familiar with those cases in which the nose is reported, after having been cut off, to have been successfully replaced—in one instance, after a dog had run away with it. An interesting example of the reparative power of nature in such an injury is recorded in last week's *Wiener Medizin. Wochenschr.* by Dr. Malfatti. On November 13th, 1871, Lieutenant Preiser, while in barracks, had his nose cut off by a sabre. The wound passed through the middle of the cartilaginous part of the bridge of the nose, dividing the left ala along its posterior third, the septum through its middle, and the left ala two lines behind the anterior angle of the nostril. The piece cut off was taken up from the ground where it lay, cleaned with cold water, and reapplied, being secured in its place by means of sutures. A week after the injury, a dry scab began to form on the left ala, and extended in the course of three days over nearly the whole nose. Granulations gradually formed; healing went on steadily; and on February 1st, 1872, careful examination was required to detect any trace of the injury.

THE PATHOLOGICAL SOCIETY OF LONDON.

THE last meeting for 1872 took place on Tuesday. Several interesting specimens were exhibited; numerous drawings of the fungus-disease, mycetoma of India, and drawings of the eruption in leprosy, were shown by Dr. Vandyke Carter, whose name is well known in India and this country in connexion with these affections. Dr. George Johnson exhibited an interesting specimen of paralysis of both vocal cords from pressure of an aortic aneurism on the left vagus and recurrent nerves; and Mr. John Wood brought forward two very interesting cases of epispadias, in one of which he had in great measure succeeded, by most painstaking operative interference, in affording relief to the patient.

THE CLINICAL SOCIETY OF LONDON.

AT the last meeting of the Clinical Society, Mr. Campbell De Morgan in the Chair, an interesting communication on the treatment of cases of pyrexia of phthisis by cool baths was read by Dr. C. Theodore Williams, and led to a considerable amount of discussion. The President made some pertinent remarks regarding the present use of cold water in the treatment of pyrexia. He alluded to the period when it was first recommended and carried out by Dr. Currie; and, as an example of the disbelief of its value entertained by the profession in the early part of this century, and their behaviour towards the advocates of the cold water treatment, he quoted the following lines on Dr. K., a disciple of Currie's, from the pen of the late Mr. H. Chadleigh Standert of Taunton—

"The solid rock the Hebrew smote,
Amidst the desert wild;
The bounteous waters issued forth,
And all the desert smiled.

"His stolid head our prophet smote,
As rugged and as wild;
The water-system issued forth,
And all the doctors smiled."

Dr. Poore also exhibited a patient with heart-disease, in whom he demonstrated a cardiac murmur to bystanders at a distance of several feet. A walking-stick was placed on the sternum, and a sounding-board in the shape of a guitar on the top of this. By this means the cardiac murmur was greatly intensified. Mr. Dalby read an interesting paper on a case of paralysis of the portio dura from a wound of the tympanum.

TESTIMONIAL.

ON December 4th, a handsome testimonial, of more than £300 in value, and consisting of a large silver salver, an epergne, two waiters, two fruit-stands, a cake-basket, and a set of dessert knives and forks, all of elegant design, together with a gold repeater, were presented to Mr. T. J. Starling, of Higham Ferrers, Northamptonshire.

CHOLERA IN AUSTRIA AND HUNGARY.

UP to December 1st, there had been 2616 cases of cholera in Hungary: of these 1081 had recovered and 1008 had died. In Buda and Pesth, from November 24th to December 1st, in addition to 264 patients remaining under treatment at the former date, there were 153 new cases, making in all 417; of whom 122 recovered, 67 died, and 228 remained under treatment. The disease broke out on December 3rd in Zamost and Hruschau in Silesia. Of seven persons attacked, two died. In Moravia, cholera has appeared in Saversdorf, and has ceased in Stitna. From November 24th to December 1st there were in Moravian Ostrau and Saversdorf 53 cases, of which 11 recovered and 16 died.

ASSOCIATION OF FRENCH ARMY SURGEONS.

THE medical officers of the army of Paris and Versailles have formed a society. It was at first instituted as a club to maintain union and a spirit of confraternity among the members of the sanitary service, but has grown into a society, in which professional interests and questions relating to the special position of the military surgeon are made the subjects of written or oral discussions. The name of "reunion" has been given to it (in place of its former title of club): the meetings are held every Friday. The society has as its organ the *Bulletin Médical Militaire*, which is published as a supplement to his *Bulletin de la Réunion des Officiers*—an evidence of good feeling between the combatant and the medical branches of the service.

THE WEATHER.

THE weather in Europe generally has been so bad, and in this country so much worse, during the last season, that we are glad to hear favourable accounts of the season at Mentone. A correspondent writes, under date December 15th: "The weather here just now is splendid. I have been all day, from ten to four, sitting and moving about in the open air." It is cheering to read of good weather anywhere. There seemed reason to fear that the receipt for it was lost upon earth.

RHEUMATISM IN WHALES.

THERE is unquestionably a great deal of unknown and unrelieved suffering in the world. If want of sympathy and difficulty of finding relief add much to physical distress, it is sad to think of the new field of woe on the largest scale which Dr. Struthers has discovered in hitherto unexplored regions of pathology. In studying the osteology of whales, he has discovered that they are very liable to rheumatism. He has seen many examples of rheumatic ostitis in whales of different kinds. It has been said that animals are not subject to disease until they are brought into connexion with man, but this fact contradicts the theory. It is the more remarkable, seeing that whales are less subject than man to variations of temperature. The cold-water treatment does not seem to be efficacious in the cure of the disease.

POISONINGS.

WE mentioned last week a shocking case of accidental poisoning, due to the neglect by druggists to use suitable fluted bottles for storing poisonous drugs. We observe in the *Chemist and Druggist* of December 14th, another case reported from Ireland, in which death appears to have occurred from a similar cause. A farmer named Walsh, in the county Kilkenny, who had been sick for some time past, received a quantity of medicine in two bottles, in one of which was corrosive sublimate, intended for external use only. The patient, however, swallowed a dose of it, and died in dreadful agony. The person who supplied the medicine—a Mrs. Doolin, Mullinabat—has been committed for trial. Poisonous disinfectants ought, we think, to be sold with similar precautions. The absence of such precautions has caused numerous deaths from accidental poisoning by carbolic acid, and by Burnett's fluid. One is reported from Devoran in Cornwall, on the 13th inst. A gentleman who was near-sighted poured from a bottle about half a tumbler of Burnett's disinfectant in mistake for Friedrickshall water, and drank it off instantly with fatal effect. The deceased, it is added, was very

highly esteemed. His widow is left with ten children. We once more loudly and firmly protest that the Pharmaceutical Society, in omitting to enforce mechanical precautions of the kind we have indicated, is not only breaking a sacred pledge which its leaders gave at the time of the passage of the last Pharmacy Act, but is also neglecting a solemn duty. We earnestly call upon the Government to fulfil its announced intention of compelling the Society to carry out its obligations.

MARINE MEDICINE.

STRANGE stories come from the sea. Some of them are at least *ben trovati*. The *Chemist and Druggist* contains the story of a sea-captain to whom a sailor applied for relief for "something on his stomach." The captain consulted his book of directions, and prescribed "No. 15." Unfortunately, however, there had been a run on No. 15, and the bottle was empty. But the skipper, remembering old games of cribbage, made up a dose by combining No. 8 and No. 7, saying "8 and 7 make 15;" and the sailor, to whom the calculation seemed quite natural, took the mixture with startling effect.—The New Bedford (Massachusetts) *Mercury* says the medicine-chest of one of the abandoned Arctic whalers was broken open by some of the natives, who, thinking they had found a prize, proceeded to swallow the contents of all the bottles. The survivors described the results as startling; for the doses were too large for the constitution of even an Esquimaux. Several of the partakers died, and others wanted to, but could not.

DRESSER'S ENGLISH IN INDIA.

NOTWITHSTANDING the improvement in the education of native medical pupils, it appears that dresser's English in India is still something of the same kind of dialect as pigeon English in China. The *Madras Medical Journal* prints the following specimen of a medical certificate given by a hospital assistant to a patient, who had his teeth loosened by a blow on the mouth.

"I do hereby certify that the Village Moonsiff —— of —— aged about 45 was found on my examination suffering from shaking of 2 front upper teeth, and 4 front lower teeth and besides several other teeth also in a slight shaking state. I consider that the shaking appear to have been caused by another individual, or by fall, or by natural of previous administration of cruel mercury. I am of opinion that the hurt is not a mortal. (Signed) ——, *2nd Class Hospl. Asst.*"

OATMEAL.

OATMEAL (says the *Edinburgh Medical Journal*), according to *Moore's Rural New Yorker*, is rapidly growing in favour on the other side of the Atlantic. According to a contributor to our contemporary, it is made into delicious breakfast-cakes, cracknels (very palatable), cocoanut-cracknels (also pleasant to the taste), and pie-crusts, which eat sweet and crisp. But we are informed by the same authority, that in its raw state, when it is mixed with water, it is becoming a favourite dish. The brose of "Auld Scotland" is being relished—and we are glad to note this, because we believe it to be a healthy and muscle-forming commodity—by the hunters and trappers of the West, who are substituting oatmeal in this form for parched Indian corn. The same brawny fellows—whose powers of endurance are proverbial, whose scorn of fatigue is known to all readers of travel and natural history—have found out that a very acceptable drink is made by putting about two teaspoonfuls of oatmeal into a tumbler of water. We have often established the excellence of this ourselves. "This they—the hunters and trappers—aver to be the best drink they can use, as it is at once nourishing, unstimulating, and satisfying." This drink, we are also assured, "is rapidly coming into use in large establishments where men work much in the heat. It has long been used in the large glass-factories and iron-foundries of Europe, and is coming into use in our own country. It is common to find it in the large government works. In the Brooklyn navy yard it is a great favourite, two and a half pounds of oatmeal being put into a pail of moderately cool water. It is said to be better than any of the drinks made up with vinegar, molasses, etc., which our farmers use in the harvest field. A well-known medical writer says, 'that from it is obtained power to sustain the exhausting influence of perspiration'. Indeed, we have seen it tried with great satisfaction, and we commend it to the attention of our hard-working friends in the harvest-field." Shade of Dr. Johnson! what think you now of your despicable food of men in Scotland?

THE CHARING CROSS DEMONSTRATORSHIP.

IT will scarcely be credited that the Charing Cross authorities find themselves unable to fill the office of Demonstrator at their School. Nevertheless, such seems to be the case, since the candidates have received the following announcement.

"Resolved that, in the opinion of this Committee, the gentlemen who have offered themselves as candidates for the Demonstratorship of Anatomy, have not had sufficient practical experience in teaching anatomy to justify the Committee in selecting any one of them.

How many candidates applied for the post we do not know; but it strikes us that the pretensions and aspirations of the Committee must have risen to a rare elevation, when they can afford to reject such an experienced anatomist and teacher as Dr. Murie. That gentleman's claims do not merely rest upon the large number and sterling quality of his contributions to the anatomy of the vertebrata, as the result of scalpel-work done at the Zoological Society's Menagerie; but, if we are not mistaken, Dr. Murie was for at least three years acting demonstrator of human anatomy under Dr. Allen Thomson at the Glasgow University. He was also demonstrator of pathology for two years at the Glasgow Royal Infirmary; and we believe we are right in stating that he was afterwards called upon to instruct the prosectors charged with preparing dissections for the examinations in human and surgical anatomy at the Royal College of Surgeons of England. After such unusual experiences of teaching and of acquiring anatomical skill and knowledge, and after obtaining great reputation from many years of original work as a comparative anatomist, it appears to us that this resolution presses very unfairly on Dr. Murie, and affords another striking instance of the unhandsome treatment which earnest scientific workers too often receive in this country. Surely the Committee might have hit upon some courteous mode of declining the services of the various candidates, instead of deliberately framing a resolution the terms of which, as applied to Dr. Murie's case, are singularly well calculated to injure the feelings of one of the most eminent anatomists whom this country possesses.

THE REGISTRATION OF STILL-BIRTHS.

ON this subject Mr. F. W. Lowndes, of Liverpool, writes to us:

Allow me to call attention to the proposed amended Bill for the better Registration of Births and Deaths which will be brought before Parliament early next session. The profession are interested in the whole measure, more or less, both in their professional capacity and as members of the community at large. By the former they are in a position to judge fairly of the merits and demerits of any legislation the working of which may remotely or otherwise affect their practice; while, by the latter, they are so situated that it is unlikely they would suggest any course which might, in its turn, press inconveniently on them as individuals. Most especially is this the case with regard to the subject of still-births; none but medical men know the effects of the present system of ignoring such, and utterly excluding them from the registration system. Many have been asked, and even tempted with a heavy bribe, to give a false certificate; many are aware that such false certificates are constantly given by midwives; while all are aware that it is hopeless to ensure a fair system of registration, and correct statistics or data to go upon, until the compulsory registration of every birth, whether of a living or dead child. Now the proposed Bill does not provide for the registration of still-births, but merely requires that, prior to their interment, a burial order shall be required of the registrar, for which order, the persons requiring it shall pay the sum of one shilling. No provision is made for the duly recording of all needful particulars, so that subsequent inquiry and identification may be possible; nor is any attempt made to ensure the preservation of such statistics as may be of the greatest use both to the obstetric practitioner and to the medical jurist. It must be obvious, that it would be infinitely better to provide for registration and interment separately so that the results may be compared, rather than that the burials should be only considered as of any consequence. Many acts have passed and required subsequent amend-

ment, at much trouble and inconvenience, which might have been avoided had those who were more cognisant of its probable effects come forward and stated what they knew, so as to assist those whose duty it was to frame the Bill and revise the clauses. Hence I hope that all those of my fellow associates who are in a position to give information respecting this matter will lose no time in doing so. Individual members of Parliament should be well posted up as to what is requisite, and a measure which may be productive of the greatest benefit to the community at large, or deficient in consequence of miscalled economy, receive every due and needful consideration.

UNIVERSITY COLLEGE HOSPITAL.

DR. GOWERS has been recommended to the Council to fill the office of Assistant-Physician, Mr. Marcus Beck that of Assistant-Surgeon, and Mr. Tweedie that of Assistant Medical Officer of the Skin-Department. The last named post has been made to enable Dr. Tilbury Fox, the physician to this department, to devote more time than formerly to the teaching of skin-diseases.

OBSCENE QUACKS.

TWO notorious quacks have been under prosecution during the week. Watson has pleaded guilty, at the Middlesex Sessions, to publishing an obscene book, of which four thousand copies have been seized. He was bound over in recognisances of £1,000 to come up for judgment. The person calling himself Dr. Kahn has been brought before the police-court on a similar charge; his case is not yet decided.

ROYAL COLLEGE OF SURGEONS.

AT the last meeting of the Council of the Royal College of Surgeons of England, Mr. John Adams resigned his office of Examiner, owing to ill-health. Mr. John Simon was the Councillor next in rotation; but, acting upon the principle which he has ably advocated — that examiners should be selected from without, and not from within the Council—he declined the honour of nomination. Next in rotation stands Dr. Humphry, and the third in order is Mr. Luther Holden. Mr. Simon's example may, however, prove contagious.

THE UNIVERSITY OF DURHAM AND THE GENERAL MEDICAL COUNCIL.

A NEWCASTLE correspondent writes:—The election of Dr. Pyle as representative of the University of Durham in the General Medical Council has occurred under circumstances which are unprecedented. The Senate of the University had referred the nomination to fill the vacancy to the Faculty of Medicine, who were unanimous in nominating Dr. Humble, a lecturer in the Newcastle College of Medicine. Dr. Pyle, a respectable physician and an energetic young man, was nominated at the last minute by the clerical graduates, in the teeth of the unanimous vote of the Faculty of Medicine and the Senate. The young clerical element predominates in Convocation; and Dr. Pyle has been elected to represent the Faculty in the face of their unanimous protest by vote, and without belonging to either the College or the Senate. If the medical men were to force a clerical representative upon the clerical body, in face of their preference for another candidate of higher standing, it would be thought very offensive. The position which Dr. Pyle occupies must be highly distasteful, and, one would think, untenable. The circumstances have caused great pain here; and it is probable that further steps will be taken by the Faculty to express their feeling at having a gentlemen forced upon them by the clergy, by whom it was not their desire to be represented in the Medical Council.

EXAMINATION OF PRISONERS.

PUBLIC attention has been called—and we think not unnaturally nor unwisely—to the case of Alfred Brahen, aged 32, a private of the 9th Foot, who died last Sunday in Millbank prison. It appears that this unfortunate man was sentenced by court-martial to 112 days' imprisonment in Millbank, for having deserted and sold his uniform. He arrived at the prison on Saturday night, and was examined by the surgeon on that evening. He looked a strong man, but complained of pains in the chest. The surgeon, however, said there was nothing the matter with him, and ordered him to labour. On Sunday morning he again complained of being ill, said he was in pain, and wanted to see the surgeon. He was accordingly placed on the sick list at eight o'clock, but between nine and ten o'clock was put to work at the pump. This pump work is described as "hard work," but it did not trouble the imprisoned soldier long. After pumping some little time he became very ill, and was removed to his cell, where he laid down on the cold floor and died. His death was caused by disease of the heart; and the surgeon stated that, when on Saturday night the deceased complained of pains in the chest he examined him for disease of the lungs, but not for disease of the heart. Another medical witness said it was impossible to examine thirty prisoners when suddenly brought in of a night for disease of the heart, and the jury returned a verdict of "Death from disease of the aorta." The medical profession will, we believe, concur in the opinion that no prisoner complaining of pain and illness should be set to work before he has been properly examined as to his fitness for labour.

HOSPITAL SUNDAY.

AT a meeting of the Committee which has taken in hand the task of instituting an "Hospital Sunday" for the metropolis, the Lord Mayor announced that the Archbishop of Canterbury, having been consulted on the subject of obtaining a greater amount of clerical co-operation with the movement, had declared his entire sympathy, and had suggested an appeal to other dignitaries of the Church, so that the collection might be simultaneous and general. At the same time, he expressed an opinion that the great Nonconformist body should be invited to aid, and should be represented on the Committee; and a resolution to that effect was adopted.

SURGICAL APPLIANCES.

A MEETING was held this week at the London Tavern, with the object of forming a society to provide the working class and persons of small means with the various surgical appliances at a reasonable price and on easy terms of payment. The chair was taken by Mr. R. Morland, who stated that a principal inducement to form the society was that, although there were four societies with a similar object already in existence, none of the appliances which they dispensed could be obtained except by means of a letter of recommendation. The obtaining of these letters, and the presenting of them, involved loss of time, and it was to avoid this that the society was being projected. Trusses and other surgical appliances would be obtainable on reasonable terms, and would be furnished on these terms on the mere production of a subscriber's ticket. Mr. Cæsar, who moved a resolution declaring the expediency of forming the proposed society, explained that it was to be a provident dispensary, and would help those who would help themselves. It would be open in the evening, and thus labouring men would not lose a portion of their wages by attendance at the institution. Numerous letters of approval, and offers of assistance and co-operation, had been received. The resolution was seconded by Mr. C. Holthouse, who noticed the number of persons who required trusses, but yet did not wish to owe them to charity. This society would meet their case, and would be a recognition of the provident principle, which was now becoming so generally popular. He believed it would also tend to an improvement in the construction of surgical appliances, the art of making which was completely at a standstill. The resolution was agreed to, and a committee was nominated to form the society.

HAMMOCKS FOR INDIAN SOLDIERS.

A GOVERNMENT general order for July 1871 directs that, "if the ground on the line of march cannot be made sufficiently smooth, or if the ground be unavoidably damp, the commanding officer is allowed to issue, on certificate from the medical officer, an extra quantity of straw per day for bedding to each European soldier." Straw, however, is dirty, bulky, harbours vermin, and withal cannot render a volcanic soil in a hot country fit for a bed. There seems no reason, however, why we should not take a lesson from the inhabitants of the forests and hill-ranges of America, Australia, and India, and provide our soldiers on the march through damp localities with hammocks to be slung around the tent-pole.

SCOTLAND.

THE total entry of medical students at Anderson's University, Glasgow, this year is 171, and of these 48 are of the first year.

HANDSOME GIFT.

DR. RAINY, lately Professor of Forensic Medicine in the University of Glasgow, has given the handsome donation of £1,500 for the endowment of medical bursaries in the University.

THE EDINBURGH ROYAL INFIRMARY AND THE LADY MEDICAL STUDENTS.

THREE reports of a very conflicting character have been sent in to the Board of Management of the Royal Infirmary by the Committee appointed to consider the subject of the admission of lady-students to medical instruction in the Infirmary. One report, signed by Professor Muirhead, advises no admission; a second, by Sir Robert Christison and Dr. Gillespie, recommends the admission of those ladies only who have already entered as students; while the third, signed by the Lord Provost, Treasurer Colston, and Mr. George Harrison, proposes that admission be given to ladies, leaving them to make their own arrangements with the staff of the Infirmary, subject to the approval of the Managers. These reports will be considered at the next meeting of the Board on Monday. At the adjourned meeting of Contributors to the Infirmary held on Monday, the Lord Provost, who occupied the chair, formally declared the six gentlemen—the question of whose election has been the subject of litigation in the Court of Session—to be Managers of the Royal Infirmary.

THE UNIVERSITY OF ABERDEEN.

WE congratulate the students of the University of Aberdeen in their choice of a Lord Rector. Knowing well the risk to which many obscure persons are exposed by our Scotch undergraduates, of being suddenly placed in a position of prominence altogether unsuited to them, we can fully sympathise with Professor Huxley's youthful opponent in his marvellous escape on this occasion. The medical students, who were the strongest supporters of Professor Huxley, in the recent struggle, have done good service to their Alma Mater in electing a most distinguished man of science. Mr. Huxley will command respect in the position of Lord Rector, and entertaining even more advanced views regarding the importance of an extended study of natural science than the late Lord Rector, he will, we believe, make every exertion to carry out the scheme proposed by Mr. Grant Duff.

NURSING IN THE EDINBURGH ROYAL INFIRMARY.

IT has been decided by the Managers of the Infirmary to alter the system of nursing, and preparatory steps are now being taken for the introduction of the new arrangements. The staff will consist of the lady superintendent, two day lady assistant-superintendents, two night assistant-superintendents, day and night nurses, assistant-nurses, probationers, and ward-assistants. The sleeping accommodation, on the excellence and privacy of which much depends in securing good and respectable nurses, will be liberally attended to. Every head day nurse will have a bedroom attached to her ward, while the night and assistant-nurses, as well as the probationers, will be accommodated with small separate bedrooms in the nurses' house. The ward-assistants, whose duties are those chiefly of charwomen, will not reside in the Infirmary. All meals will be taken in a large dining-room, and here lectures will be occasionally given to the nurses. The scheme proposed is partially in force at present, but it cannot for some time be fully elaborated. Nursing now-a-days has, we are thankful to say, passed beyond the standard of Mrs. Gamp. Medical science now requires more than ever in her service the aid of educated, honest, and intelligent nurses. To secure this aid, these servants must be well fed, well housed, well paid, and treated with respect; and we are glad to see that the Managers of the Infirmary are giving increasing attention to the subject.

IRELAND.

UNIVERSITY OF DUBLIN.

A CORRESPONDENT writes:—The following table shows the number of candidates passed and rejected at the medical examinations held in 1872.

	Passed.	Rejected.
First Examination.		
Anatomy	31	14
Chemistry	24	10
Botany	41	10
Materia Medica	39	11
Physics	51	6
Final Examination.		
Bachelor in Medicine ...	42	5
Master in Surgery	14	1

A CONVALESCENT HOSPITAL FOR BELFAST.

MR. SAMUEL MARTIN has presented fourteen acres of land to the General Hospital, Belfast, for the erection thereon of a Convalescent Hospital in connection with that institution.

HOSPITAL SUNDAY IN BELFAST.

THE eighteenth hospital Sunday will take place in Belfast on the 29th of this month. It is anticipated that the subscription will be the largest that has yet taken place. An endeavour is being made to induce the operatives in the various manufacturing establishments, who so largely benefit by the General Hospital in whose behalf the appeal is made, to devote one day's pay each to this valuable purpose. It is believed that this would produce a fund amounting to close upon £1,000 a year. Belfast is the only city in Ireland that has a hospital Sunday as an established fact.

THE SLIGO BOARD OF GUARDIANS.

AT a recent meeting of this Board, one of the guardians (Mr. Jones), in alluding to an application from the medical officers for an increase of salary, remarked that £100 of former years did not represent more than £70 at the present time. It was allowed on all sides the doctors had done their duties well, and, therefore, it was not fair to reduce their salaries to £70 a year. A good deal of capital had been made out of what the ratepayers said on this subject. And with respect to this burden on the ratepayers—what would it be? There were seven doctors, and £20 to each would be £140. Half of that would come out of the Consolidated Fund, so that in point of fact only £70 would be on the rates. When a tenant farmer went to pay his rent he was allowed one-half of the poor-rates, so that the £70 had to be again divided, and all that would come out of the poor ratepayers' pockets would be £35 annually. The valuation of the entire union was from £97,000 to £98,000, so that the fractional increase, which this act of justice would cause to the poor ratepayers, was so small that he could not undertake to reduce it to figures. This is an important statement as coming from a guardian, and we do not hesitate in publishing it, as it is applicable to every district in Ireland.

THE CORK DISPENSARY PHYSICIANS AND THE LATE SMALL-POX EPIDEMIC.

AT a meeting of the Dispensary physicians of the Cork Union, for the purpose of urging on the Board of Guardians their claims for remuneration for their increased duties during the prevalence of the small-pox epidemic in the city, Dr. Wycherly represented the arduous and important duties which the Dispensary physicians of the city were called upon to exercise during the very trying ordeal of the epidemic. Resolutions were adopted representing the justice of their claims upon the Guardians, and respectfully requesting compliance with their demands. Public feeling is altogether in favour of the medical men being fairly compensated for their largely increased duties during the period referred to.

THE BRITISH MEDICAL ASSOCIATION AND THE ADULTERATION ACT.

ONE of the clauses of the Adulteration Act, relating to the appointment of analysts, requires that they shall possess competent medical, chemical, and pharmaceutical knowledge. The pharmaceutical chemists, after obtaining a favourable opinion from counsel upon a case stated by themselves, have endeavoured to obtain admission to office as persons eligible under the Act. A recent deputation from the South-Eastern Branch of our Association took occasion incidentally to call the attention of the President of the Local Government Board to the fact that chemists and druggists, being persons engaged in trade and connected with trade interests, were not fit persons to administer an Act of which they are themselves the subjects; and, moreover, that very few of them possessed any analytical knowledge, and none of them could possess any adequate medical knowledge. Mr. Stansfeld's reply was published in the daily papers, and was very satisfactory, except to the pharmaceutical chemists. They have, therefore, attended on Mr. Stansfeld for the purpose of representing to him that there are on the register of pharmaceutical chemists and druggists persons possessing competent medical, chemical, and microscopical knowledge for the office of analysts within the meaning of the Act of Parliament; and that it is not expedient for such persons to be excluded from appointment. Mr. Stansfeld promised to consider the question and make an authoritative announcement. A subsequent communication has been addressed to Mr. Stansfeld by the Chairman of the Parliamentary Bills Committee of the British Medical Association, pointing out that, whereas an Act of Parliament exists, regulating the examinations which certify medical knowledge, subsequent Acts requiring medical knowledge should be interpreted by that light; and that, for any post which an Act of Parliament designates as requiring medical knowledge, those persons only should be considered eligible who have passed one of the recognised examinations.

THE DRUITT TESTIMONIAL FUND.

MR. HAYNES WALTON, the Treasurer, begs to acknowledge the receipt of the following subscriptions since Wednesday, December 4th.

	£	s.	d.
A Friend	50	0	0
Mr. J. R. Hope Scott	21	0	0
Mr. Octavius E. Coope (Brentwood)	10	0	0
Mr. Thos. Mayo (Winchester)	10	10	0
Dr. Churchill	10	10	0
From three Ladies & a Gentleman, by Mr. Burney Yeo	5	1	0
Mr. John Churchill, jun.	5	5	0
Mr. Augustus Churchill	5	5	0
Mr. W. G. Phillimore	5	5	0
Dr. Chepmell	5	5	0
Mrs. E. E. Day (Essex)	5	5	0
Mrs. Lionel Beale	5	5	0
Mons. Laussot (Paris)	5	0	0
Mr. Robt. Drummond	5	0	0
Sir Robert Phillimore	4	0	0
Mr. Thomas Bryant	3	3	0
Dr. Hawksley	3	3	0
Messrs. Dymock and Guthrie (Edin.)	3	3	0
Mr. Richard Quain	3	3	0
Dr. E. Ballard	2	2	0
Dr. H. Maudsley	2	2	0
Mr. F. Manley Sims	2	2	0
Dr. R. Jackson (Oxford)	2	2	0
Mr. Walter Coulson	2	2	0
Mr. Alfred Woodhouse	2	2	0
Messrs. Jupp and Sons	2	2	0
Dr. Latham (Cambridge)	2	2	0
Dr. J. Bankart (Exeter)	2	2	0
Dr. Park (Boston, U.S.)	2	2	0
Dr. Murchison	2	2	0
Mr. Gaskoin	2	2	0
General Water Purifying Company	2	2	0
Dr. Thos. B. Peacock	2	2	0
Mr. R. Hall	2	2	0
Dr. Kelly (Tintara, Adelaide, South Australia)	2	2	0
Mr. G. Johnson	2	2	0
Dr. Armitage	2	0	0
Mr. Wm. Martin	2	0	0
Dr. Hermann Weber	1	1	0
Mr. Henry Morris	1	1	0
Mr. Wm. Dickinson	1	1	0
Dr. W. H. Day	1	1	0
Dr. Cumberbatch	1	1	0
Dr. Wm. Ogle	1	1	0
Dr. Murchison	1	1	0
Dr. Roth	1	1	0
Dr. Sturges	1	1	0
Dr. Ruttledge	1	1	0
Dr. Bull (Hereford)	1	1	0
Dr. W. S. Smith (Weymouth)	1	1	0
Mr. J. Wright Baker (Derby)	1	1	0
Mr. J. Merriman	1	1	0
Dr. Allbutt (Leeds)	1	1	0
Dr. Andrew	1	1	0
Lady Phillimore	1	0	0

In our last list, Dr. Harris of Redruth was described by mistake as Mr. Harris.

Subscriptions may be sent to the Treasurer, Mr. H. Walton, 1, Brook Street, Hanover Square; the Secretary, Mr. A. Norton, 6, Wimpole Street; or may be placed to the account of the Druitt Testimonial Fund, Union Bank, Argyll Street, Regent Street. Subscriptions will be acknowledged weekly in one or more of the medical papers.

SPECIAL CORRESPONDENCE.

BIRMINGHAM.

[FROM OUR OWN CORRESPONDENT.]

WE look with interest on the renewed effort to inaugurate a "Hospital Sunday" in London; our recent one has produced more than £5000, which will be given to the Queen's Hospital next week—a very acceptable Christmas-box.

A "Hospital Saturday," appealing specially to the manufactories, is now on the *tapis*, and an influentially signed requisition is ready for presentation to the mayor, requesting a town's meeting on the subject.

At a recent meeting of the Town Council it was proposed to appoint a medical officer of health and borough analyst, at £400 a-year, and allowing private practice, but to-day wiser counsels have prevailed; the salary of the analyst is fixed at £150 per annum, that of the medical officer of health at £500; both offices may be held by the same person; no private practice is to be permitted, nor any other public practice except in analysis. Effect was immediately given to these resolutions by the nomination and appointment of Dr. Alfred Hill to both offices. Dr. Hill has honourably held the post of borough analyst for some years, and has moreover often and ably assisted the council in sanitary matters; and the manner in which this appointment has been made, without contest or advertisement, "because," as a speaker observed, "it was a foregone conclusion," and the praises accorded to Dr. Hill from all quarters, are a high tribute to the esteem in which he is held.

The vital statistics of the town (for first week in December) give 295 births and 181 deaths—the former being 27, the latter 13, above the average. The calculated annual rate of mortality per 1000 is 27, being also higher than usual. The deaths include 42 of infants under one year, and 38 of persons over sixty; thirteen was from scarlatina. Small-pox is less prevalent than it was, eleven new cases were reported last week; it is, however, very severe at Oldbury, where the number of cases reported last month was 155, deaths 19; none of these occurred in the special hospital recently established.

At Handsworth there is a larger proportion of typhoid fever than usual, and scarlatina is seldom absent. It is well known that the sewerage here is very imperfect, and for a great part there are only surface drainage and "dumb wells." Two years ago, the proposal to appoint a Local Board of Health was negatived; quite recently an efficient medical officer (Dr. Welch) has been appointed.

We hear of an interesting and most commendable new foundation in the Potteries, where the infant mortality amounts to as much as 240 per 1000; this is probably the consequence of the mothers working away from home. Mr. Melly and others are about to establish a *crèche* for the care of the little ones.

Our new foundations here are of a different character. Ground has been bought and programme prepared for the "Mason Scientific College," which will have good endowments for professorships of physics, chemistry, and possibly physiology; "anything, in fact, but classics." The munificent and anonymous donation of £2500 to our Midland Institute, to further the teaching of hygiene to the public, will bear fruit next session in the forming of penny "science of health classes"; and the professorship will be very well endowed, as the trustees are empowered to spend both principal and interest in the course of a few years' teaching.

The "Working Men's Extension" of the Queen's Hospital is really a fine work; the first instalment of it is now nearly ready, being a hall eighty feet long and fifty high, with suitable consulting rooms attached, and nurses' rooms over them. The new mortuary and lavatory are also in progress, and the plan includes two blocks of wards, each containing forty beds.

The Children's Hospital has also been enlarging its out-patient department, thanks to the liberality of the Bazaar public. Excellent new surgical rooms have been built, and all the walls have white and blue Minton tiles to the height of four or six feet, and these prove both pleasant and cleanly. Dr. Heslop has, at his own expense, decorated one of the physician's rooms in a most elaborate manner, "as a strong protest against the shameful sort of rooms in which the committees of most hospitals expect their professional staff to live, or to do their work."

At the General Hospital there are, at present, several interesting cases of aneurism—two abdominal—one of which seems to have ruptured three weeks ago (Mr. Pemberton); the other improving under iodide of potassium (ten to twenty grains), ice-bags, and digital compression (Dr. Foster); one, thoracic (Dr. Fletcher); and one, trau-

matic, of the right posterior tibial behind the ankle (Mr. Baker). In a recent case of uræmic convulsion, which had lasted many hours, consciousness returned during venesection to twenty-four ounces, and there has been no recurrence (Dr. Fletcher). There is also a case of "tricuspid regurgitation," and one of hemiplegia, with hysterical symptoms. relieved by valerian (Dr. Wade); and, amongst the out-patients, two cases of empyema, now convalescent after wearing drainage-tubes for some weeks (Dr. Russell and Dr. Wade).

Amongst interesting cases at the Queen's Hospital we noticed one of diabetes, cured (as far as excretion of sugar is concerned) by opium and bromide of iron, after two months of treatment; the only alteration in diet being bran-bread, and allowance of cabbage for vegetable. One of aortic regurgitant disease with musical murmur; another of facial paralysis (Dr. Heslop); two of cancer of the stomach, and one of extensive pleuritic effusion, with heart displacement, improving under moderate vesication (Dr. Sawyer). There was also a case of elephantiasis of a stump treated by ligature of femoral, but afterwards amputated; and another of imperforate anus, wherein the child survived three days, and after death, rectum and bladder were found to communicate.

A project of amalgamation between the two principal hospitals, for student purposes, is now under attentive consideration. It is proposed that the students of the Queen's College shall be at liberty to attend at either hospital, and, as this would open to them a clinique of more than 400 beds, it seems for many reasons desirable, provided that such regulations and conditions can be agreed upon as shall both keep students steadily to their work, and obviate possible causes of jealousy or unpleasantness between the respective parties.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Royal Infirmary.

THE Council of Thirty, who are for the next three years to decide all matters relating to the election of the honorary medical staff of the Infirmary, is at length constituted, and their names are made public. The Council is composed of leading merchants without exception; there being no professional element whatever present. The bye-laws, which are to be enforced in future elections, are also announced—the most important being one which forbids canvassing on the part of the candidates, and one which provides that a period of at least twenty-eight days shall elapse from the date of the first announcement of a vacancy and the receipt of applications. Another fortnight is allowed the election committee to chew and digest the testimonials which are sent in, when they will proceed to record their votes and elect the candidates.

The whole of the Infirmary debate has created a good deal of extra-professional interest; nor is this surprising, when the somewhat exceptional character of the Manchester Infirmary is taken into consideration. Most towns of the size of Manchester have two or more hospitals, which fairly divide both subscriptions and patients; but it is not so in Manchester. Here, although there are numerous and useful medical charities, to wit, the Salford Hospital, St. Mary's, the Clinical, the Southern, and the Children's Hospitals, besides special hospitals for the eye and the ear, yet they are but satellites of the great central charity of the Royal Infirmary. This institution, with its giant offspring—the Lunatic Asylum, and the Convalescent Hospital at Cheadle, and the Fever Hospital at Monsal, has a funded property of about £140,000; and, exclusive of the Lunatic Asylum, yearly expends about £20,000. No wonder that the management of such a concern should interest the public who liberally support it. Again, it is of importance to many of the surrounding towns besides Manchester, inasmuch as both medical and surgical cases of much interest are commonly sent to the Manchester Infirmary from a considerable distance. It follows from this, that it is probably the centre of a larger hospital population than any other hospital in the country. When these circumstances are remembered, and also the fact that the surrounding districts teem with machinery of every variety, it is somewhat surprising that there are not more surgical operations than we find are actually performed—*e.g.*, from June 25, 1871, to June 25, 1872, there were ninety capital operations, including fifty-eight amputations, nine herniotomies, ten lithotomies, five ovariotomies, five excisions, and three ligatures of arteries, a number which is less than would be expected to be furnished by a population of upwards of half a million of poor people. Large as is the property of the infirmary, it would be almost doubled if the present building, and the land on which it stands, were sold—a project which has often been mooted, and may yet be carried out. The funds thus received would enable the trustees to construct a hospital of more modern design than the present, which is faulty in being built on the old-fashioned principle with central corridors and small wards. We have, indeed, but one model hospital in Lancashire, and that is a workhouse hospital, than which there is probably no finer building of the kind in England. I refer of course to the pavilion hospital of the Chorlton Union.

ASSOCIATION INTELLIGENCE.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE third meeting will be held in the Midland Institute, Birmingham, on Friday, December 27th. The Chair to be taken at Three o'clock.

VINCENT JACKSON, Wolverhampton, } *Honorary*
R. JOLLY, Birmingham, } *Secretaries.*

Birmingham, December 16th, 1872.

EAST YORK AND NORTH LINCOLN BRANCH: QUARTERLY MEETING.

THE last quarterly meeting was held at the Hull Infirmary on December 4th, 1872; J. F. HOLDEN, Esq., President, in the Chair.

Papers.—The following papers and cases were read.

1. Case of Lymphatic Leuckæmia. By G. F. Elliott, M.D.
2. Ablation of the Tongue successful. By K. King, M.D., F.R.C.S.
3. Perforation of Duodenum caused by railway accident. By J. W. Plaxton, Esq.

The Infirmary.—A resolution was proposed by the President, and seconded by J. Morley, Esq., recommending the appointment of a Pathologist and Registrar for the Infirmary.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 10TH, 1872.

T. B. CURLING, Esq., F.R.S., President, in the Chair.

PATHOLOGY OF CHRONIC BRIGHT'S DISEASE WITH CONTRACTED KIDNEY, WITH ESPECIAL REFERENCE TO THE THEORY OF "ARTERIO-CAPILLARY FIBROSIS." BY GEORGE JOHNSON, M.D., F.R.S.

THE author began by referring to his discovery of hypertrophy of the muscular walls of the minute arteries in cases of chronic Bright's disease, published in the fifty-first volume of the *Medico-Chirurgical Transactions*. This result of a quarter of a century's careful observation was now called in question by Sir William Gull and Dr. Sutton, who, in the recently issued volume of the *Transactions*, propounded doctrines of great novelty relating to the pathology of Bright's disease. They gave a brief summary of their conclusions at pp. 295-6. Dr. JOHNSON now proposed to inquire whether these conclusions were in accordance with pathological facts and with physiological principles.

To prove that hypertrophy of the heart is a consequence of "arterio-capillary fibrosis," and not of degeneration of the kidney, they referred to six cases in which it was said that the cardio-vascular changes were present, while the kidneys were healthy or but little altered in structure. In each of these cases Dr. Johnson maintained that the hypertrophy of the heart was due, not to changes in the minute blood-vessels, but to other obvious causes. In one case (No. 7), aged 42, there were emphysema of the lung and bronchitis; in one (Case 10), aged 69, there were senile gangrene and, of course, degeneration of the larger arteries; in one (Case 20), there was disease of the aortic valves; one patient, who was 63 years of age (Case 2), probably had senile degeneration of the arteries, and her kidneys weighed fifteen ounces; another (Case 3) was 77 years of age; while in a sixth case (No. 19), aged 62, there was atheroma of the cerebral and probably of other arteries, his lungs were very emphysematous, and his kidneys weighed only eight ounces. It was assumed by Sir William Gull and Dr. Sutton, that kidneys weighing as much as fifteen ounces and as little as eight ounces were alike free from disease.

Although it was maintained (pp. 289-90) that there is a constant relation between the "hyalin-fibroid" change in the vessels and hypertrophy of the heart, it was stated (p. 292) that in a few cases this change was seen in the vessels of the pia mater, unassociated with hypertrophy of the heart. The "hyalin-fibroid" change was supposed to lessen the elasticity of the walls of the minute arteries, so to impede

the circulation, and to cause hypertrophy of the left ventricle (p. 290). Dr. Johnson maintained that in this explanation the elasticity of the larger arteries, which acts in aid of the heart as a propelling force, was confounded with the muscularity of the smaller arteries, which antagonises the heart. Degeneration of the muscular walls of the arterioles would involve, not an increase, but a decrease of resistance, and, therefore, would not explain the cardiac hypertrophy. It was stated by Gull and Sutton (p. 295) that thickening of the arterial walls is always associated with atrophy of the adjacent tissues. Yet they stated (p. 287) that these arteries are thickened in the walls of the *hypertrophied* heart, and they are also thickened in the large white kidney.

Dr. Johnson maintained that the "hyalin-fibroid" change is not an *ante mortem* pathological change, but a *post mortem* physical result of the distension of the fibrous tunic of the arteries by the mixture of glycerine and camphor-water, in which all the specimens had been mounted before they were examined by the authors of this theory. He maintained that the appearance in question was never seen in vessels examined immediately after their removal from the body, or preserved in dilute spirit, or in a solution of salt of specific gravity 1030, while it was frequently, but not constantly, observed in specimens mounted in



Fig. 1.—Normal Artery from the Pia Mater.

glycerine. Normal arteries from the pia mater mounted in these different fluids presented a striking contrast; those in dilute spirit or in salt-and-water appearing quite normal, while those in glycerine were often thickened and hyaline.

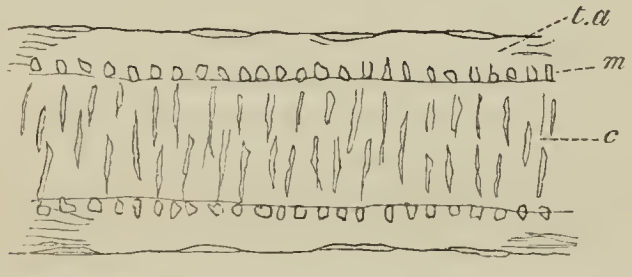


Fig. 2.—Normal Artery from the Pia Mater, rendered Hyaline by Glycerine and Camphor Water. *t, a.* Tunica Adventitia, or Fibrous Tunic. *m.* Muscular Layer. *c.* Canal of Artery.

The "hyalin-fibroid" appearance thus produced might be seen in vessels from subjects at the two extremes of infancy and old age, where death resulted from diseases having no relation to Bright's disease, and quite unconnected with hypertrophy of the heart. Specimens were preserved from the pia mater of a woman, aged 40, who died of diabetes, and whose heart weighed only six ounces and three-quarters; from another woman, aged 40, who had cancer of the ovary, the heart weighing eight ounces; from an infant, aged eleven months, who died from spasm of the glottis—the kidneys, the heart, and all the viscera being quite healthy; and from a boy, aged 15, who died from typhoid fever, having been in good health until the attack of fever. There was no *post mortem* evidence of disease except such as resulted from the fever. Arteries from the pia mater were preserved in three different fluids. Those in weak spirit and in salt and water (specific gravity 1030) appeared quite normal, while those in glycerine and camphor-water had their fibrous tunic much distended and extremely "hyaline."

The imbibition of fluid by the arterial tunics was a result of physical conditions. A fluid slightly acidulated rapidly passed in and distended the fibrous tunic, rendering it "hyaline;" then the neutralisation of the fluid by ammonia occasions a rapid shrinking of the tunica adventitia, which again assumed its normal fibrous appearance.

The physical conditions which favoured the imbibition of the simple unacidulated mixture of glycerine and camphor-water would be influenced by various circumstances, such as the mode of death, and the period after death at which the examination is made. It was incumbent on those who maintained that the appearances in question were the result of pathological processes, to demonstrate them in vessels unchanged by artificial agents. The glycerine rendered the muscular structure in some vessels indistinct; and this had been described as atrophy of the muscular elements. In other vessels it separated the inner from the muscular coat; and this had been mistaken for thickening of the internal tunic of the artery. (See plate v, figs. 3 and 4, in the last volume of the *Transactions.*) The author denied that the capillaries were thickened; and maintained that arterioles in the pia mater distended by glycerine had been mistaken for capillaries. With regard to the changes in the kidney, their "hyalin-fibroid" character was denied by Dr. Johnson; and reference was made to a paper by Mr. Simon, and another by Dr. Johnson, in the thirtieth volume of the *Transactions.* Referring to fig. 7, plate vi, in the paper by Sir W. Gull and Dr. Sutton, Dr. Johnson declared that they ignored the fact that, in the renal arteries, there are an inner longitudinal, and an outer circular, layer of muscular fibres; and in a transverse section of such an artery they mistook the outer circular layer for the analogue, in position and structure, of the "hyalin-fibroid" condition of the fibrous tissue of



Fig. 3.—Artery, with Hypertrophied Walls, from the Kidney. An Inner Longitudinal and an Outer Circular Layer of Muscular Fibres. The Canal is filled by Opaque Injection.—X 200.

the arteries of the pia mater. They denied the existence of muscular hypertrophy; yet some of their own specimens and drawings exhibited at the *conversazione* of the Society in June were good examples of hypertrophy of the muscular walls of the arteries. Reference was made to a footnote at page 277 of their paper, in which a doubt was expressed as to the possibility of casts escaping from the convoluted tubules of the cortex.* Dr. Johnson maintained that in the microscopic appearances of some forms of tube-casts there was abundant evidence of their origin in, and their escape from, the convoluted tubes. The more frequent occurrence of hypertrophy of the heart in connection with the contracted than with the large white kidney he explained, partly by the more watery blood in the latter cases exciting less contraction of the arterioles, and partly by the occurrence of waxy or lardaceous degeneration of the minute arteries, which thereby had their contractile and resisting power impaired. To doubt the causative connection between contracted kidney and hypertrophy of the heart because they were not constantly associated, would be as unreasonable as to deny that a large white kidney is a cause of dropsy because dropsy is sometimes absent. The author disputed the statement that the morbid changes in cases of contracted kidney "are the result of causes not yet ascertained." The most common causes were excess of food and of stimulants, with or without decided gouty symptoms, but he had seen many cases in which the disease had been a result of chronic dyspepsia in persons of strictly temperate habits. The proximate cause of the renal degeneration was the excretion of abnormal products by the gland-cells. This applied to all forms of Bright's disease, whether acute or chronic. The term "arterio-capillary fibrosis" was a misnomer, for the capillaries, except the Malpighian capillaries, were unchanged, and there was no morbid "fibrosis" of the arteries.

The author concluded by thanking Sir William Gull and Dr. Sutton for having forcibly directed attention to the cardio-vascular changes in chronic Bright's disease. Differing entirely in their pathology, they agreed in thinking the subject one of great interest and importance.

Dr. SUTTON acknowledged the fairness of Dr. Johnson's criticisms, and expressed his regret that, owing to an unavoidable engagement, Sir William Gull was unable to be present. With regard to the connection between hypertrophy of the coats of the vessels and senile degeneration, Dr. Johnson did not point out what were the precise changes constituting the last named condition. The association of the change in the vessels with atrophy of the tissues had been stated by Sir W. Gull and himself to be frequently present, but not always so. He admitted that the hyaline appearance in the external coat of the vessels was, to some extent, dependent on the glycerine used; but the fibroid appearance was certainly not so, it was present in vessels treated by salt and spirits and water. He allowed that in some cases the morbid changes could not be found in the vessels of the pia mater; but then vascular changes were to be found in other parts of the body. Again, Dr. Johnson had said that, while glycerine caused the tunica adventitia to expand, it con-

* In the note referred to, the word *tubercles* is, without doubt, a misprint for *tubules.*

tracted the muscular coat of the arterics. It was somewhat singular that it should have this dissimilar action. Dr. Johnson denied that the capillaries were thickened ; Sir W. Gull and Dr. Sutton had, however, shown h m a vessel which they believed to be a capillary in this condition. The distinction between arteries and capillaries, however, was artificial ; he could not say where one ended and the other began. In the vessel specially referred to, there was no muscular tissue. Dr. Johnson asserted that there were no hyalin-fibroid changes with the contracted kidney ; according to Sir W. Gull and Dr. Sutton, there was this association, and they were supported by Dr. Dickinson, Dr. Grainger Stewart, and others. They believed that the causes of the granular contracted kidney were not yet ascertained, although in Dr. Johnson's opinion they were so. He thanked Dr. Johnson for calling attention to the subject under discussion, and hoped that a conclusion founded on a pathological basis would be arrived at.—Dr. DICKINSON said that, with regard to the question how far the changes in the arteries were due to reagents or to *post mortem* changes, he had come to the conclusion that the hyalin-fibroid change had a real existence. The change was not produced by reagents in healthy arteries. The hyalin-fibroid condition was no doubt a material cause of hypertrophy of the heart, and was generally associated with the granular contracted kidney. He thought that the change in the arteries sometimes preceded that in the kidney ; but he would not speak positively on this point. He thought that scarcely anyone but Dr. Johnson believed that all renal diseases originated in the epithelium lining the tubes. Lardaceous change in the kidney began in the arterial structure and not in the epithelial cells.—Dr. ANSTIE asked how convoluted casts in the urine could have originated in the convoluted tubes and passed as such through the straight tubes of the kidney.—Dr. CHARLTON BASTIAN agreed with Sir W. Gull and Dr. Sutton that fibroid thickening of the arteries was to be met with very frequently. Fibroid thickening of the capillaries did occasionally occur ; Dr. Bastian had found the capillaries of the brain much thickened in a case of locomotor ataxy ; and the hyaline change was frequent in sclerosis of the spinal cord. It was rather unfortunate that the pia mater should have been selected as the battle-ground for the dispute ; and he could not agree with either of the views that had been brought forward. No account had been taken of the existence of the distinct and separable sheath surrounding the small arteries of the brain. In the corpus striatum it was very large ; perhaps, however, it was less distinct in the pia mater. In tubercular meningitis, there was proliferation of cell-elements in this sheath around the vessel ; and again, in the so-called dissecting aneurisms of the brain, this sheath was greatly dilated. An examination of Sir W. Gull's plates seemed to show that some of the appearances might be explained by supposing that the sheath itself had undergone fibroid change. He agreed with Sir W. Gull and Dr. Sutton that the fibroid changes were to be met with in the arteries of other parts of the body.—Dr. SIBSON suggested that the question at issue between the author of the paper and Sir W. Gull and Dr. Sutton should be referred to a Committee of the Society. With regard to the question whether hypertrophy of the heart was due to the fibroid affection of the arteries or to an obstruction to the flow of blood, he said that clinical observation showed that in hypertrophy the arteries were in a state of tension. On listening over the origin of the aorta the first sound was almost silent, and the second loud and sharp ; and there was also a difference in the time of occurrence of the first and second sounds in the two sides of the heart. The double first sound was almost always heard over the septum.—Dr. BROADBENT had stated on a former occasion that the arterial tension attendant on hypertrophy was lost during pyrexia, and also under the administration of nitrite of amyl. This could not be the case if it depended on mere passive obstructions, such as would be produced by thickening of the arteries.—Dr. PAYNE suggested that muscular hypertrophy might be a consequence and not a cause of arterial tension. That the muscular coat of arteries became hypertrophied, he regarded as an undoubted pathological fact.—Dr. SANKEY said that hypertrophy of the small arteries was no doubt met with ; and without doubt, also, the hyalin-fibroid change occurred. He agreed with Dr. Bastian as to the occurrence of effusion around the vessels of the brain in the perivascular canals. A small artery treated with acetic acid and glycerine became hyaline and transparent.—Dr. QUAIN thought that, in reality, all the apparently opposite views might be correct. He cordially supported the proposal to refer the question to a Committee.—Dr. JOHNSON said that Dr. Sutton had evidently lost confidence in his own specimens, for in one sentence he had virtually conceded the whole question as to the nature of the so-called "hyalin-fibroid" change in the arteries. Dr. Sutton admitted that the *hyaline* change might be the result of glycerine, but denied that the *fibroid* appearance could be thus explained. Now the fact was, that the external tunic of the arteries was fibrous, and had a wavy fibrous outline. When fully distended by glycerine, it quite lost its fibrous character, and appeared transparent or hyaline. On the other hand, when partially distended, or when, after complete distension, it had again partially shrunk, it had a semi-fibrous, semi-hyaline appearance: in other words, it assumed the "hyalin-fibroid" character ; and the specimens on the table show that the appearance in question might occur in perfectly normal vessels when mounted in glycerine. Dr. Johnson repeated that the appearances described did not occur in the capillaries. He believed that Sir W. Gull and Dr. Sutton had mistaken small arteries for capillaries. He did not deny that, in certain pathological states of brain, there was sclerosis of arteries and capillaries. Some of the speakers appeared to have overlooked the fact that the subject under discussion was, not the state of the minute vessels in cases of locomotor ataxia or of insanity, but the condition of the vessels in connexion with chronic Bright's disease. As to the existence of genuine hypertrophy of the muscular walls of the arteries, it surely could not be denied, in the face of evidence such as that afforded by the specimens on the table; and it had been admitted by some of the most competent microscopists in London. Dr. Sutton could not understand how glycerine could at the same time distend the fibrous tunic and (as he said) "contract" the muscular coat. Surely it was not difficult to see that a fluid accumulating between the two coats of the artery would push one outwards, and the other, the muscular coat, inwards towards the canal of the vessel ; which might be seen in some specimens to be irregularly narrowed by the mechanical pushing inwards of the muscular wall. Dr. Sutton denied that they described the tunica intima of the arteries as being morbidly thickened. What then was the meaning of the description of fig. 3, plate v ? "Tunica adventitia and intima thickened by fibroid changes." Fig. 2, in the same plate, was thus described : "Arteriole much thickened by coarse fibroid changes outside muscular layer ; tunica intima thickened also." If the authors believed these appearances to be the result of fluid passing between the middle and inner coats, they would surely have said so. It was useless to attempt to decide the question of the minute structural changes in the contracted kidney by mere argument. The appeal must be to specimens, by the aid of which it was easy to demonstrate the whole series of changes. He would only remark that Dr. Dickinson and others, who adopted Virchow's theoretical classification of Bright's disease, and declare that the contracted kidney was the result of essentially intertubular changes, were compelled to ignore those obvious structural changes within the tubes which must catch the eye of even the most superficial observer, and which many years ago formed the subject of a controversy between Mr. Simon and himself. Dr. Sutton appeared almost to pride himself on his confession of ignorance as to the causes of contracted kidney ; yet careful clinical observation pointed to such causes as excessive eating and drinking, and to certain forms of dyspepsia, as having much influence in exciting the disease. Dr. Todd called it a "gouty kidney". It was not always of gouty origin, but it is very commonly associated with conditions allied to gout ; and it was of practical importance to recognise this association. Nothing in the paper by Sir W. Gull and Dr. Sutton had surprised him more than to find that they had referred to cases of hypertrophy of the heart in very aged persons, to cases of extreme emphysema of the lungs, and even to a case of incompetent valves, as if such cases could throw light upon the cardio-vascular changes in cases of Bright's disease. Dr. Anstie appeared to consider that he had put a very puzzling question in asking how a convoluted cast, as seen in the urine, could have passed, as such, through the straight tubes of the cones. Dr. Johnson supposed that a cast moulded in a convoluted tube, and having a certain amount of elasticity, might be straightened in passing through a straight tube, and resume its convoluted form after its escape. This surely was more probable than the alternative supposition that a tube-cast, originally straight, coiled itself up like a worm after being expelled from the kidney. The speaker cordially supported the proposal for a Committee. The more thoroughly competent was the Committee, the more entire would be his confidence in submitting his specimens, and the questions raised by them for their inspection and judgment.

[Dr. Johnson requests us to add that he had intended to say, in reference to Dr. Broadbent's very interesting observation on the effect of nitrite of amyl in reducing the arterial tension in cases of chronic Bright's disease, that, while it is confirmatory of his doctrine that the peripheral resistance is the result of excessive contraction of the hypertrophied muscular arteries, it is quite irreconcilable with the theory that the resistance to the blood-flow is caused by degeneration and consequent rigidity of the minute arteries and capillaries. It is obvious that resistance thus originating would be uninfluenced by the peculiar action of the nitrite of amyl upon the muscular arterioles.]

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, NOVEMBER 30, 1872.

GEORGE H. KIDD, M.D., President, in the Chair.

Fracture of the Spine.—Dr. BENNETT brought forward an example of this injury. A man was admitted to Sir P. Dun's Hospital, on June 13, 1872, after falling with a sack into the hold of a lighter. There was little or no evidence of collapse. Both sensation and motion were completely lost from the clavicles downwards. There were paralysis of the bladder and priapism, and tympanitis became developed on the second day. Reflex phenomena were at first well marked in the lower limbs. The temperature of the limbs was about a degree higher than that of the head, which was 98.4 degs. Some pain in the neck was complained of; incessant cough was brought on by the least attempt to speak; and there was extreme rolling of the head. Dyspnœa was very great, owing to the complete paralysis of the intercostal muscles. After four days the man died. On raising the pharynx, scarcely any blood was found beneath the prevertebral fascia. The anterior common ligament was ruptured in three situations, corresponding to the second, fourth, and fifth intervertebral discs, the lesion opposite the fourth being most extensive. There was no fracture of the bodies of the vertebræ; but from each of the superior articulating processes of the fourth cervical vertebra, a small grain of bone had been dctached. Just at this level also (that is, at the level of the intervertebral disc between the third and fourth cervical vertebræ) the spinal cord was almost completely divided, the laminæ of the third vertebra having cut into it.

Pathology of Atheroma.—Dr. JAMES LITTLE showed a specimen which bore out the view that atheromatous change was due to an inflammatory process. A man, aged 62, subject to gout, suffered from an attack in January. He subsequently had a bronchial affection, followed by continual cough, and a sensation of oppression and heat in the chest. Œdema of the lower limbs then supervened. There was some ascites, dyspnœa was troublesome, and he coughed up viscid mucus. A fine crepitation, as in œdema of the lung, was heard generally over the chest. A soft systolic cardiac murmur was noticed from time to time. The urine was now loaded with lithates, but was not albuminous. He sank from the bronchial affection. At the *post mortem* examination, thirty-six hours after death, no rigor mortis was observed; the heart was large and flaccid, the blood liquid and dark. The aorta was throughout of a deep vermilion colour, as were also the femoral and brachial arteries; and all these vessels had atheromatous deposits in various stages. The heart was hypertrophied, dilated, and was undergoing fatty degeneration. The atheromatous degeneration had involved the coronary arteries. The dropsy, again, was in all probability due to the diminished elasticity of the vessels, dependent on their diseased state, together with a dilated heart and injured valves. In the present case the sequence of events was perhaps old standing gout, a trifling inflammatory attack, and lastly a falling into bad health.

Addison's Disease.—Mr. DARBY showed a portion of the bronzed skin, the kidneys, liver, and spleen of a patient who had died of this disease, and in whom all the symptoms were well marked.

Mitral Valve Disease.—Mr. MAC SWINEY exhibited a well-marked example of ossific deposit in the valvular structure of the heart of a tall athletic man, who had always enjoyed good health.

Epithelioma of Cervix Uteri.—Dr. ATTHILL presented two specimens. The first tumour he had removed from the anterior lip of the cervix in a patient aged 50, the mother of ten children, and who had ceased to menstruate fourteen years ago. The vaginal discharge before operation, was watery, fœtid, and sanguineous. There had been no hæmorrhage. The mass was of the size of a walnut. The second growth, of much larger size, was from a patient, aged 36, mother of four children, the youngest four years old. Menorrhagia set in ten weeks ago, and there were bearing down pains with other symptoms. The microscopical appearances were similar in both cases; the stroma being of white fibrous tissue, with epithelial cells.

Purulent Pericarditis.—Dr. LYONS showed the heart and pericardium of a man who was admitted to hospital with paronychia and an extremely feeble and rapid pulse, from 130 to 140 a minute, with chills alternating. The paronychia was opened, and the man seemed to be relieved, when dyspnœa rapidly set in. The area of præcordial dulness increased, and the heart was heard as though flapping about in some soft thick fluid. Pain in the right groin (the glands of which were somewhat enlarged) and in the right thigh was complained of. The patient sank rapidly. A pint and a half of purulent fluid escaped from the pericardium on incision; it contained also a large quantity of soft lymph of the consistence of butter. An abscess in the right psoas muscle gave exit to about a pint of pus.

Embolism of Middle and Anterior Cerebral Arteries.—Dr. HAYDEN reported the case of a boy, aged 7, who was admitted to hospital suffering from bronchitis. A presystolic murmur was heard over the apex of the heart, half an inch inside the left nipple-line. While suffering from a second bronchial attack, the boy was found, on the morning of November 20th, hemiplegic on the right side, and speechless. Motion was quite absent on the affected side, but sensation was exalted. His face was drawn to the left; he died in a few hours. The vessels at the base of the brain, except in the left fissure of Sylvius, were anæmic. A plug of fibrin filled the left middle and anterior cerebral arteries. A mass of fibrin was attached to the anterior right segment of the mitral valve; the aortic valves were both contracted and incompetent; and there was thrombosis of the left ventricle.

Subject for Society's Gold Medal, 1873.—The PRESIDENT announced that the Council had selected as the subject for competition for the Society's Gold Medal, to be awarded at the end of the session in April, 1873, the "Diagnosis and Pathology of Abdominal Tumours in the Male."

CORRESPONDENCE.

ALCOHOL AS A CAUSE OF KIDNEY-DISEASE.

SIR,—With reference to Mr. Taylor's communication in your last number, it should be distinctly understood that those who insist upon the powerful influence of the abuse of alcohol as a cause of Bright's disease, do not call in question the notorious fact that renal disease results from a variety of causes, and that it is of frequent occurrence in children and in adults of strictly temperate habits. No one doubts that exposure to cold and wet and certain conditions of blood-poisoning, such as occur, for instance, in cases of scarlet fever, diphtheria, erysipelas, pyæmia, etc., may result in various forms of acute and chronic Bright's disease. Mr. Taylor's statistics show that the majority of the victims of Bright's disease in his practice were persons of intemperate habits, the proportion being 16 to 12; and he appears to think that these results are confirmatory of Dr. Dickinson's conclusion that intemperance has but little influence in the causation of Bright's disease; but it is evident that, in order to render his statistics fairly comparable with those of Dr. Dickinson, Mr. Taylor should have given, not merely the deaths from albuminuria, but the total number of deaths from all causes occurring in his practice during the period of thirteen years over which his inquiry extends. Then, dividing them into temperate and intemperate, he should show the proportion of cases of albuminuria in the two classes.

I am, etc.,

December 16th. GEORGE JOHNSON.

SIR,—"The use of alcoholic drinks is comparatively inoperative in causing disease of the kidneys"—such is one of Dr. Dickinson's conclusions. In attempting to arrive at the truth or converse of it, it seems hopeless, by comparing the effects between quantities "more or less", if we are not to be satisfied with only a very partial and unsatisfactory inquiry. If any good is to result to medical science, a comparison must be made between total abstainers and those using alcoholic drinks. Acting on this idea, I communicated with the Secretary of the Temperance and General Life Assurance Society. This Society has two classes of members—viz., total abstainers and moderate drinkers, both departments being kept perfectly distinct. On asking the question—How often disease of the kidneys had been returned as the cause of death, and in what proportions in the two different departments?—the following figures were kindly sent to me, as the result of an examination of their register, by J. T. Mitchell, Esq., F.R.C.S., one of the Directors. "From July 1st, 1869, to October 1st, 1872, 932 deaths occurred; of these, 700 cases were insured in the General Section, and 232 in the Abstaining; whilst in the former class 17 cases have died of kidney-diseases, only 3 cases died from like causes in the latter or Abstaining Section—the proportions being 2.42 per cent. in the general class and 1.29 amongst the abstainers." That these statistics are more reliable than those frequently quoted there is good ground for believing, considering how very particular insurance societies are in requiring correct information of the cause of death, and the fact of their being gathered from the books of the Society by one well qualified to discriminate the various names under which disease of the kidneys may be returned. From them we gather that 3 per cent. of the total number of deaths amongst what may be well called the provident and careful classes arise from diseases of the kidneys; the proportions of deaths arising from such causes amongst the moderate drinkers and abstainers being nearly as 2 is to 1.

This is by no means a sufficient answer to the remark of Dr. Dickinson quoted above, but a small contribution towards collecting facts on which a safe and scientific comparison may be made.

I am, etc.,

Chatteris, December 17th, 1872. J. MITCHELL WILSON, M.B.

MEDICAL CLUBS.

SIR,—I beg to call your attention to the report of the West Somerset Branch meeting, held at Yeovil on October 17th, in your issue of November 2nd, where you will find a question raised by me as to the prudence of rejecting one of the rules of a Foresters' club—viz., "to examine for admission *all sent to him* (the surgeon)". In a second letter to Dr. Kelly, I stated that twelve months ago many of the members of the club were aware that I intended refusing to examine farmers and the better class of tradesmen for admission; but, no case coming before me till the quarterly meeting, held in the end of September, I was unable to bring the question before our local club. The reason for my refusing to examine the man sent was, that he came about half-an-hour before the time he would have been instituted, and I had no previous knowledge of his being proposed. I was anxious to bring the question to an issue, and refused to examine him there and then.

My object in writing to you is to call on all medical men holding club surgeoncies, and all practitioners in general, to assist in defending ourselves by excluding from such clubs all those who are able to support us. I know for certain that the object of getting admission to clubs is to save medical bills; and to allow such men as farmers and the better class of tradesmen the privileges of being members of a club, is to lower our standing and rob our pockets. It may be difficult to draw the line, but that can easily be done, when the question shall, as I hope it will, be taken up by the profession, and by your able assistance.

I am, etc., THOMAS CLARK, L.R.C.P.E.

Dunster, Somerset, November 1872.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

SOUTH WALES.

A LARGE meeting of the union medical officers for Monmouthshire and West Glamorganshire was held at Cardiff on November 29th. Mr. Doyle, Poor-law Inspector, attended. Mr. Doyle made a speech similar to the one delivered at Bangor on November 19th, which was reported in our columns on November 30th. The same objections were made as to the difficulty of drawing up the sanitary reports that Mr. Doyle recommended, and to the uncertainty of the remuneration to be accorded for them. After a long discussion, it was resolved "that in the opinion of this meeting, the temporary appointment of officers of health should be accepted by the union medical officers of each district."

THE PUBLIC HEALTH ACT AT SUNDERLAND.

AT an ordinary meeting of the Sunderland Medico Chirurgical Society on the 26th of November, the Public Health Act was brought forward by Mr. Brady, the President; and Dr. Denham, Dr. Yeld, Mr. Barron, Dr. Foote, and others, joined in the discussion. It was proposed by Dr. Eastwood, Dinsdale Park, seconded by Mr. G. B. Morgan, Sunderland, and carried unanimously:

"That it is desirable to appoint a medical officer of health for the borough of Sunderland, who shall be paid sufficient salary to enable him to devote himself entirely to the duties of his office, that he shall be restricted from private practice, and that a copy of this resolution shall be transmitted to the town clerk of the borough, for presentation to the Council."

At a recent meeting of the town council, the following report was read from the Health Committee.

"The Health Committee have had a joint meeting with the Local Board of Health of Southwick, and the Rural Sanitary authority of the Sunderland Union, respecting the appointment of a medical officer of health, and they have come to the following resolutions, which the Committee recommend that the Council should adopt and agree to, viz.—That, in the opinion of this meeting, it is expedient that one medical officer of health should be appointed for the three sanitary authorities embraced in the Sunderland Union. That it is not expedient that any money voted by Parliament should be taken in aid of the salary of the medical officer of health. That this meeting is of opinion that only a gentleman who is proficient in qualitative and quantitative analysis be appointed medical officer of health. That it is expedient in the appointment of a medical officer of health, that the exclusive services of a medical gentleman to fulfil the duties of the office should be secured. The committee further recommend that it is expedient to call in the assistance of an engineer to advise and report on the sewerage areas within the borough, and as to the situation and size of the sewers necessary for sewering the same."

It was agreed that one medical officer should be appointed for the three sanitary districts. The other clauses of the report were adjourned, excepting the last, recommending that the assistance of an engineer should be obtained, which failed to secure a seconder to the resolution.

APPOINTMENTS UNDER THE PUBLIC HEALTH ACT.

*** *We shall be obliged to our readers to forward notice of appointments in their respective districts.*

AT a meeting of the Sanitary Committee of the Haverfordwest Board of Guardians, held on Wednesday, the 11th instant, the following business was transacted. An Inspector of Nuisances was appointed for the whole union, comprising an area of 170,861 acres and a population of 34,499, *minus* that included in the jurisdictions of the Haverfordwest Corporation and the Milford Improvement Commissioners, which are the urban authorities in the district of the union. There were five candidates; and, after a poll, Mr. J. W. Francis was elected at a salary of £4 a week, until the 25th of March next, the end of the current financial year. The whole of the inspector's time is to be devoted to the duties of his office. He is to make a thorough inspection of the whole district, and to furnish fortnightly reports to the Committee.

It was unanimously resolved, that the district medical officers be elected medical officers of health for their respective districts; viz., Mr. W. D. Wathen for the Fishguard district (area 50,092 acres, population 7,410), Mr. John Howell for the St. David's district (area 44,524 acres, population 6,685), Mr. Thomas H. Rowe for the Haverfordwest district (area about 38,000 acres, population about 4,366), and Mr. George Griffith for the Milford district (area about 35,000 acres, population about 5,829). No salary was attached to these medical officerships; but it had been before determined by the Committee, under the advice of Mr. Doyle, Local Government Inspector, that the amount of remuneration should be decided upon after the receipt of the reports, and that the quality of the several reports should be taken into consideration in assessing the honoraria to be awarded.

We cannot help thinking that it would have been more satisfactory if a minimum salary were attached to each medical officership of health, with the promise that, if the report bore evidence of good work, an additional honorarium would be given. Considering the immense district to be inspected, the appointment of only one inspector is not sufficient, as it will be impossible to make a thorough inspection in the time given (three months), and that at the worst time of the year.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

SIR,—I beg to thank you for the support you have afforded me in the conflict which has been forced upon me by the action of Mr. Wickham Barnes, and of those of the London Council of the Poor-law Medical Officers' Association who agree with him. That I am correct in the views which I have steadily advocated at all the general meetings of the Association for nearly four years past—views which, until the recent schism, have received the sanction of the Council, and still receive that of the profession generally—as to the position which the rural district Poor-law medical officers could safely occupy in relation to the working of the Public Health Act, the following extracts from letters which I have received will show.

1. A distinguished member of the House of Commons, well qualified to judge, and whose opinion I requested, writes as follows.

"The real cause (if any other than personal) of the disagreement seems to me to be that, whereas the real battle of sanitary reform in action is to be fought in villages and small towns, all the points hitherto brought out by Mr. Barnes and others refer to large towns. In the latter, the doctors are quasi-independent, and the salary will be remunerative; in the villages and rural unions, the doctors will be, as they have hitherto been, the vassals of the squires and farmers, and veritable toads under harrows. I think you are right, and will support you as far as I can."

2. "Mr. Wickham Barnes commences his letter to the *Lancet* with a 'regret', and ends it with a 'hope'. I am disposed to think that both are entirely personal to himself, and that the sentiments embodied in

your protest have the support of the great majority of the provincial members of the Association. I think that it is much to be regretted that Mr. Barnes should, by publishing the selfish resolutions passed at a meeting of a few metropolitan members, attempt to stultify and reverse the general policy and feeling of the Association, as determined at its general meetings. Such conduct, if persisted in, must assuredly result in a division of the Association into two sections—one comprising the town, the other the country, members. The latter are already beginning to feel that they have not benefited so much by the union as their more fortunate town brethren. One great grievance they labour under—the supply of medicines being still, except in a few unions, compulsory on the part of the surgeon, though contrary to the expressed wish of Parliament.

"So far from your position being untenable, I think it is Mr. Barnes who should at once resign the secretaryship of the Association, on which he endeavours, with questionable taste, to impress his own peculiar views, ignoring the fact, as stated in the editorial note appended to your letter in the *Lancet*, that 'this is a matter concerning the provincial medical service only'."

3. "I write to thank you for your views, as expressed in the journals of last week, in reference to the Sanitary Act. A meeting (private) was held at my house on Tuesday last, where medical officers of this and two adjoining unions were present. The opinion was unanimous, with one exception only, that in rural districts the duties were incompatible with private practice, and that they could only be efficiently performed by a good man occupying an independent position, who gave his full time to the duties. We were further of opinion that, if such a man were appointed, we should at all times be ready to give him all reasonable assistance in our respective districts. I take it, this would be mainly verbal reports from district medical officers. It could not be expected gratuitously; but information of an useful character all would be ready to give."

4. "I have taken no little pains to ascertain the feelings and opinions of the men with whom I have come into contact in this neighbourhood and elsewhere; and they all agree that it would be unwise for any country practitioner, who is not quite independent of his profession, to accept an appointment as health-officer—that is, they would support your view, not that of Mr. Barnes. We may be mistaken; but surely we are more likely to understand what concerns us than any metropolitan medical man can tell us. The *Lancet* states that there is no duty which may not be competently performed by any qualified medical man. Is there one man in a hundred competent to act on Clause 8, Section 4, sufficiently to condemn any single article of food, and prove himself right in a law court? Whoever thinks so, must have a much better opinion of the knowledge of the ordinary run of medical men than I have. The *Lancet* also states that the duties will require tact and discretion to prevent enmity and injury. I am open to conviction. How am I to display this tact when I see a carcase of diseased meat hanging at my butcher's, or when I find his lordship's cottage property fearfully overcrowded and in a thoroughly unsanitary state? or, more difficult still, that of a small landlord who lives on his rents? Advise, says the *Lancet*, persuade, finally report, for it comes to that at last. Then how about enmity? and all for what?—five pounds *per annum*, less income-tax. No, I thank you! The *Lancet* is very kind and pressing; the *Medical Times* and Mr. Wickham Barnes especially so; but I would rather not: not that it is a matter of any moment to me, but I should wish, on public grounds, to see the Sanitary Act made a real thing, not a mockery and a snare, a broken reed, which will pierce the hands of those who lean upon it."

5. "I entirely agree with your views. That I am not writing from theory alone, I can prove from the fact that only last year I tried to get some improvements carried out in this village. All the cesspools empty themselves into the chalk; and, as a consequence, the wells are contaminated. Out of seven specimens of water sent to London, only one was found fit for drinking purposes. Notwithstanding this was proved and I had the support of Mr. Bailey Denton and Mr. Harrison of the Local Government Board, I had only three of the inhabitants to stand by me, and one of the most energetic in the opposition was the rector. The matter was not pushed sufficiently far to make any enemies; but, supposing I were now to be appointed sole health-officer and order the necessary alterations, I should make a host of bitter enemies."

6. "Do you not think it would be desirable to have a general meeting of Poor-law medical officers in London to decide the question" (as to the course to be followed with regard to appointments under the Public Health Act)? "Under present circumstances, I am at a loss to know what answer to return to the clerk of the Board of Guardians. I still feel satisfied that the Act will virtually be a dead letter if it be attempted to carry it out through the medium of the Poor-law medical officers alone. They barely command the respect of the Board of Guardians, and there is little likelihood of their exercising any authority, without which the reports would receive but little attention. This is a matter on which you are our leader: I shall be glad to know what you think about it."

These are extracts from but a few out of many letters which I have received to the same effect, but I fear to trespass further on your space. In conclusion, allow me briefly to recapitulate the principles which I have consistently advocated. They are simply, that every district Poor-law medical officer should be, in virtue of his office, deputy health-officer; that his duty should consist in reporting the existence of preventable disease and its causes; that, for the additional labour of making such reports, he should receive compensation based on some general principle (centrally determined); that such reports should be made to a superior health-officer, either appointed by a local authority over a considerable area or nominated by the Crown; that on such superior health-officer should rest the onus of directing what sanitary works should be executed, thereby shielding the district medical officer from the odium and injury which a conscientious discharge of the duty would probably entail—a duty which Mr. Barnes and others would impose upon him.

I am, etc.,

33, Dean Street, Soho, Dec. 16th, 1872. JOSEPH ROGERS.

SANITARY MAPS.

SIR,—To facilitate the Medical Officer of Health in the discharge of his important duties, I would suggest that the sanitary authorities provide him with maps of his district, similar to the sketch I enclose, indicating every house in the district, the kind of drainage, the water-supply, the arrangements and fall of the sewers; and, to make the map complete the scavengering arrangements should be stated.

I have read the order of the Local Government Board, published in last week's JOURNAL, and some time since I read the Public Health Act (1872), but I do not remember that any mention is made respecting the mapping out of districts in the manner and with the objects which I suggest.

The map should be of convenient size, and suitable letters and marks agreed upon, indicating every death-rate, with the cause (preventable or non-preventable); also every birth. These marks should be duly entered by the Medical Officer of Health, in such colours as the officer might think best, red, black, or blue; *e.g.* the letter D (black) means Death; the letter B (red) means Birth; N (black) Natural; D N, Death from natural causes; D, Cholera, 20 July, 1872; M O V, 21 July, 1872, *see* p. 72 (black stripes over site of house), M O V meaning medical officers' visit, and date; p. 72 meaning page in Medical Officers' Report Book. Black marks might suggest an epidemic; red or blue stripes, contagious diseases, etc.

It is not worth while occupying space with further detail, as most points are embraced on the map or section sketches; however, I hope I have stated sufficiently fully the various points for you to understand the kind of map I propose.

In my opinion these maps would be of immense local interest and value. One or more of them ought to accompany every report and tabular statement prepared by the Medical Officer of Health.

I am, etc. S. CARTWRIGHT REED, M.D.

Markham Square, S.W.

OBITUARY.

W. F. MORGAN, F.R.C.S., Bristol.

MR. MORGAN was born in 1800, passed the College and Hall in 1823, and was shortly afterwards elected house-surgeon to the Bristol Royal Infirmary, at which institution he had been a pupil. This appointment he held for several years; and, soon after he resigned it to commence practice, he was elected to the office of surgeon to the Infirmary, the active duties of which office he performed to 1854, when he resigned and became consulting surgeon; thus retaining his close connection with the Infirmary during a period of over fifty years. Mr. Morgan was not a writer, and published little; nor did he take any active part in public, in consequence of an impediment in his speech. Beyond his own neighbourhood, therefore, he was comparatively little known; but his long connection with the Infirmary, and consequent great experience, his extensive knowledge of the literature of his profession, and his calm good judgment, made his opinion to be highly valued and respected by all who knew him. It was well remarked by Sir James

Paget, in the eloquent speech with which he lately proposed the health of Sir Thomas Watson, that we are his pupils still—not only in respect to his writings—"but as students of his life—a life of unsurpassed gravity, sincerity and uprightness." To no one could this latter observation be more aptly or more truly applied than to Mr. Morgan. Essentially simple and unassuming—unselfishly kind and generous—sensitively honourable in all his dealings, he earnestly loved his profession as a science as well as an art, and led a life of consistent irreproachable goodness. For some years he had retired from active practice, in consequence of extreme irritability of the heart, which necessitated the avoidance of all exertion and excitement; but he still kept up and enjoyed his kindly and affectionate intercourse with his profession. On Sunday the 7th, he retired to bed as usual, but in the night was aroused by symptoms and conditions which he had long anticipated and prepared for, and in a hour was dead. His funeral took place on Tuesday week, when his colleagues of the Infirmary, with many other members of the profession, met around his grave to testify their loving esteem for him as he lived, and their reverence for his mem ory.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF OXFORD.

RADCLIFFE FELLOWSHIP.—An examination for a Radcliffe Travelling Fellowship will be held in the first week of February 1873. Candidates are requested to send their name and address to Dr. Acland, at the Museum, before January 15th, "Radcliffe Travelling Fellowship" being written outside the envelope.

MEDICAL NEWS.

THE GENERAL MEDICAL COUNCIL.

A MEETING of the Branch Council for England was held on Wednesday, for the transaction of ordinary business. Auditors were appointed; and the case of a medical practitioner, whose name has lately figured unpleasantly in the law-courts, was considered. The case will be brought before the General Council, to be dealt with under the Medical Act. No formal question was discussed, we believe, as to the meeting of the General Medical Council; nor is there any reason to believe that it will meet at a particularly early date. Its period of meeting will be determined, probably, by the wishes of the Irish bodies with reference to the partial scheme for amalgamation for purposes of examination, which three of them are preparing to submit. The Scotch bodies have, unfortunately, not agreed yet upon any such scheme. The Government have thus far made no steps towards medical legislation in the ensuing session.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Licentiates of the College on Dec. 16th.

Baker, George Benson, 42, Grove Road, St. John's Wood
Bird, Cuthbert Hilton Golding, Guy's Hospital
Blake, Frederick George, 3, Dowry Square, Clifton
Davies, George Augustus, Newport, Monmouthshire
Dixon, John Francis, 14, Percy Circus, King's Cross
Howse, William, New Swindon
Moore, John Bartholomew Giles Gidley, Langstone Throwley, Okehampton
Philpot, Harvey John, East Dulwich
Preston, Theodore Julian, General Dispensary, East Grinstead
Robinson, Mark, Her Majesty's Dockyard, Portsmouth
Walker, George Edward, 27, Vincent Square

The following gentleman, having passed in Medicine and Midwifery, will receive the College Licence on his obtaining a qualification in Surgery recognised by the College.

Clague, John, Castletown, Isle of Man

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At examination meetings, held on December 10th, 11th, and 12th, the following gentlemen received the License to practise Medicine.

Allen, John Gower
Buckly, Daniel Francis
Clarke, Arthur Champneys
Luther, Edward Wentworth

The Midwifery Diploma was granted to—

Allen, John Gower
Luther, Edward Wentworth

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 12th, 1872.

Archer, Edmond Lewis, Junction Road, Kentish Town
Bromley, John Maddern, Penzance
Dewar, James, Middleton Cheney, Oxon.
Page, Herbert William, Carlisle

The following gentlemen also on the same day passed their primary professional examination.

Brayn, Richard, King's College
Sheehy, William Henry Patmore, St. Bartholomew's Hospital
Turle, Arthur, St. Thomas's Hospital

UNIVERSITY OF CAMBRIDGE.—Second M.B. Examination. Examined and approved.

Charnley, M.A., St. John's
Hughes, B.A., Jesus
Sangster, B.A., Caius
Smith, B.A., Downing
Twining, B.A., Downing

MEDICAL VACANCIES.

THE following vacancies are announced:—

ADDENBROOKE'S HOSPITAL, Cambridge—House-Physician and House-Surgeon: each £65 per annum, board, and residence.
AFRICAN ASSOCIATION OF LIVERPOOL—Medical Man to take charge of a Station on the West Coast of Africa: minimum salary, £300 per annum, and all expenses.
BATH UNION—Medical Officer for District No. 2: £43 per annum.
BIRMINGHAM LYING-IN CHARITY—Medical Officer.
BOLNESS and CARRIDEN, Linlithgowshire, united Parishes of—Medical Practitioner.
CHORLTON UNION, Lancashire—Resident Medical Officer for the Workhouse Infirmary: £260: 10 per annum.
CLINICAL HOSPITAL and DISPENSARY FOR CHILDREN, Manchester—House-Surgeon: £60 per annum, residence, and board.
COVENTRY AND WARWICKSHIRE HOSPITAL—House-Surgeon: £80 per annum, board and lodging.
DERBYSHIRE GENERAL INFIRMARY, Derby—Assistant House-Surgeon.
DERBYSHIRE GAOL, Derby—Surgeon.
DORSET LUNATIC ASYLUMS, near Dorchester—Assistant Medical Officer for the Forston Asylum: £100 per annum, board, and apartments.
GERMAN HOSPITAL, Dalston—Honorary Assistant-Physician.
HERTS REFORMATORY, Hertford—Medical Officer.
HOWDEN UNION, Yorkshire—Medical Officer and Public Vaccinator for the Newport District: £40 per annum, and extra fees.
INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.
KILDALTON, Islay—Parochial Medical Officer: £70 per annum, including medicine for the paupers.
LAMBETH, Parish of St. Mary—Medical Officer for District No. 7: £70 per ann.
LEDWICH SCHOOL OF ANATOMY, MEDICINE, and SURGERY—Lecturer on the Practice of Medicine.
LEXDEN and WINSTREE UNION, Essex—Medical Officer and Public Vaccinator for District No. 9: £90 per annum, and fees.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Hon. Assistant-Physician.
MOSS-SIDE BOARD OF HEALTH—Medical Officer of Health: £52: 10 per annum.
NAVAL MEDICAL SERVICE—Assistant-Surgeons.
NEATH URBAN SANITARY DISTRICT—Medical Officer of Health: £30 per annum.
NEWPORT (Mon.) INFIRMARY AND DISPENSARY—Resident Medical Officer.
NEWPORT (Mon.) ODD FELLOWS MEDICAL AID ASSOCIATION—Assistant-Surgeon: £60 per annum, board, and residence.
OLDHAM, Borough of—Medical Officer of Health: £400 per annum, offices, stationery, etc.
PATELEY BRIDGE UNION RURAL SANITARY DISTRICT—Medical Officer of Health.
ROYAL COLLEGE OF SURGEONS, Ireland—Professor of Surgery.
ROYAL PORTSMOUTH HOSPITAL—Female Superintendent for the Lock Wards: £40 per annum, rooms, and washing.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL—Surgeon.
ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon: £75 per annum, board, residence, and washing.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Lower Seymour Street—Physician and Surgeon for Out-Department.
SLIGO UNION—Apothecary for the Sligo Dispensary: £60 per annum.
SOUTH SHIELDS UNION—Medical Officer for the Jarrow District: £40 per annum.
WALLASEY DISPENSARY—House-Surgeon; £100 per annum, furnished residence, coals, and gas.
WEST DERBY, Lancashire, Local Board of—Medical Officer of Health: £100 per annum.
WIRRAL UNION, Cheshire—Medical Officer for the Bebington District: £40 per annum.
WORCESTER GENERAL INFIRMARY—House-Surgeon: £100 per annum, board, and lodging.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

SUTTON, John Maule, M.D., appointed Medical Officer to the Friendly Societies' Medical Institute, Northampton.
THORNTON, W. Pugin, Esq., elected Assistant-Surgeon to the Hospital for Disease of the Throat.
WHARRY, C. J., M.B., C.M., appointed Superintendent of the Civil Hospital at Hongkong.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY .....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Lockhart Clarke, "On a Case of Cysts in the Cerebellum"; Dr. Edis, "On a Case of Right Hemiplegia occurring during Pregnancy, with Rapid Convalescence after Parturition"; Dr. Nieden, "A Case of Lesion of the Upper Dorsal Portion of the Spinal Cord, with excessive Lowering of Temperature and Pulse", Dr. Ogle, "On Acute Rheumatic Fever, Pericarditis with Effusion—axpected necessity for Tapping the Pericardium—Recovery."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

ERRATUM.—The number of first year's students in the University of Aberdeen this session is 52; and not 32, as was stated by misprint in the last number of the JOURNAL.

MR. WOODMAN (Exeter) will find particulars as to Mr. Nightingale's invisible respirator in our advertising columns.

VOLUNTEER.—We repeat that we shall give immediate information regarding the New Medical Regulations, when they are issued from the War Office.

DR. BROWN (Rochester)—It has already appeared.

DR. ROBERT SMITH (Ferry Hill) will find the figures which were quoted in the *Pall Mall Gazette*, in a previous number of the *Local Government Chronicle*, in an article purporting to be statistical analysis of the Commissioners' Report.

COMMUNICATIONS relating to the administration of ether as an anæsthetic, have been received from Mr. Clover, Mr. Prichard (Bristol), and Dr. Kidd.

MR. J. T. JONES (Llanfyllin).—We can only, at present, advise our correspondent to bring the circumstances at once under the notice of the Council of his Branch of the Association, and to obtain their decision.

THE charges which Justitia (Liverpool) brings against important corporate bodies are very grave, and are worded in a manner likely to injure national susceptibilities. If he wish his letter published, he must append his name to it, and furnish authenticated evidence in support of his statements.

ANDREWS *v.* STYRAP.

SIR,—My attention has just been called to a letter, headed "Andrews *v.* Styrap", in the JOURNAL of November 30th, in which the following expression occurs:—"A considerable sum was contributed by the profession specially for this prosecution; and it would now be satisfactory to the subscribers to know how the money has been expended." Such a remark being calculated to convey an erroneous impression as to the body by whom the prosecution was undertaken, it may perhaps be well to state that the Council of the Ethical Branch of our Association, through their representative Dr. Styrap, were the prosecutors and responsible parties; and that (with the exception of five or six other practitioners) the members of the Ethical Branch were the sole contributors to the fund. To them an audited copy of the receipts and payments in full (the solicitor's charges included) was transmitted several weeks ago.

I beg to add that Dr. Paget of Cambridge (President of the General Medical Council), in his unofficial capacity, very kindly offered a subscription, which, however, was courteously declined. I am, etc.

J. W. PROCTER, President of the Ethical Branch.

Shifnal, Salop, December 12th, 1872.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

MR. SMITH (Pershore) will find examples of the value of faradisation in restoring animation when suspended by chloroform, in the papers of Mr. Green (of Bristol), published in the JOURNAL of May 25th, and December 7th. Mr. Green records in all seven cases, in each of which he says, "the heart suddenly stopped after the administration of chloroform, the patient appearing dead; and with only one exception (case II) its motions were as instantly restored by faradisation, and life was saved in each of them."

UNQUALIFIED PRACTITIONERS.

SIR,—It is very much to be regretted that the authorities will continue to recognise and protect unqualified practitioners.

It appears from Mr. Blandford's letter, in the JOURNAL of December 7th, that the coroner of Stockton-on-Tees not only declined to hold an inquest into the death of a woman who appears to have been the victim of a couple of unqualified men, and classed them as "medical gentlemen" on the same footing as registered practitioners, but quietly censured Mr. Blandford for not taking upon himself to perform the work of a common police-informer.

A short time ago, a druggist got hold of a "bogus qualification", and began to practise as a physician, and signed himself "M.D.", and obtained from the registrar of deaths a book of the forms of certificate of death, which, from time to time, he filled up with the names of his victims, and signed his M.D. Some one made representations about it to the authorities (the Secretary of State, I think), and got, as a reply, that "the certificates of some unqualified men would be more satisfactory than the vague statements sometimes given by the friends of the deceased", or words to that effect. This was all the satisfaction he got for his trouble.

Unqualified practitioners abound in the manufacturing towns. There are numbers of them in Bolton, Lancashire, styling themselves "M.D.", "M.B.", "Doctor", etc. There is one man who has on his window-blind, in gold letters, after his name, "M.B., A.M.R.S."; the M.B, standing for "Medical Botanist", and the other letters for "Associate of the Medical Reform Society." Other "Doctors" advertise openly in the newspapers, and have their name-plates on their doors, with Dr. or M.D.

One man who was prosecuted and fined (I think thirty shillings) for putting the word "Surgeon" on his door-plate, merely went home and had another plate put on his door with "Dr." before his name. These are some of the means they adopt to gull the public, and get that practice and remuneration which belongs to legally qualified men.

It would be very interesting if some member of the profession could ascertain and inform us what advantage registration can be if it does not protect the public from unprincipled quacks; and us in the proper use of our diplomas and degrees. It would also be interesting to know what becomes of all the money screwed from the profession in the shape of registration fees. I certainly felt it a great hardship to have to pay that five guineas for the privilege of having my name placed upon the *Register*, after I had worked hard and obtained a legal qualification to practise my profession; and I cannot yet see the advantage of registration if any quack doctor is placed on the same footing as a registered qualified practitioner. I can only say that, if the time were to come over again, I should certainly keep my five guineas in my pocket, and I should very much like to have it back now. Lecture and graduation fees are quite heavy enough to the majority of medical students without the large fee which they must pay for the doubtful advantage of being registered. I am, etc.,

December 1872. A REGISTERED PRACTITIONER.

MR. WICKHAM BARNES.—We have already expressed our entire disapprobation of the manœuvres by which the opinion of six metropolitan gentlemen was made to figure as that of the Poor Law Medical Officers' Association, in opposition to the facts. Mr. Stansfeld, as his letter shows, has fallen into the trap; but we do not think it a subject of anything else than strong disapprobation and unmixed regret.

A MEDICAL contemporary, in discussing our recent article on Modern Surgery, is so entirely bewildered by that sharp and outspoken medical review, that it candidly confesses that it considers such reviewing to belong "to the high ropes of literary morality," with which it has nothing in common, and invents quite an ingenious and dishonest little fiction of its own to explain the circumstances. It finds so little in its inner consciousness to justify it in believing in honest, able, and impartial reviewing, that it tries to explain to its readers that it is probable that 1st. The review in question was written in two halves; 2nd. The first half was written and published by "a partisan," opposed to Mr. Bryant, and prior to Mr. Erichsen's appointment as orator in surgery to the Association, without editorial supervision; 3rd. That the second part was written (by a sycophant) under pressure after that appointment. The invention of such a theory requires a very disordered imagination, and a very low form of literary morality. The refutation of it might, if it were required, be at once found by a simple comparison of dates. Mr. Erichsen's appointment was made on the 12th, and confirmed on the 13th of November. The first of the two articles did not appear in the JOURNAL till November 30th; they were both by the same haud, and were written as a whole, complete and unaltered from the first.

CAUSE OF INCREASE OF INSANITY.

SIR,—Dr. J. Crichton Browne expresses his firm conviction, founded upon his professional experience, that "much of the increase of insanity is to be attributed to the miserable materialistic philosophy which is now so assiduously disseminated." This statement is an amazing one and a startling. Now my own experience in insanity, which is probably equal to, if not greater than, Dr. Browne's, leads me to give such a cause a hardly recognisable place; while the fear of hell, a matter of that faith which, according to Dr. Browne, is "necessary to mental health", is a cause which is lamentably prevalent.

Dr. Browne also says that "no martyr has ever been reprieved on the ground of insanity." To this I would reply that the man who, if he had lived in the good old days of fire and stake, would have been a martyr, is, in this latter half of the nineteenth century, locked up in an asylum until he recovers from his cerebral malady.

I should be glad to have the opinion of your readers respecting the materialistic philosophy as a cause of insanity. I am, etc., X. Y. Z.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

FEES.

SIR,—In reference to the letter of a Provincial Physician in your number of October 26th, I thought it was clearly understood among medical men that they never charged fees to each other, or to their wives (or widows while remaining such), or to their sons or daughters under age, or while forming part of their father's household, but that beyond this no immunity was customary. If fathers and mothers, brothers and sisters, or sons and daughters (when settled in life) of medical men, are to claim immunity from fees, we may as well give up our profession as unremunerative, when we also take into account gratuitous advice to the needy, certificates to be written for nothing, emergencies and accidents to be attended without fee, on pain of being charged with inhumanity, the unpaid drudgery of hospital and dispensary work, the insufficient payment of clubs and parochial appointments, the offering of our services gratis to this or that person in distress by some philanthropist, the postponement of the payment of fees due at once, and the great number of instances in which payment is altogether evaded.

The general rise in prices brings up the whole question of a revision of medical and surgical fees. I do not now advocate raising them: they ought, first of all, to be rightly adjusted and duly paid.

As to adjustment, some established tariff of charges should be adhered to; not his own scale for every man, but that which is customary in the district where he practises, or higher, never lower. If it be usual to vaccinate, or render other service, without fee, this should be left off, and proper fees be charged.

As to payment, all medical remuneration should be by way of fees, paid at the time; not by way of charges, booked and sent in as a bill afterwards. This ought to be generally understood on both sides. The contrary is now the case with the general practitioner; fees are an exception; to book and send in bills is the rule: and the consequence is, that a great door is opened to fraud. Fees at the time should be the rule; to book and send in accounts afterwards should only be done as an exception, with known and established families and patients, where the doctor thinks proper. If medical men would adopt this rule, and make it known as the established custom of the profession, it would go far to diminish the very heavy losses now caused by bad debts, and many surgeons would find themselves immediate gainers.

To this some will object; I could do so myself, and overwhelm the thing with objections. But it would not advance the interests of the profession to do so; it will do more good to try to bring this about—to do it where it can be done, and, if not, to do part of it—than to make a controversy, and set to work to prove that I am mistaken. It is for the sake of the profession that I write; not for myself, to whom the publishing of this does no good, but for my professional brethren, whom I have seen for many years injured and lowered, by being defrauded of their just dues, treated as less than gentlemen by the ignorant, and pulled down by mutual controversy, instead of standing together for their common defence.

I hope, therefore, that the fee system will be viewed with favour, as tending to strengthen the profession, and that it may be thought worth while to work towards it in every possible way, and to make it understood by those without as the method in which business with the medical profession is transacted, any deviation from it being exceptional. I have no time to answer objections, or to press this view on the unwilling; but, before concluding, have a word to say on kindred topics.

As to clubs, no appointments of this sort should pay less than five shillings a year per head; and, in cases where less is now accepted, every opportunity should be used to get the remuneration advanced to, or towards, the right point. Certificates of inability to work through illness, when given for any club to which the signer is not surgeon should be charged for. Half-a-crown is not too much, with a shilling for every repetition, giving certificates of recovery always gratis. Certificates of death should be regularly charged for (2s. 6d.), and should not be copies of the certificate meant for the registrar.

Death-certificates being ordained by law to be given gratis, the law-makers cannot complain if the profession defend itself. You cannot certify what you do not know. You do not know, of yourself, that a patient is dead merely by being told so; that is not evidence; and no medical man, who respects himself and the profession he belongs to, will certify as a fact what he merely knows by hearsay. Our mode of protection is obvious. We cannot charge for the certificate; but, if we are to go to the patient's residence to verify the death by seeing the body (without which we cannot certify), we can charge for that visit the same fee as for any other. And in doubtful cases we may decline to make the visit until the fee is paid.

If most of us concur to act thus, or as nearly so as the idiosyncracies of individuals permit, the profession will become a gainer, and the gain will be equivalent to some raising of our fees, though without materially doing so. The different ethical societies may perhaps see fit to favour these views, which, for obvious reasons, an individual cannot put forth, but which, if adopted by the whole profession, or by professional bodies and societies, may be promulgated and acted on with the greatest advantage. Thus I leave the matter.

I am, etc, A PROVINCIAL SURGEON.

HOSPITAL SENIORITY.

SIR,—In 1866 our hospital was opened. It has this peculiarity—viz., that a house-surgeon is not kept, neither has it a staff of "physicians" and "surgeons"—it being decided to elect four practitioners in the town to take charge of both medical and surgical cases, and to be called the "medical officers" of the hospital. Now A., B., C., D., each possess at the date of election the College of Surgeons' and Apothecaries' qualifications. A. qualified in 1843; B. in 1840-1849; C. in 1854-1855; D. in 1863. But D. also possesses the L.R.C.P.London at the date of election, and is senior scholar and associate of his College. Now kindly tell "Alpha" in your paper if either A. B. C. or D. is justified in calling himself senior medical officer.

I am, etc.,

ALPHA.

P.S.—B. is made F.R.C.S.Eng. (Honorary) 1872.

*** As they were all elected at the same date, and with very varying qualifications, without any arrangement as to seniority, we do not see how either can fairly call himself senior. No principle of seniority was agreed upon; and the usual test of diplomas does not apply easily, owing to the variety of qualifications admitted, to an equal footing.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

GALVANO-EMESIS.

SIR,—Mr. F. D. Tomlinson makes inquiry as to the method of galvano-emesis, and as to what is a suitable conductor for the œsophagus The conductor which I used for the œsophagus was a piece of wire covered with India-rubber as an insulator, and terminating in a brass cone; an instrument supplied generally with a galvanic apparatus. To the epigastrium I applied the ordinary wet sponge-conductor. I used the interrupted current, supplied by a small two-celled sulphate of mercury battery, which is very convenient, being small, powerful, easily graduated as to the strength of the current, and quickly arranged in working order.

I am, etc., CHARLTON FOX, M.D.

Birmingham, December 13th, 1872.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Dec. 14th; The Manchester Guardian, Dec. 18th; The Ulster General Advertiser, Dec. 14th; The Scotsman, Dec. 16th; The Bath Express, Dec. 14th; The Eastern Morning News; The Northwich and Winsford Guardian; The Barrow in Furness and North-Western Daily Times; The Altrincham and Rowdon Guardian; The Durham County Advertiser; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. George Johnson, London; Mr. T. Annandale, Edinburgh; Mr. Southam, Manchester; Mr. T. Pridgin Teale, Leeds; Mr. Callender, London; Dr. Joseph Rogers, London; Dr. R. Macnamara, Dublin; Dr. Douglas Powell, London; A Correspondent; Mr. Chase, Hereford; Dr. Mackey, Birmingham; Dr. Charlton Fox, Birmingham; Mr. Dalby, London; Mr. Burrell, Edinburgh; Dr. Wilson Fox, London; Dr. Julius Pollock, London; Dr. Langdon Down, London; The Secretary of the Clinical Society; Dr. J. W. Moore, Dublin; Mr. Furneaux Jordan, Birmingham; Dr. Sankey, Cheltenham; Mr. Joseph Bell, Edinburgh; Dr. C. J. B. Williams, London; Dr. W. A. Elliston, Ipswich; Dr. Durrant, Ipswich; Dr. G. Buchanan, Glasgow; Dr. Latham, Cambridge; Dr. S. Martyn, Clifton; Mr. J. Hamilton, Dublin; Mr. W. Rivington, London; Mr. T. H. Bartleet, Birmingham; Mr. W. P. Swain, Devonport; Mr. C. Steele, Clifton; Mr. E. Lund, Manchester; Mr. A. E. Durham, London; Dr. Ransome, Manchester; Mr. G. Longbotham, Leeds; M.D.Edin.; Dr. Lanchester, Croydon; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. Wanklyn, London; Dr. John Ogle, London; Dr. Murchison, London; Dr. Poore, London; Mr. C. J. Wharry, London; Mr. Campbell De Morgan, London; Dr. Southey, London; Dr. Clouston, Carlisle; Dr. Ferrier, London; Mr. V. Jackson, Wolverhampton; Dr. Orton, Beeston; A Member; Dr. Shapter, Exeter; Dr. Brittan, Clifton; Dr. Styrap, Shrewsbury; Dr. Chadwick, Leeds: Mr. W. Stokes, Dublin; Mr. Jessop, Leeds; Dr. G. M. Simpson, Highgate; Dr. Vandyke Carter, London; Dr. Beveridge, Aberdeen; Dr. Hughlings Jackson, London; Mr. J. W. Langmore, London; Dr. Angus Fraser, Aberdeen; Dr. H. Bennet, Mentone; Rev. Dr. Haughton, Dublin; Our Manchester Correspondent; Dr. Playfair, London; Dr. Embleton, Newcastle-on-Tyne; Mr. Holthouse, London; Dr. B. Foster, Birmingham; Mr. A. Prichard, Bristol; Dr. Tilbury Fox, London; Dr. T. L. Brunton, London; Dr. Corfield, London; Dr. Falconer, Bath; Dr. Handfield Jones, London; Dr. Graily Hewitt, London; Dr. Theodore Williams, London; Mr. Andrew Clark, London; Dr. John Harley, London; Dr. R. Barnes, London; Mr. W. Adams, London; Dr. Rumsey, Cheltenham; Dr. Humphry, Cambridge; Dr. W. Taylor, Cardiff; Dr. Edis, London; etc.

BOOKS, ETC., RECEIVED.

Ovarian Tumours: their Pathology, Diagnosis, and Treatment, especially by Ovariotomy. By R. Randolph Peaslee, M.D., LL.D., New York: 1872.

On the Scientific Value of the Legal Tests of Insanity. By J. Russell Reynolds, M.D., F.R.S. London: 1872.

Catalogue of Works of Arts, etc., exhibited at the Opening of the New Library and Museum of the Corporation of London.

Hospital Prayer Book. By E. J. Waring, M.D. London: 1872.

The Teeth: Notes on their Pathology. By Oakley Coles, L.D.S.R.C.S. London: 1872.

A Practical Treatise on Urinary and Renal Diseases, including Urinary Deposits. By William Roberts, M.D. Second Edition. London: 1872.

The Practice of Surgery: a Manual. By Thomas Bryant. London: 1872.

The Fourth Annual Report of the English Anti-Tobacco Society for 1871-72.

Report on the Structure of the White Blood-Corpuscle. Philadelphia: 1872.

A Treatise on Relapsing or Famine Fever. By R. D. Lyons, M.D. London: 1872.

Responsibility and Disease. By J. H. Balfour Browne. London: 1872.

Statistical Report on the Health of the Navy for the Year 1870. London: 1872.

Report of the Sanitary Commissioner for Madras for 1871. Madras: 1872.

An Inquiry into the Theory and Practice of Antiseptic Surgery. By James Cumming, M.D. Edinburgh: 1872.

Handbook for Midwives. By Henry Fly Smith, B.A., M.B. London: 1872.

Die Parasiten der weiblichen Geschlechtsorgane des Menschen und einiger Thiere. Von Dr. D. Haussmann. Berlin; 1870.

Text-Book of Physiology: General, Special, and Practical. By John Hughes Bennett, M.D., F.R.S.E. Edinburgh: 1872.

Hints for Obstetric Clerks. By Albert F. Field. London: 1872.

The Micrographic Dictionary. London: 1872.

A Table giving the Relative Values of Different Articles of Food. By Charles Ekin, F.C.S. London: 1872.

Manual of Palæontology. By H. A. Nicholson, M.D. London: 1872.

1873.

THE BRITISH MEDICAL ASSOCIATION.

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The ANNUAL MEETING of the Association for 1873 will be held in August in LONDON, under the Presidency of

SIR WILLIAM FERGUSSON, BART., F.R.S.

The **ADDRESS IN MEDICINE** will be delivered by EDMUND A. PARKES, M.D., F.R.C.P., F.R.S., Professor of Hygiene in the Army Medical School, Netley.

The **ADDRESS IN SURGERY** will be delivered by JOHN ERIC ERICHSEN, Esq., F.R.C.S., Senior Surgeon and Holme Professor of Clinical Surgery in University College Hospital.

The **ADDRESS IN PHYSIOLOGY** will be delivered by JOHN BURDON SANDERSON, M.D., F.R.C.P., F.R.S., Professor of Practical Physiology in University College, and Professor-Superintendent of the Brown Institute.

THE HASTINGS GOLD MEDAL, Value Twenty Guineas,

Will be awarded for the best Essay "On the Pathology and Treatment of Ovarian Diseases."

The objects of the Association are—the promotion of Medical Science, and the maintenance of the honour and interests of the Medical Profession. The Subscription to the Association is One Guinea annually: and each Member on paying his Subscription is entitled, in addition to the other advantages of the Association, to receive weekly, post free, the "BRITISH MEDICAL JOURNAL: BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION." The Subscription is payable, in advance, on the 1st January in each year.

Gentlemen desirous of becoming Members of the Association should communicate their wish to the HONORARY LOCAL SECRETARIES, or to the General Secretary, F. FOWKE, Esq., 37, Great Queen Street, Lincoln's Inn Fields, London, W.C.

The BRITISH MEDICAL JOURNAL for 1873.

Edited by ERNEST HART, Esq.

The JOURNAL includes the earliest *scientific, social, and political information* on all subjects interesting to the Profession; SPECIAL CORRESPONDENCE from the principal cities and localities of Great Britain and the Continent; Reports of the principal Medical Societies in England, Scotland, and Ireland; REPORTS on NEW INVENTIONS; SPECIAL REPORTS ON SANITARY AND MEDICO-LEGAL QUESTIONS; RECORDS OF THE PROGRESS OF THERAPEUTICS, SURGERY, and the MEDICAL SCIENCES; REVIEWS of BOOKS, etc.

THE DEPARTMENT DEVOTED TO THE INTERESTS OF THE POOR LAW MEDICAL SERVICES OF GREAT BRITAIN and IRELAND, are specially directed, on behalf of the Poor Law Medical Officers' Association of England, by Mr. Benson Baker, and on behalf of the Poor Law Medical Officers' Association of Ireland, by Dr. D. T. T. Maunsell of Dublin, Honorary Secretaries of those Associations.

A further series of Leading Articles will be issued, illustrating the **PROGRESS of MEDICAL SCIENCE,** and the influence of recent discoveries in **PHYSIOLOGY and MEDICAL CHEMISTRY.**

The REPORTS on SANITARY ENGINEERING in Houses, Hospitals, and Public Institutions (fully Illustrated), will be continued and completed.

On January 4th, will be commenced a Series of **REPORTS on the FORMS and USES of ELECTRICAL APPARATUS, including a succinct Guide to the MODERN TREATMENT of DISEASE by ELECTRICITY.** Fully Illustrated.

Early in the month of January will be commenced a Series of Articles **On the DUTIES of MEDICAL OFFICERS of HEALTH: with Directions for the Mode of Performing Analyses of Food, Air, and Water.**

UNIV. OF THE UNIVERSITY OF ILLINOIS

For the Annual Subscription of One Guinea, paid in advance, the BRITISH MEDICAL JOURNAL is forwarded weekly, free by post. Orders enclosing remittances should be addressed to Mr. Francis Fowke, Esq., at the Office of the Journal, 37, Great Queen Street, London, W.C.

In the forthcoming Volumes will be published—

THE LUMLEIAN LECTURES on CONVULSIVE DISEASES of WOMEN and CHILDREN. **Robert Barnes, M.D., F.R.C.P.,** Obstetric Physician to and Lecturer on Midwifery at St. Thomas's Hospital; Examiner in Midwifery in the University of London.

CROONIAN LECTURES on MIND, BRAIN, and SPINAL CORD, in CERTAIN CONDITIONS of DISEASE. By **C. Bland Radcliffe, M.D., F.R.C.P.,** Physician to the Westminster Hospital and the National Hospital for the Paralysed and Epileptic.

GOULSTONIAN LECTURES on ELEPHANTIASIS GRÆCORUM. By **Robert Liveing, M.D., F.R.C.P.,** Physician to and Lecturer on Anatomy at the Middlesex Hospital.

LECTURES on HUMAN MYOLOGY. Illustrated. Being Lectures to be delivered at the Royal College of England, by **G. M. Humphry, M.D., F.R.S.,** Lecturer on Anatomy in the College; Professor of Anatomy in the University of Cambridge.

THE HARVEIAN ORATION at the Royal College of Physicians, to be delivered by **George Rolleston M.D., F.R.C.P., F.R.S.,** Linacre Professor of Anatomy in the University of Oxford.

SIX LECTURES on the PATHOLOGY and TREATMENT of BRIGHT'S DISEASE of the KIDNEYS. By **George Johnson, M.D., F.R.C.P., F.R.S.,** Senior Physician to King's College Hospital, and Professor of Medicine in King's College. Fully Illustrated.

THE LECTURES on the PRACTICE of MEDICINE, by **Charles Murchison, M.D., F.R.S.**. Physician to St. Thomas's Hospital, of which the publication has been suspended owing to the pressure of other occupations, will, it is hoped, be resumed early in the spring.

REPORTS and ABSTRACTS of CLINICAL LECTURES, by **Sir William Jenner, Bart., K.C.B., M.D., F.R.C.P., F.R.S.; Sir William Gull, Bart., M.D., F.R.C.P., F.R.S.; Sir James Paget, Bart., F.R.S.** Lectures and other Contributions from the following Members of the Profession:

T. CLIFFORD ALLBUTT, M.D., Physician to the Leeds General Infirmary.—EFFECTS of OVERWORK and STRAIN upon the HEART and GREAT VESSELS.

W. MORRANT BAKER, F.R.C.S., Assistant-Surgeon and Lecturer on Physiology at St. Bartholomew's Hospital.

T. H. BARTLEET, F.R.C.S., Surgeon to the General Hospital, and Joint Professor of Physiology in Queen's College, Birmingham.—CLINICAL LECTURE on TWO CASES of LIGATURE of the FEMORAL ARTERY.

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CHARLES J. B. WILLIAMS, M.D., F.R.S., Senior Consulting Physician to the Brompton Hospital, formerly Professor of Medicine in London University College.—CASES ILLUSTRATING the PATHOLOGY, TREATMENT, and PROGNOSIS of DISEASES of the HEART.

CLINICAL LECTURE

ON

CHRONIC BRIGHT'S DISEASE, WITH CONTRACTED KIDNEY

(ARTERIO-CAPILLARY FIBROSIS).*

Delivered at Guy's Hospital, June 6th, 1872.

BY SIR WILLIAM GULL, BART., M.D., D.C.L.,
Physician Extraordinary to the Queen; Consulting Physician to Guy's Hospital.

[*From Notes by* MR. HENRY CLARKE.]

IT is the facts of the early stage of the disease in some cases which amply demonstrate the insignificant part which the morbid state of the kidney, when present at this stage, may then play. I repeat the early stage in some cases; for a further and greater difficulty in the due appreciation of this morbid state arises from the fact that the fibroid changes often come on early, and advance far in the kidneys, before other parts are very much affected. Still it is to be remarked that when this is so the renal change is of precisely the same nature, and has the same seat, so far as the several tissues are concerned, as when it occurs early in the capillaries elsewhere. That is, I ought to add, if the disease be the one under discussion; since, as I have before stated, there is a local as well as a constitutional fibroid change of the kidneys. And this brings me to the most important confirmatory fact, showing that mere renal destruction does not produce the state we are discussing. Hitherto it has been assumed, and generally admitted, that chronic Bright's disease, with contracted kidney, has always essentially a local origin, and is limited to the kidney in its beginnings, and that the changes in the heart and arterial system are the natural and proper sequelæ of imperfectly depurated blood. Dr. Bright says, speaking of the changes in the heart: "The most ready explanation appears to be that the quality of the blood is altered by the kidney disease. The blood in consequence affects the minute and capillary circulation so as to render greater action necessary to force it through the vascular system." This explanation has been most generally accepted since Bright's time. Dr. George Johnson, to whom we are indebted for much valuable information on renal pathology, fully endorses this opinion, and maintains that there exists a corresponding hypertrophy of the muscular coats of the capillaries compensatory of the cardiac hypertrophy, which acts as a stopcock on the minuter vessels to hinder the afflux of the unwholesome blood to the tissues.

I shall presently have to speak of this change in the smaller arteries (arterioles) and capillaries, and to assert that probably they are not hypertrophied, and that the physiological purpose here mentioned is not founded in fact. But first, as to the effect of imperfectly depurated blood—uræmia—on the heart. It seems to have been too readily assumed, in accordance with an experiment by the late Dr. John Reid, which showed that during asphyxia there is an increased pressure on the arterial walls, that a similar state of arterial tension occurs if the blood be imperfectly depurated by the kidneys, and that, this state of tension being continued, hypertrophy of the heart is the result. But is the effect of blood imperfectly depurated by the kidneys that which is thus asserted? Dr. Wilks mentions that the heart is free from hypertrophy in many cases of large white kidney. Dr. Dickinson says that simple hypertrophy of the left ventricle is rarely associated with any form of renal disease, except granular degeneration.

Dr. Grainger Stewart found the heart hypertrophied in only about four per cent. of the cases of lardaceous disease of the kidney. To these facts might be added others of a similar kind, such as scrofulous and cystic degeneration of the kidneys. Many of these forms of renal disease are slow in their progress and destructive of the renal function, and thay often occur at that period of life when hypertrophy would be readily produced to meet any impediment to the systemic circulation, and yet it does not occur.

A full consideration of all the circumstances makes it, in fact, more than doubtful whether mere defective renal excretion is a sufficient cause of cardiac hypertrophy. It may, perhaps, be objected that the hypertrophy may still depend upon some particular form of renal degeneration. In this, Dr. Sutton and myself are disposed entirely to concur, but not in the sense generally admitted. It is, we believe, when the fibroid change in the kidneys is part and parcel of a fibroid change in the capillaries of the body generally, that the cardiac hypertrophy occurs. Though associated with the renal disease, the hypertrophy is not produced by it. To prove how little mere fibroid atrophy of the kidneys, when a local affection, can produce the cardiac and other changes usually attributed to it, I might quote cases of such change in the kidneys in young subjects, in whom, however, after death, the heart was not thickened. I might refer to cases also given me by my friend Dr. Moxon; but I prefer on the present occasion to draw attention to one of such cases recorded by Dr. Murchison in the *Transactions of the Pathological Society*, vol. xxii. And I do this with the more confidence, because in all its important details it corresponds with what I have myself observed to occur from time to time in young subjects of either sex, and is not brought forward by Dr. Murchison in reference to this subject at all.

Walter F., aged 18, was admitted into Middlesex Hospital May 9th, and died May 13th, 1871. His father, mother, brother, and sister were alive and well. There had been no more in the family. Ten days before admission to the hospital he was seized rather suddenly with pain at the pit of the stomach, palpitations, and dyspnœa on exertion. Two hours previously he had carried a heavy tray of plates fifty yards, and had experienced no inconvenience at the time, though he attributed the attack to this cause. After this he lost appetite, and died on the 13th of the month, four days after admission. The body was well-nourished, and showed no signs of chronic disease, and he sank apparently from uræmia. The urine drawn off by a catheter on the day of his admission was limpid and colourless like water. Its specific gravity was 1007. It contained phosphates, and a decided though small trace of albumen. The apex of the heart beat between the fifth and sixth ribs rather tumultuously; the transverse dulness did not exceed an inch and three quarters. On a *post mortem* examination the "*heart and blood-vessels were healthy.*" "The only organs diseased," says Dr. Murchison, "were the kidneys, both of which were extremely small; the right weighing one ounce and a quarter, and the left three quarters of an ounce. On section, they had an uniform, pale, firm, tissue, which, on microscopic examination, showed very much the same characters as those of an ordinary contracted granular kidney."

I desire to show from this case, as I could from others of a similar kind, that in young subjects, renal degeneration from local fibroid changes in the kidney may lead to a fatal issue through defective excretion, without any hypertrophy of the heart being produced. If defective renal excretion alone led to arterial tension, as supposed, it is highly probable that, if it occurred in a young subject, in whom the nutritive conditions are active, it would, *à fortiori*, lead to cardiac hypertrophy. It may be objected, that the course of the case was too short for this result; but Dr. Murchison says, "Whatever view be taken of the renal lesion, it is quite clear that it had existed a long time prior to death." It would thus appear that fibroid renal disease alone is not a sufficient cause of cardiac hypertrophy. In the case here recorded, the pale and light urine was indicative of extreme renal degeneration. The blood was so imperfectly depurated as to cause a fatal issue. The course of the case must have been chronic; and yet the heart was entirely free from hypertrophy. But whilst, on the one hand, the heart may remain free from hypertrophy, in the long continued presence of blood so imperfectly depurated by the kidneys as at length to become fatal; so, on the other hand, daily experience shows that, at the period of life when the general fibroid cachexia is most common, cardiac hypertrophy begins and advances to its extreme limits, whilst the morbid changes in the kidney are indistinct or early; the kidneys being no more than coarsely granular, if obviously affected at all. In illustration, I might direct attention to the frequent occurrence of death by ingravescent apoplexy, at the age of from forty-five to fifty years, where the left ventricle of the heart is often extremely thickened, but the kidneys still unaffected, or, in the early stage of fibroid change, coarsely granular.

The observations which my friend Dr. Sutton has made upon the arterioles and capillaries, afford evidence that in this form of Bright's disease there is a more or less general alteration of the smaller arteries (arterioles) and capillaries throughout the body. To begin with the kidneys themselves, it would appear, in accordance with the views of many other observers, among whom I ought chiefly to name Dr. Dickinson, that the morbid change alluded to begins in the intertubular tissues, and principally in and around the smaller arteries and capillaries. The vascular coats are altered and thickened by the formation of a fibroid or hyalin-fibroid substance. This change affects the tunica

* Concluded from page 674 of last number.

intima and the external tunic of the vessels, whilst the muscular coat presents various appearances.

Dr. George Johnson has expressed the opinion that the alteration in the muscular coat is simply one of hypertrophy, and is due to a continued stimulus in the vessels to meet the increased action of the heart, according to the views above quoted. Dr. Beale, who has referred to this matter, thinks, with ourselves, that the thickening of the vessels has been too hastily assumed to be one of hypertrophy. Dr. Beale's views on this part of the subject—I mean as regards the vascular changes in the kidneys—are entirely in accordance with what has been seen both by Dr. Sutton and myself. We have found the muscular nuclei often indistinct, and in some cases hardly to be recognised; and, although there may be an appearance of hypertrophy in some parts of a vessel, it is, as Dr. Beale states, associated with great change and degeneration of the normal tissue in adjacent parts. In confirmation of this, Dr. Beale goes on to say (Dr. Beale *On Kidney-Diseases*, pages 71-72): "The new tissue added is completely destitute of the properties characteristic of a healthy structure. It is true that we speak of *hypertrophy* of the muscular coat of the intestine and of the bladder, although the tissue may have lost all contractile power; but it is obvious that the word *hypertrophy* is inapplicable, and ought to be restricted to those cases in which there is not only increased bulk but an increased development of a tissue without impairment of function. In *hypertrophy* of the heart and of the muscles of the limbs, there is increased formation of healthy muscular tissue, and a corresponding increase of muscular power; but in the case of these thickened arteries, thickened bladder, intestine, etc., there is an increase of substance depending upon the formation of an abnormal tissue with impaired action or *loss of healthy function* altogether. In the case of the thickened arterial coats there is an increased bulk with altered structure, not simply increased bulk without change in structure (hypertrophy). Careful observation leads me to remark, in the first place, that the muscular fibre-cells are much less distinct than in the normal state. The oval nuclei are to be readily distinguished, and are often increased in size and number, but the contractile tissue has degenerated into mere fibrous tissue, which possesses no contractile power whatever. Secondly, the connective tissue external to the muscular fibre-cells is often enormously thickened, and all indications of the delicate nerve-fibres, which ramify in this situation in health, are lost. Thirdly, the calibre of the small arteries is considerably reduced, partly perhaps from deposit taking place internal to and amongst the muscular fibre-cells; partly to the reduced quantity of blood traversing them, but mainly to the increased deposition of new material externally in what was the areolar coat of the vessel."

So far, therefore, as the vascular morbid changes in the kidney go, there is some unanimity amongst observers as to their character, and there is further some agreement as to their being primary and not secondary to morbid changes in the secreting epithelium, as was supposed by Dr. Bright, and is now maintained by Dr. G. Johnson. The early change in the renal epithelium, upon which so much stress has been laid, appears to be largely, if not entirely, due to passive transudation from the vessels, in the act of dying, since similar or even identical appearances are common in the renal epithelium in kidneys otherwise healthy. It is certainly by no means confined to Bright's disease; and it is usual to find it in kidneys which present no signs of lesion, except merely mechanical venous congestion.

We believe that the changes in the secreting epithelium will be found to be secondary to the intertubular changes around the vessels, and not, as Dr. G. Johnson believes, primary and essential. This view is confirmed by the condition of the capillaries in other organs. In the lungs, in the stomach, in the skin, in the spleen, in the heart, in the retina, and in the membranes of the brain, the arterioles and capillaries have been found in an abnormal state, from a formation of fibroid or hyalin-fibroid substance similar to that which occurs in the arterioles of the kidney. This morbid change in the vascular system, more or less throughout the body, varies much, however, in different cases, both as to its prevailing extent in any organ, and as to the organ primarily or chiefly affected by it. In some cases, and in probably the great majority, the kidneys are much altered, whilst the heart is at the same time hypertrophied, and the minute arteries and capillaries are proportionately thickened. In others the kidneys may be but little affected, whilst the heart is much hypertrophied, the systemic arteries and capillaries being at the same time thickened by fibroid change.

It is this wide-spread change in the vessels, together with a tendency to atrophy of the surrounding structures, which constitutes, we believe, the essential pathology of "chronic Bright's disease with contracted kidney."

It is a change, as before remarked, which occurs chiefly at or after the middle period of life. And yet the age of a patient is not commonly to be estimated by years. Hereditary predisposition, habits of life, and other circumstances which may lower the vitality of the tissues may induce at a much earlier period than forty-five conditions which do not usually supervene till many years later.

The conclusions at which Dr. Sutton and myself have arrived, are briefly these. 1. That there is a diseased state coming on about the middle period of life, which is characterised by a morbid formation of fibroid or hyalin-fibroid tissue in the arterioles and capillaries. 2. That this is accompanied with atrophy of the adjacent tissues in varying degrees. 3. That this morbid change commonly begins in the kidneys, but may begin primarily in other organs. 4. That the contraction and atrophy of the kidneys is not a cause of the disease, but only part and parcel of the general morbid state. 5. That hypertrophy of the heart is due to changes in the arterioles and capillaries, whereby their elasticity is diminished and so the blood retarded. It is not due to a morbid condition of the blood itself. 6. That the blood may be fatally affected by disease of the kidneys, without producing any change in the heart, provided the morbid condition of the vessels alluded to is absent. 7. That the causes which lead to these vascular changes are not yet fully elucidated. 8. That they have an alliance with senile conditions, though probably they are in their nature distinct.

If we turn to the therapeutical bearings of this subject, the discussion of its true pathology does not lessen in importance. At the present time there is a dominant idea in respect of chronic Bright's disease with contracted kidney, that the various functional disorders and lesions which occur in its course are chiefly, if not entirely, connected with a *materies morbi* in the blood, to which such disorders and lesions are chiefly referrible. The therapeutics of the day are largely directed according to this idea. Like most theories respecting the *materies morbi* of different diseases, whether we regard the elimination of the poison of cholera, the neutralisation of an acid in the blood in rheumatism, the destruction of it by colchicum in gout, or the antidote to some septic poison in fever, the theory that all or most of the symptoms in chronic Bright's disease are due to uræmia is frequently fraught with dangerous and destructive effects in practice.

I call vividly to mind the unhappy results of treatment so directed; the vapour-baths and antimonials of former times for eliminating through the skin; the compound jalap powder and elaterium, to call forth the vicarious functions of the intestinal mucous membrane, *et cætera similia*—such or similar treatment tended no doubt to exhaust the already failing nutritive powers.

Although, in respect of the uræmic state, the faulty condition of the blood and its treatment by eliminants cannot be neglected, still it must be admitted that there is an important distinction between the uræmic state and its consequents, and that general fibroid cachexia (?), which exhibits itself in the arterioles and capillaries of the different organs, as now under discussion. The two may no doubt be combined, and, indeed, are often combined, in the same individual; but still, for therapeutic purposes, it is of no small importance to the sick man that as exact a perception as possible of the distinction here insisted on should be acquired.

Whilst we cannot leave out of consideration the changes in the blood, neither can we safely forget that there are important antecedent and concomitant tissue-changes which are independent of mere uræmia.

I have not time fully to discuss, even if it were my duty to do so on this occasion, all the clinical bearings of this subject. My colleagues, your present teachers, are as fully alive to the necessity of extending our views on this subject as I myself can be. They will, I am sure, tell you, that many of the diseases of the brain, of the lungs, of the heart, and of the stomach, are associated with, and form part and parcel of, this great malady. When treating of apoplexy, they will say that, over and above the cerebral affections which are due to uræmia, and which were first of all so well described in this place by my late colleague, Dr. Addison, the brain-tissue is liable to subacute or chronic lesion, from disease of its capillary vessels: that acute pneumonia, or bronchitis, at the period of life of which I have spoken, is often due to already commencing vascular disease: that dyspepsia, and especially the so-called gouty dyspepsia, is not the result of a *materies morbi* floating in the blood, but of a subacute or chronic degeneration of the mucous tissue.

Here, as elsewhere, in the therapeutics of disease, the limitation of our thoughts to the conditions of the moment, or to the special organ affected, cannot but be productive of either fruitless or dangerous practice. It is always dangerous to rest in a narrow pathology; and I believe that to be a narrow pathology which is satisfied with what you now see before me on this table. In this glass you see a much hypertrophied heart, and a very contracted kidney. This specimen is classical. It was, I believe, put up under Dr. Bright's own direction, and with a view of showing that the wasting of the kidney is the cause of the

thickening of the heart. I cannot but look upon it with veneration, but not with conviction. I think, with all deference to so great an authority, that the systemic capillaries, and, had it been possible, the entire man, should have been included in this vase, together with the heart and the kidneys; and then we should have had, I believe, a truer view of the causation of the cardiac hypertrophy, and of the disease of the kidney.

HIPPOCRATES: HIS LIFE AND WRITINGS.

An Inaugural Address delivered before the Royal Medical Society of Edinburgh on the 8th of November, 1872.*

By J. WARBURTON BEGBIE, M.D., F.R.C.P.Ed.

I SHALL now quote rapidly a few of the Aphoristic statements from the different sections of this book: there are in all seven. "Ubi somnus delirium sedat, bonum est": When sleep puts an end to delirium it is a good symptom." "Non satietas, non fames neque iliud quicquam bonum est quod naturæ modum excedat." "Neither repletion nor fasting nor anything else is good when it exceeds what is natural." The first of these affords a good example of the *observation* of Hippocrates, while the simple wisdom displayed in the latter commends the aphorism to our judgment. Very many subjects of importance in symptomatology, in prognosis and therapeutics, with but little attention to order or arrangement, are treated of in this section. "Ubi fames non opportet laborare:" "When hungry, undertake no laborious duty." A very important subject is handled in the third section chiefly; namely, the temperature and general character of the seasons, and the relation of prevailing diseases to these. "Hieme vero Pleuritides, Peripneumoniæ, Lethargi, Gravedines, Raucedines, Tusses, Dolores Pectorum, Lumborum, Vertigines, Siderationes" (apoplexies). Several of the aphorisms in this section relate to the alvine discharges, particularly to stools characterised by the presence of black bile and blood. "Dysenteria si ab atrâ bili inceperit lethalis est." Of dysentery arising in the same way, Galen writes in at least two places; referring, moreover, to the opinion thus expressed by Hippocrates: "Dysenteriam siquidam quæ ab atrâ bili incipit, mortiferum pronunciat Hippocrates;" and again, "Unde dysenteria si ab atrâ bili incipit lethalis est ut inquit Hippocrates." Section fifth contains chiefly diagnostic and prognostic rules in various maladies. The disease called epilepsy (in Greek, "ἐπίληψις" or "ἐπιληψία", a seizure) is by Latin writers styled "Morbus Comitialis", because its occurrence on the day of the Comitia or assembly of the people broke up the meeting (the disease being considered as "divine", a special infliction of the offended god). "Quibuscunque morbi comitiales ante pubertatem fiunt transmutationem habent. Quibuscunque vero viginti quinque annos natis fiunt hi plerumque commoriuntur." A reference to the text-books on medicine, or an appeal to the experience of medical men who have seen much of this sad disease, will satisfy you of the truth of this remark. With the changes which the system undergoes at puberty, epilepsy is sometimes not unfrequently indeed overcome. After twenty-five years of age, the prognosis in this disease is much more unfavourable. The following aphorism requires little or no comment. "In persons who cough up frothy blood, the discharge of it comes from the lungs." The presence of bubbles of air in expectorated blood may serve to distinguish its origin from the blood of a hæmatemesis. "Diarrhœa attacking a person affected with phthisis is a mortal sign." How very commonly in our day, is diarrhœa one of the last symptoms—how often, indeed, is the colliquative diarrhœa the fatal symptom—in this disease. "If a woman with child be bled, she will have an abortion; and this will be the more likely to happen, the larger the fœtus." That a degree of more than ordinary caution is required in drawing blood from the arm of a pregnant woman who suffers from an inflammation, even the most heroic phlebotomist will readily admit. The too strict notion of the Hippocratic school on this head was, however, overturned before the time of Celsus—that is, in the earliest years of the first Christian century. We find Celsus, in his discussion of bloodletting as a remedy, after referring to the old idea as expressed in the Hippocratic precept, which he also combats, thus concluding: "At firmus puer, et robustus senex, et *gravida mulier* valens tuto sic curantur."

"Hæmoptysis in a woman is removed by an eruption of the menses."

* Concluded from page 677 of last number.

"In a woman where there is a stoppage of the menses, a discharge of blood from the nose is good." There are some quaint and curious aphorisms scattered throughout the book. The forty-second is as follows. "A woman with child, if it be a male, has a good colour; but if a female, she has a bad colour.'—a diagnostic rule upon which I scarcely think our learned friend Dr. Matthews Duncan would depend, but which, in justice to Hippocrates, it is right to remember, still enjoys the confidence of women in different parts of the country, and which Ambrose Paré, the distinguished French surgeon in the middle of the sixteenth century, approvingly quotes.

The *sixth* section of the Aphorisms relates principally to a class of cases which, in the ancient system of prognostics, were called "Supervenientia"—literally, a disease or symptom supervening on a previously existing disease. But, besides these, there are many other statements relating to subjects of great practical value; for example: "In dropsical persons, ulcers forming on the body are not easily healed." "It is not a good sign for an erysipelas spreading outwardly to be determined inwards; but for the disease to be determined outwards from within is good." "Persons are most apt to be attacked with apoplexy between the ages of forty and sixty"—a fact which may be held as settled by modern statistical inquiry, and which the investigations of Rochoux more especially have satisfactorily explained. "We must look to the urinary secretions, whether they resemble those of persons in health." The attention paid by Hippocrates to the condition of the urine in disease was very great; and, in the course of his writings, many valuable and suggestive remarks are made upon it. He had noticed the fact of bubbles of air resting long on the surface of some limpid urines, and had connected such urine with intractable disease of the kidneys—a really wonderful generalisation. If, gentlemen, you agitate albuminous urine in a glass vessel, and then allow it to repose, you will find the froth remaining on the surface of such urine for a lengthened period; while it speedily disappears from non-albuminous urine which has been similarly treated. I venture to say that no nearer approach was made to the great discovery of Dr. Bright than that of Hippocrates, if we exclude the recognition of albumen in the urine by the application of a high temperature; and that was only established by Blackall at the commencement of the present century.

The last aphorism in the whole book is a very remarkable one. Its authenticity has, however, been questioned. "What diseases medicine does not cure, iron (the knife) cures; those which iron cannot cure, fire (the cautery) cures; and those which fire cannot cure are incurable."

Passing from the book of Aphorisms, let me observe that one of the most instructive and interesting of the whole Hippocratic collection is that entitled *On Air, Waters, and Places* (Περὶ Ἀέρων, Ὑδάτων, καὶ Τόπων), *De Aeribus, Aquis, Locis*. The perusal of this work reveals the fact that, in regard to the effects which might be attributed to atmospheric changes—to coldness, heat, dryness, and moisture, the direction of the winds, the quality of the waters used by man, and the situations for the dwellings of the people—Hippocrates paid the greatest attention, counting such subjects of extreme intererest, and specially deserving the attention of the physician. "Whoever wishes to investigate medicine properly," says he, "should proceed thus: in the first place, consider the seasons of the year, and what effects each of them produces; for they are not all alike, but differ much from one another in regard to their changes; then the winds, the hot and cold, especially such as are common to all countries, and such as are peculiar to certain localities. We must also consider the qualities of the waters; for, as they differ from one another in taste and weight, so also do they differ much in their qualities. In the same manner, when one comes into a city to which he is a stranger, he ought to consider its situation, how it lies as to the winds and as to the rising sun; for its influence is not the same, whether it lies to the north or to the south, to the rising or setting sun. These things one ought to consider most attentively; and concerning the waters which the inhabitants use, whether they be marshy and soft, or hard and running from rocky situations; and then if saltish and unfit for use in cooking; and the general nature of the ground, whether it is naked and deficient in water, or wooded and well watered; and whether the city lies in a hollow confined situation, or is elevated and cold; and the mode in which the inhabitants live, and what are their pursuits; whether they are fond of eating and drinking to excess, and given to indolence, or are fond of exercise and labour, and not given to excess in eating and drinking." But a few years ago, gentlemen, it might have been argued that a work treating of such subjects as are mentioned in the passage I have quoted, little concerned us as physicians or students of medicine; but at the present day, when so large a share of professional attention is given to sanitary economics, and now that public hygiene is rapidly assuming the dignity of a distinct and important branch of human knowledge, I feel sure you will

agree with me in thinking that the subjects which Hippocrates discusses in this work are eminently deserving the attention of medical men; while the circumstance of his having devoted a very considerable amount of time and study to their consideration is just another proof of how fitting he is in many things to be our recognised instructor and guide. The points to which the author directs attention in this treatise are four in number, and may be summed up as follows. 1. He endeavours to determine the influence which the situation of towns, in so far as their exposure to the sun and winds is concerned, has upon the maintenance of health and the production of diseases. 2. He examines the properties and essential qualities of waters, good or bad. 3. He endeavours to signalise the diseases which prevail according to seasons, and according to the succession in which these occur. 4. He contrasts Europe and Asia, and attributes the distinguishing physical and moral characteristics of their inhabitants to differences of country and climate. It is remarkable, that in the pages of Aristotle, who was well acquainted with the writings of Hippocrates, a reference of some length exists to the treatise we are now considering—of such striking resemblance, indeed, that M. Littré, the learned translator of the works of Hippocrates into French, terms it "un véritable résumé de ce traité". This circumstance of itself bears strong testimony to the authenticity of the treatise. After giving an extract from the writings of Aristotle, M. Littré concludes with the following remark: "We are disposed to believe that Aristotle had before him at the time the work "Περὶ Ἀέρων, Ὑδάτων, Τόπων", when he wrote the passage referred to.

Passing now to a very brief notice of another of the genuine works of Hippocrates, I select the one entitled Περὶ τῶν ἐν Κεφαλῇ Τρωμάτων, *De Capitis Vulneribus, On Wounds or Injuries of the Head.* By a perusal of this treatise, we are enabled to judge of the extent to which its author had carried the study of anatomy. It is true that Galen attributes to the Father of Medicine the invention of scientific anatomy, and even speaks of the Asclepiadæ as having been instructed in the art; facts for the support of which he adduces no good grounds, and which, with the light we now possess, limited as that is, we cannot accept. Human bodies, there is every reason to believe, had not been dissected in the time of Hippocrates, notwithstanding the tradition mentioned by Pausanias (the traveller) that Hippocrates had presented to the temple of Apollo at Delphi a skeleton, or rather the corpse, of a man so extremely attenuated that nothing but the bones with a thin covering of flesh remained. Still, many of the writings in the Hippocratic collection, and this, of all his genuine works, attest the fact that the Father of Medicine seized every opportunity to examine the human body, and more especially the bones. It is evident, even to the superficial reader, that the osteology of Hippocrates surpasses immeasurably every other part of his anatomy. Of the muscles he had formed a very imperfect notion; he speaks always of "σὰρξ," or in the plural "σὰρκες," flesh. No distinction was drawn by him, nor indeed for a long time after his era, between arteries and veins, both being included under the term φλὲψ, φλεβὲς; while the word "ἀρτηρία," artery, as its name denotes, was applied alone to the trachea or windpipe. Still less was the anatomy of the nervous system understood by Hippocrates; he calls without distinction τόνος or τόνοι, literally bands, or νεῦρον, νευρὰ, the ligaments and nerves. He attributes motion to the white cords and tendons, without drawing any distinction between nerves and tendons. The blood he knew to nourish the body, and he further regarded it as the source of heat. We find a description in the Hippocratic writings, vague indeed, yet still capable of being understood, of the lungs, heart, large blood-vessels, stomach, liver, ureters, and bladder. Indeed, it surprises us how much was known, when we reflect that the only possible sources from which Hippocrates could receive anatomical knowledge were the dissection of the lower animals (chiefly dogs and monkeys), and the inspection of the cavities of the human body in cases of persons who had been wounded by accident, or otherwise met violent deaths. When describing the cranial sutures, as he does in this treatise, Hippocrates points out that a mistake may possibly occur in distinguishing between sutures and fractures or cracks in the bones, and he acknowledges that he himself fell into error in so doing. It was the confession of this mistake by Hippocrates which led Celsus, in a most eloquent passage, to express the admiration he entertained for his character. "A suturis se deceptum esse, Hippocrates memoriæ prodidit: more scilicet magnorum virorum et fiduciam magnarum rerum habentium"; "for, continues Celsus, "little minds possessed of nothing will suffer nothing to be lost: an ingenuous confession is expected of a great genius, who has enough, and more than sufficient, to ensure for him esteem; and very specially is such confession commendable in the practice of an useful art like medicine, which is handed down to posterity for their benefit, that they may not be deceived in the same way as another before them has been. Regard for the memory of a great professor," concludes Celsus, "has led me into this digression." We scarcely know, gentlemen, whether most to admire the spirit which prompted the illustrious Roman author thus to laud the magnanimous action of the Father of Medicine, or the excellence of the advice which he makes the relation of the circumstance to convey. You may, gentlemen, rest assured that the more you study the character of Hippocrates, as unfolded in his writings, the more will you feel disposed to agree with the testimony of the learned Macrobius—"Hippocrates qui tam fallere quam falli nescit"; "He knew not how to deceive or to be deceived."

I must, however, hasten to a close by noticing very shortly the other genuine works of Hippocrates. The treatise—Περὶ Διαίτης Ὀξέων, *De Ratione Victûs in Morbis Acutis, Regimen in Acute Diseases*, is occupied mainly with two important questions: 1. The proper distinction of diseases from one another; 2. The rules by which the regimen in acute diseases ought to be regulated. Diagnosis and treatment, then, are the subjects discussed; and many most interesting passages occur under both sections. Another work is entitled Προγνωστικὸν, *Prænotiones, Prognostics.* In most diseases, but more especially in febrile complaints, it was the custom of Hippocrates to pay the most minute attention to the appearance presented by the patient. He noted invariably the countenance, what expression it wore—the eyes, voice, gesture, movements of the invalid. In addition to these, he inspected the excretions, the stools, and urine; paid attention to the perspiration, and, if vomiting had occurred, to the matters vomited. The sputa were his constant care in diseases of the chest; and we know that he listened to the sounds of respiration, for we possess (in a less genuine treatise, Περὶ Νούσων) an excellent description of that method of physical exploration which still bears his name—the Hippocratic succussion. Sleep and wakefulness, appetite and thirst, and frame of mind of the patient he regarded; also the state of the tongue, and decubitus; and, finally, to which he attributed the greatest importance, days of crisis, critical days.

Carefully weighing the indications suggested by a consideration of all these signs, comparing them, and seldom interrupting the process of Nature in febrile diseases by the administration of strong remedies, Hippocrates was enabled to predict, with a degree of certainty, which to the minds of his countrymen appeared prophetic, the duration, crisis, and oftentimes the particular manner of termination in various diseases. How important, in his opinion, was the *prognosis* in disease, the opening sentences of the *Prænotiones* will satisfy you: "It appears to me a most excellent thing to cultivate prognosis, for, by foreseeing in the presence of the sick, and explaining the omissions of which patients have been guilty, he will be the more readily believed to be acquainted with the circumstances of the sick, so that men will have confidence to intrust themselves to such a physician; and he will manage the cure best who has foreseen, from the present state of matters, what is to happen. For it is impossible to make all the sick well: this, indeed, would have been better than to foretell what is going to happen; but since men do die—some even before calling the physician, and some immediately after calling him, having lived perhaps only one day or a little longer, and before the physician could bring his art to counteract the disease—it therefore becomes necessary to know the nature of such affections, how far they are above the powers of the constitution. Thus", he concludes, "a man will be the more esteemed to be a good physician, for he will be able to treat those aright who can be saved, from having long anticipated everything, and by seeing and announcing beforehand, those who will live and those who will die, he will thus escape blame—'a culpâ exors fuit'." I need scarcely offer any comment on this passage. The truth and vast importance of the view which Hippocrates inculcates are self-evident; and that physician must have seen little of disease and of its treatment who will be prepared to deny that a careful prognosis, in so far as patient and patient's friends are concerned, is of the utmost consequence, while the merit that is likely to accrue in the event of a correct prognosis cannot fail to be gratifying to the physician. "Hæc ad futura prænoscenda peritissimus erit", says Galen.

The last of the genuine writings of Hippocrates is styled "Ἐπιδημίων", *Popularium, Epidemics.* The first and third books of the Epidemics have been almost universally considered as the undoubtedly genuine writings of Hippocrates. The term "epidemics" was understood by the ancient physicians as applying to any disease or diseases which attacked a number of individuals in a limited locality at any particular time—in fact, they had very much the same understanding about epidemic diseases as we have now. Nevertheless, you must be prepared, in studying the Epidemics of Hippocrates, to find details of cases, many of the greatest interest, which can in no sense be regarded as examples of epidemic maladies. In these books we find, moreover, surgical cases, fragments of anatomical descriptions, philosophical speculations, statements as to empirical remedies, and general reflections on various sub-

jects. They have been styled "Adversaria" or memorandum books—in mercantile language, "day-books", in which are collected isolated facts and detached observations to serve as materials for more elaborate and finished works on professional subjects.

In this work we have an exposition of the pathological doctrines of Hippocrates. We trace to him the origin of that humoral pathology, or doctrine of the humours, which, as the prevailing creed of all the medical sects for more than twenty centuries, kept its ground in Europe. In blood, phlegm, yellow bile, and black bile—four fluids or humours of the body—the primary seat of disease was supposed by the Father of Medicine to exist, and health was the result of their due combination, or *crasis*, as it was called. The term *coction* was applied to the changes in quality undergone by the humours in the progress of a disease: it was the indication of returning health, as preparing the way for the expulsion of the morbid matter, or *crisis*. Then, lastly, and in his estimation all important, these crises had a tendency to recur at stated periods, hence called critical days. As respects practice, a careful consideration of his writings and of these books of the Epidemics in particular, enables us to judge how much Hippocrates entrusted to Nature—how fully he had recognised the principle of a "Vis Naturæ Medicatrix"; as he himself expresses it, "Our natures are the physicians of our diseases"—"Νούσων φύσιες ἰητροί". Dr. Greenhill, in a most instructive article contributed to Dr. William Smith's *Dictionary of Greek and Roman Biography*, thus sums up the medical practice of Hippocrates: "It consisted chiefly in watching the operation of nature, and in promoting the critical evacuations, so that attention to diet and regimen was the principal, and often the only, remedy that he employed. Several hundred substances have been enumerated, which were used medicinally, and the names of which are to be found in different parts of the Hippocratic collection. Of these, by far the greater portion belonged to the vegetable kingdom, as it would be in vain to look for any traces of chemistry in these early writings."

I have thus very briefly, and, I fear, very imperfectly, referred to the undoubtedly genuine writings of Hippocrates; and now, before concluding, desire to say a few words regarding a very short and most interesting work, considered by M. Littre, and certain other commentators, to have been also written by Hippocrates, I mean the piece entitled "Ὅρκος," "Jusjurandum," "The Oath." Of it Dr. Adams says, it is an interesting document, as exhibiting the practitioners of medicine in a very remote age, already formed into a regular corporation, bound by an oath to observe certain regulations, and having regular instructions and instructors in the art. The present piece would seem to be an indenture between a physician and his pupil; and it is most honourable to our profession in ancient times, that a document pertaining to it, instead of displaying a narrow-minded and exclusive selfishness, inculcates a generous line of conduct, and enjoins an observance of the laws of domestic morality. Here is the oath. "I swear by Apollo, the physician, and Æsculapius and Health and All Heal" (that is, by Hygeia and Panacea), "and all the gods and goddesses, that, according to my ability and judgment, I will keep this oath and this stipulation; to reckon him who taught me this art equally dear to me as my parents; to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this art, if they wish to learn it, without fee or stipulation." "Truly," writes a recent reviewer, "who does not remember, with some shame for our degenerate days, the recognition of relationship in the oath of Hippocrates." And, continues the oath, "that by example, precept, lecture, and every other mode of instruction, I will impart a knowledge of the art to my own sons and those of my teachers, and to disciples bound by stipulation and oath, according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicines to anyone if asked, nor suggest any such counsel; and, in like manner, I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practise my art. I will not cut any persons labouring under the stone, but will leave that to be done by men who are practitioners of this work; but, whatever house I enter, I will go in there for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and, further, from the seduction of females, or the enticing from service of males, whether freed men or slaves. Whatever in connexion with my professional practice, or not in connexion with it, I see or hear in the life of man, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated, may it be granted me to enjoy life and practice of the art, respected by all men, in all times; but, should I trespass and violate this oath, may the reverse be my lot."

As I have already mentioned, the authenticity of this noble piece has been called in question by several modern critics, but, on the other hand, it has been frequently cited as genuine in the works of ancient authors. M. Littre, who accepts the oath as genuine, mentions that M. Triller, a very distinguished scholar, who has devoted much attention to the Hippocratic writings, has pointed out a passage in Aristophanes, in which certain words of the Hippocratic oath, as well as the name of the Father of Medicine itself, are employed. We read in Aristophanes as follows: "*Mnesilochus loquitur*—I swear, if taken ill, to attempt my safety by all means in my power." *Euripides* remarks, "I swear by Ether, the heavens, the habitation of Jove." The former speaker again observes, "What better oath than the oath of Hippocrates." Euripides again replies, "Eh bien! I swear by all the gods." This is, indeed, important testimony to the authenticity of the oath. It would be difficult to suppose that another Hippocrates than the Father of Medicine was here alluded to; and, if such be the case, we have Aristophanes, who was the contemporary of Hippocrates, invoking the fraternity of Hippocrates, and, in that invocation, employing language similar to what occurs in the Hippocratic oath.

The most formidable objection, however, which has been brought against the genuineness of the oath relates to the allusion which it contains to the operation of lithotomy. The operation of cutting for the stone, it is contended, was not performed in so remote a period. This, however, appears to be a gratuitous assumption; and the real explanation of the reference in the Hippocratic oath to lithotomy is probably just this, that in ancient times the operation was never undertaken by the regular members of the profession, but was practised, as it still is in certain parts of Hindostan, and, according to good authority, till within a hundred and fifty years in Scotland, by non-professional persons. This, then, will satisfactorily account for our finding no detailed description of lithotomy in the pages of Hippocrates and Galen, although Celsus makes abundant reference to it as practised in his day.

And now, gentlemen, I must not presume any longer on your patience. There, of course, remains much which I might say to you about Hippocrates and his works, but time avails no longer. I trust that I have succeeded in pointing out to you how worthy and enlightened a model we have for imitation in the "Father of our Profession." To you, gentlemen, the members of the Royal Medical Society, who are associated together by an "obligation," which, if it be not so strict in its details as the Hippocratic oath, is equally binding, I return my warmest thanks for the pleasure to which, through your kindness, I have been called this evening. And, before ceasing, I would use the privilege which my present position affords me, of urging on all students of medicine, who have not as yet taken the "obligation," to lose no time in doing so. There is no old member of this society, I firmly believe, who does not look back—even although the retrospect be, as in my case, a long one—without feelings of gratitude, on the period of his more active connection with the "Royal Medical Society." For the sake of the present body of medical students, for the interests of the great Medical School in this city, I earnestly hope that the session, which we this evening inaugurate, may be a truly successful one.

Impediments to Micturition in Children.—At a recent meeting of the Medical Union in Vienna, Dr. Englisch described the following conditions as producing impediment to the flow of urine in children, and illustrated his remarks by preparations. 1. In many cases there is membranous occlusion of the external orifice of the urethra, extending generally some way into the canal. 2. The urethra may be obstructed by broad valves, with the free edge lying towards the bladder. They occur rarely in the penile portion of the urethra; more frequently at the caput gallinaginis. Similar valves are met with at the neck of the bladder and in the ureters. The retention of urine produced by them may be so great as to produce thickening of the bladder, and ultimate dilatation of the ureters and renal pelves and disease of the kidneys. 3. The orifice of the urethra or the canal itself may be the seat of stricture, the result of inflammation; or may be pressed on by tumours. 4. Cystic and polypous growths are causes of difficult micturition. The former may be the result of retained secretion (affecting Littre's glands in the female, and the sinus pocularis in the male), or new growths. The former always occur in the middle line, at the junction of the bulbous and spongy portions of the urethra. Dr. Englisch has found polypous growths only at the prostatic portion and the vesical orifice of the urethra. 6. Hyperplasia of the prostate is a very common cause of difficult micturition; it is no doubt congenital. 7. Difficulty of micturition may also be produced by other causes acting externally to the urethra. Thus ascites may give rise to inflammation of the cellular tissue of the pelvis, and to periurethritis.—*Wiener Med. Wochenschrift*, November 23rd, 1872.

CLINICAL LECTURE
ON
CHOREA, AND ITS TREATMENT.

Delivered October 28th, 1872.

By WILLOUGHBY FRANCIS WADE, F.R.C.P.Lond.,
Physician to the General Hospital, Birmingham.

We will pass on, then, to the consideration of the question, What is the best plan of treating ordinary cases? In the first place, knowing that some at least will get well if placed in suitable conditions, we have to say what conditions are suitable. Amongst the most important is a sufficiency of good, plain, wholesome food. Even more important than this, in my estimation, is rest in bed, which keeps the muscular and nervous systems in the greatest attainable repose, and thus prevents wear and tear; it also secures an uniform warm temperature. I prescribe two tablespoonfuls of compound decoction of aloes twice or thrice a day, as these patients are very often constipated; and an aloetic purgative is more likely than any other to bring away ascarides or joints of tapeworm, should any be present; and we know that worms seem to be sometimes the exciting cause of chorea. It is not desirable to produce much action on the bowels; and, to avoid this, it may be necessary to omit or diminish the medicine.

Under these circumstances, patients often begin to improve very soon, and in not a few of them the improvement is continuously progressive. When this is so, I act upon that greatest of therapeutic maxims, "Let well alone."

One word upon the way to ascertain whether they are improving or not. I often see cases of chorea that, so far as I can judge from my own observation, are stationary, whereas the nurse assures me that they are much better. The nurse is always right. She sees them continually throughout the day. I see them for a short time only; and my speaking to them produces emotional excitement, and enhances their movements. Occasionally the converse happens; the visit produces a sedative effect for the time, and the patient seems better, though not really so. This temporary sedation is commonly followed by increased agitation. These are not the only cases in which you may get valuable opinions from nurses; and my advice to you is, never to neglect this source of information; and do not be affronted if the nurse tell you that the patient is worse since you changed his medicine, or otherwise disparages your judgment. You need not, of course, take all that a nurse tells you for gospel, but must exercise your wits in sifting the chaff from the wheat. In our present case, I learned in this way the interesting fact that the man's involuntary movements are greater if he gets fatigued.

If the patient do not begin to improve in a few days, or if his improvement be not continuous, it is, in my opinion, needful to do something more. There are several drugs which enjoy a certain repute as controllers of choreic motions. The chief are preparations of zinc, of iron, and of arsenic. When I first came to this hospital, I found chorea commonly, if not invariably, treated with sulphate of zinc, and accordingly adopted it. I begin, then, under these circumstances, with two or three grains of sulphate of zinc in water three times a day. Many cases get on very well without augmentation of this dose; but I will not affirm with positiveness that in such cases the recovery is not spontaneous. In a good many cases, however, it is evident that this dose is insufficient. If that be apparent, I increase it, and determine the amount of increase upon principles which have, at all events, the merit of being definite. Sulphate of zinc is one of those drugs which produce distinct effects if given to a healthy person. In a sufficient dose, it causes vomiting; in a less one, nausea. There are others, such as arsenic, quinine, belladonna, etc., which have what is generally styled a physiological, but which would with greater accuracy be termed a pathological, action on the human body. Now it seems to me that we may reasonably lay down the following therapeutic axiom.

Drugs which have a physiological reaction have not had a fair trial unless they produce either

a. Diminution of the symptoms or disease for which they were given; or

b. Their recognised physiological action.

That is to say that, until they have produced their physiological action, they cannot be pronounced to be impotent to produce the intended curative effect. If the curative effect be produced, we have no desire to see any physiological effect; which, indeed, we shall probably be much better without.

With regard to sulphate of zinc, I have repeatedly found slight physiological effects; viz., nausea coincides with distinct therapeutical effects, and a smaller dose is in rebellious cases inoperative. For example, the patient improves only when each dose produces slight nausea; and when the stomach has become inured to that dose, as it will in a few days, improvement ceases, to recommence so soon as the dose has been augmented to a nauseating quantity. It is surprising what a large quantity is at times required to satisfy this very plain and practical test, as we shall see directly, when we come to examine into our present case.

I should have mentioned that the dose sometimes causes a spurious nausea, due, not to emetic action of the drug on the stomach, but to the fact that the dose is disagreeable to the palate. Before discovering this, I was much puzzled by a case where the nurse told me each dose produced nausea, and yet the symptoms did not yield, as they soon did to a suitable dose. In our present case, the patient, a man, is forty-five years old, and has been affected for twelve months. I have never seen a patient nearly so old as this, and I am not aware of any case in which simple chorea has commenced so late as forty-four; though cases are recorded of women in whom, commencing about forty, it had lasted seven or eight years, making them at the end of that time older than our patient. He has been all the time in comfortable circumstances, and had not lost weight before admission nor has he gained since; we are therefore entitled to assume that his improvement is not due merely to improved circumstances, but may fairly be attributed to medicine. Twelve months was quite long enough to leave the case to nature to cure if she could, but she could not. His general health was good. The disease commenced in his feet and gradually spread over his body, so that, on admission, his legs, arms, head, face, and tongue "danced," and had done so for many months. He was not confined to bed, as adults often rebel against such treatment, and I was anxious to keep him under observation; and I confess that it seemed to me more probable that it was a case of organic disease than of pure chorea, and that his chances of recovery were limited, for it is an undoubted fact that chorea may depend upon organic disease of the nervous centres.* He was ordered two grains of sulphate of zinc in water, one grain to be added to each dose day by day—*i. e.*, on the second day he took three grains for each dose, on the third day four grains, and so on. Day after day, day after day, no amendment. The first time the nurse said she thought him a little better, was on the day that each dose contained thirty grains. The dose was still augmented, till he took two drachms in one day. No nausea was excited. But the bowels having become relaxed, as I thought possibly from the drug, I reduced his daily allowance to one drachm, and in twenty-four hours the diarrhœa ceased. Improvement, which was at first most apparent in the parts latest attacked, still continued, and he is at the present time much improved, though still not well, and I am still inclined to the opinion that the case is probably one of organic disease. There is no sign or symptom of cardiac or arterial disease. Now, I have already said that, in my opinion, we may fairly connect the treatment and the improvement as cause and effect, and I think that so considerable a result in what may turn out to be a necessarily incurable case, in consequence of organic changes, speaks most strongly in favour of the efficacy of the treatment. There remains the question, Would a small dose have been equally efficacious with the large one? I think not; firstly, because I have seen many cases where a large dose was needed to produce any sensible or obvious effect upon the symptoms; secondly, because here no amelioration was discovered till the dose was, and for some little time had been, a considerable one. I should not have cared about the diarrhœa but for two reasons; one, because diarrhœa is a troublesome and unpleasant circumstance; the other, because it has been said that a continuance of large doses of sulphate of zinc may produce marasmus. If this be so, it is unwise to run the risk of such a result; and irritation of the mucous membrane of the intestines, such as diarrhœa indicates, may certainly so destroy the absorbent power of the intestines as to induce marasmus.

This case then, which is in many other respects so interesting, illustrates these four points.

1. Chorea does not always wear itself out and get well spontaneously.

2. Sulphate of zinc does exercise an influence over choreic movements.

3. The stomach and system at large will at times tolerate much larger doses of this drug than are commonly given.

4. Doses of unusual magnitude may be required before any curative influence is manifested.

* Concluded from page 679 of last number.

* Dr. J. W. Ogle, *Medico-Chirurgical Review*.

ON FIBROID DEGENERATION OF THE UTERUS, AND THE BEST WAY OF TREATING IT.*

By PROTHEROE SMITH, M.D.,
Physician to the Hospital for Women.

I MAKE no apology for choosing, as the subject of this paper, a disease the most common of all the morbid affections to which the uterus is liable. There is, perhaps, no pathological condition which has received greater attention of late years from gynæcologists than that known as fibroid disease of the uterus. Although generally recognised as forming numerically by far the largest portion of the morbid affections of the organ, fibroids of the uterine tissue present great varieties of situation, form, and relation to adjacent organs, and consequently the attendant physical signs and symptoms are proportionately manifold. This has probably led to the contrariety of opinion and difference of treatment which obstetric physicians have advocated. Notwithstanding, therefore, the recorded views, experiences, and conclusions which of late years have been published, we are indebted to the Editor of the BRITISH MEDICAL JOURNAL for collecting material to demonstrate that, although, since the disease was recognised clinically and pathologically, good observers have, one after the other, adduced evidence, and that apparently satisfactory, to prove the efficacy of certain remedies to alleviate and cure this malady, yet the therapeutics of the disease are still uncertain, and only tentative. With a view in some measure to aid the inquiry, "What is the best way of treating this malady?" I have ventured to offer this short paper to the Association, in the hope that it may provoke discussion, and elicit that attention on the part of pathologists and obstetric physicians which the extent and importance of the subject justly claim. Time would fail me here to do more than to suggest a closer insight into the true pathological condition which constitutes the disease under consideration, believing that, without such an investigation, any further plan for special medical treatment would be but an addition to the various and contradictory statements which have long given to the therapeutics of fibroid disease of the uterus an empirical character. Without, therefore, reviewing the results of the different plans hitherto generally pursued, I shall content myself with offering some remarks and cases in illustration of that treatment which I have usually adopted.

It was my intention to treat of the pathology of the disease at greater length, but the engrossing occupation which the profession in the metropolis demands at this season has prevented me from collecting material sufficient to warrant my making more than a few preliminary observations, which I hope may on a future occasion afford me an introduction to a more comprehensive essay on the precise nature of those abnormal transformations, enlargements, and indurations, which give the essential character to fibroid and other tumours of the uterus.

The disease is found intimately associated, and sometimes as it were intermingled, with the normal contractile tissue, which makes up the bulk of the organ in contradistinction to the soft tissue lining the uterus, and which gives rise to that vascular growth known as mucous polypus. While thus intercurrent with the contractile fibre-cells, the attendant symptoms, both local and general, may be explained by the irritation which is created, inducing a constant though generally ineffective effort on the part of the uterine contractile fibres to expel the offending matter. When such an effort is successful, the mass is either projected into the uterine cavity, covered only by the lining membrane, and becomes polypoid, when it is easily removed by ligature, *écraseur*, or scissors; or, if thrust through the contractile tissue, it is expelled outwardly, or, if formed by deposit in the cellular tissue directly beneath the peritoneum, it becomes a subperitoneal fibroid, where it only annoys by the effect of its bulk and weight on adjacent organs, when it can only be removed, if pedunculated, by an abdominal section, or, when implicating the uterine structure, by the extirpation of the whole of the uterus and appendages—an operation unjustifiable excepting in extreme cases, fraught as it is with much peril to life. When the disease is distinct from the normal structure, but sessile in form, it may often be successfully treated by incising and dilating the cervix and enucleating the mass, by removing it piecemeal with ligature or *écraseur*, etc.—a plan of treatment which I have adopted with complete success in several cases extending over a period of seven years.

In illustration of this mode of treatment I give the following case, mentioned in my lectures on "Primordial and other Causes of Uterine Displacements", and taken from my case-book of in-patients at the Hospital for Women, volume for 1865. I had twenty-eight years ago seen the practice of Récamier in Paris, but I had observed that the use of his instruments for enucleation was often followed by metritis and metrocellulitis. I had the privilege also of witnessing the late Sir James Simpson's attempt to remove a large fibroid, by separating it from its uterine attachments with the hand, etc., after incising and dilating the neck; but the ultimate result, though nearly successful in liberating the mass, was arrested by the death of the patient from pyæmia. These unfavourable instances for a long time deterred me from pursuing this mode of treatment; but, believing that the plan adopted by Récamier had failed in consequence of the injury done by the instruments employed, and that Simpson's case had not succeeded because disintegration of the tissue of the fibroid had resulted from its extensive separation from the structure which had supplied it with blood, I determined, should an opportunity occur, to try to obviate these evils by avoiding these two sources of mischief; and the following case shows how that was accomplished.

Mrs. M. A. T., aged 50, was admitted into the Hospital for Women May 3, 1865. She had had five labours and good recoveries, and one miscarriage at six months twelve years previously. She had good health till December 1862, when she had a flooding. Her periods lost their regularity, and she suffered from gushes of blood every three weeks. On admission, a hard mass, movable with the uterus, filled the hypogastric region. *Per vaginam*, at two inches from the vulva, a mass was felt filling the pelvic cavity. After some time, ergot produced expulsive pains, and the mass became rather lower. On December 20th, the mass began to protrude from the vulva. A ligature was applied, with Gooch's cannula, as high up as possible. On the 24th, a portion of the tumour came away with the ligature. On the 26th, the ligature was again applied. On the 30th, the ligature broke when tightened; and at 7 P.M. the mass came down, and was removed with the knife. Abdominally, the tumour then disappeared. On January 3rd, 1866, the ligature was again applied; and, on the the 10th, the ligature and a piece of the tumour came away. On the night of January 16th, the ligature came away, with more of the tumour. On February 12th, the ligature was again applied, and brought away a small portion of tumour. On the 24th, it was again applied round a large portion of the tumour. On March 1st, the ligature and a piece of the tumour came away, and the patient was discharged cured on March 7th.

In this instance the fibroid tumour occupied the whole pelvis, reaching up to the umbilicus; growing from the fundal portion, it carried the lining soft tissue of the uterus before it, presenting a mass apparently filling and obliterating the uterine cavity. On two occasions, however, Dr. Meadows introduced a sound two and a half inches through a small aperture in its centre, which might have been the remainder of the canal. A sense of great bearing down being constantly present, I gave ergot of rye to aid this effort of expulsion, and, finding the mass consequently lower, I, for the first time, formed the idea of endeavouring to remove the disease by aiding the spontaneous efforts to effect this purpose through the natural passage and outlet. By means of a vulsellum, having drawn down the tumour, and partially separated it from the uterine neck, I had no difficulty in strangulating a portion with a ligature, and, by tightening it daily, I removed a piece the size of a large orange. The continued employment of ergot brought the mass lower and lower, and, as I separated it from its attachments, I applied the ligatures, with Gooch's cannula, six times, until the abdominal tumour was felt to be level with the pelvis, and depressed, presenting, as my colleague Mr. Scott remarked, a condition of inversion of the fundus which deterred me from further operative measures. After a few days, the uterus recovered its normal form and position, and it was found that the whole of the fibroid had been removed. Mr. Pollock of St. George's Hospital (who saw the patient during these operations) suggested the employment of a weight to aid by traction the descent of the tumour, which was perforated by a cord. I found, however, that the structure was too friable, and that, moreover, the ergot with a bandage answered the purpose, whilst the slow process of removal by Gooch's cannula prevented the contraction of the os tincæ, so that there was no need of traction to bring down the tumour within easy reach of the ligature.

In other instances in which excessive hæmorrhage demanded it, and in which enucleation was impracticable, I have found incising the mass, with the uterine tissue embracing it, especially the cervical portion, productive of the happiest results. In some long standing cases, with flexion or retroversion of the fundus, continuous pressure, by means of a fixed intrauterine support, has been followed by reduction in bulk, and in some instances even by the entire disappearance of the tumour. Acting on this suggestion, and seeing that every natural cure, by polypus and exfoliation, was the result of contractile efforts, I have endeavoured, when beyond the aid of surgery, to treat these diseases by helping forward, medicinally or mechanically, the natural efforts for their cure—

* Read before the Midwifery Section at the Annual Meeting of the British Medical Association in Birmingham, August 1872.

viz., that of compression and expulsion ; the former, compression, diminishing the vascularity of the primary albuginous or sarcomatous state, and converting it into inert fibro-cartilaginous, cretaceous, or osseous matter, thus effecting that change in the disease from a soft erectile, easily congested or inflamed, and growing or active tissue, into that dense and more compact and less organised structure which is not so capable of congestion and inflammation. This condition constitutes its passive form, usually observed after the cessation of menstruation, when (following years of suffering, the consequences of uterine irritation, inducing hæmorrhages and sympathetic or reflex pains and distress) a state of good health often follows, interrupted only, as far as the fibroid is concerned, when by mechanical irritation it incommodes adjacent organs. Of all the means of relieving such secondary annoyances, parietal support is the most eligible, to procure which the "pelvic band" is by far the most effective means. Medicinally, ergot of rye with borax, the application of cold externally, by compress or otherwise, and *per vaginam* by douche, with mineral acids and astringents, the recumbent posture, the pelvis being kept above the level of the heart, and a high and dry situation, will be found amongst the most effective remedies. To aid expulsion there is nothing like ergot of rye and borax, taken in doses of from fifteen grains to thirty of the former to five of the latter. When enucleation of a large mass is attempted, the most dependent portion should be removed as soon as possible after it becomes detached from the uterine wall. This is most important, as, if it be left till the greater portion has become loosened from its attachments, there is danger of disintegration of the loosened tissue, and of consequent blood-poisoning.

To accomplish the enucleation of a large intramural fibroid, the cervix uteri, when it is required to expose the disease, should be incised laterally throughout its entire length on both sides ; after which it is easily dilated by sponge-tents, and by the fingers or hand, and the swelling may then be gradually peeled off from the walls of the uterus by repeated efforts, as the patient is able to bear it—always removing, by ligature or otherwise, from time to time, such portions of the disease as may come within reach. To do so, I prefer, as a rule, the ligature applied by Gooch's cannula to the *écraseur*, because during the process of separation there is always an attempt on the part of the womb to expel the disease, and at the same time to keep dilated and open the os tincæ and cervix, thereby rendering future operations more easy than when the piece is at once cut off and the remainder retires within the embrace of the uterus. When the chief bulk of the disease has been removed, the remaining portion is usually absorbed, and the cure is completed, as shown in the case above quoted.

Passing by the consideration of recurrent and fibrocystic disease, I would call attention to fibroid degeneration of the cervical portion of the uterus. This perhaps is, if not the most frequent, a very common form of the disease—often, I believe, mistaken for *élongement*, or utero-cervical areolar hyperplasia, simple induration, and even for carcinoma. The microscope, and a more attentive investigation of the subject, will, I think, confirm the conclusions to which observations extending over a period of thirty years now enable me to make the following brief and concluding remarks.

There is scarcely any condition of the uterus which is accompanied by more distressing symptoms and disorders than that under consideration. It may be shortly described as presenting usually an increase both in bulk and length of the cervix uteri, which becomes much firmer and often nodulated, the nodules being generally more indurated than the surrounding tissue ; the os is patulous, and one or both labia are everted, and the lining membrane congested, inflamed, and granular. With the speculum, the labia are in its early development seen to be injected, becoming afterwards, however, often pale and exsanguineous. The disease usually commences in the labial portion of the cervix, and subsequently implicates the deeper structures, extending at times throughout the whole length of the cervix, and in some instances is continuous with similar degenerations in the body and fundus; when so, there is usually considerable deformity, resulting from flexion and torsion of the organ.

The symptoms may be briefly described as rectal, vaginal, or vesical pains and irritation, bearing down, thick mucous leucorrhœa, weariness and aching in lumbar and sacral regions, and in the hips and thighs, with lameness of one leg, sympathetic pains in the dorsal region and scrobiculus cordis, nausea, and other dyspeptic derangements, with various nervous and hysterical affections. No general treatment that I am aware of gives permanent relief to this distressing malady. The entire removal, however, when practicable, of the diseased structure proves the truth of the foregoing pathological description, by the complete relief to the symptoms which usually follows the means which I here advocate for the cure of the disease.

When simply labial, it may be amputated by means of the *écraseur*, or destroyed by the actual cautery or bromine ; but I prefer and always employ potassa caustica for this purpose, whether the affection be superficial or deep-seated, for the following reasons.

It may be used with perfect impunity, and it gives comparatively little pain. It may be employed with such accuracy and precision as nothing but the scalpel otherwise can afford ; and, when proper caution is observed, it leaves no injurious consequences behind, as puckering and contractions of the adjacent vagina, etc.

It is impossible here to do more than very concisely to mention the *modus operandi* of this remedy and its results. By means of my expanding cylindrical speculum, the patient lying on her left side, I procure not only a more extensive view of the uterus than by other means, but the upper part only of the vagina being thereby expanded, a basin is, as it were, formed edgeways, which is filled with vinegar and water up to the exact line, as far as that on which you intend to operate, with the potassa caustica. In doing so, all risk of injury, by the melting and *débris* of the caustic, is obviated.

When the disease is of long standing and very hard, after one or two applications of the potassa caustica, its character is obvious. Contrasted with the surrounding red normal tissue, it is distinctly seen to be of a white colour (like that of white India-rubber or the fat of beef); relief from pain is often immediately felt after separation of the first slough, and this is, I believe, owing to the removal of the tissue investing the disease, which beforehand prevented it from being expelled, by the fruitless contractions which its presence usually provokes. On the contrary, it will be seen, after each application of the potassa, that the white fibrous matter, rubbed down to a hollow by the caustic, becomes in three or four days a projection, and thus, however deeply implicating the cervix, the whole is gradually thrust forward so as to be brought under the solvent action of the potassa till the whole is enucleated. When no remaining disease can be felt, it only remains to pass a large-sized bougie daily to the extent of the wound to prevent cohesion of its sides whilst healing.

From amongst a mass of cases, I must content myself by enumerating some of the favourable results I have seen from such treatment : speedy and entire relief from pains, lameness, in a word the symptoms already mentioned as indicating the disease, followed, in several instances, by pregnancy and healthy labours. In illustration of the subject, I would conclude by quoting the following case recently treated by me in the Hospital for Women. I do so the more readily, because it was taken by Dr. Snow Beck, who had, previously to treatment, demonstrated microscopically the fibroid character of the disease, although the extreme fœtor of the discharges, and the severity of the pains, and the sallow and distressed aspect of the patient had suggested the possibility of cancer. It will be remarked that, by acting in accordance with this view of the pathology of the case, notwithstanding the difficulty and extreme caution required in using so powerful an escharotic at such a depth, a perfect cure resulted, the patient continuing entirely free from the pains, headaches, and other distresses which had made her life for so long almost insupportable.

M. H. T., aged 45, married twenty-four years, was admitted May 15th, 1872. She had had twelve children, the youngest seven years ago. She had children quickly. Nine years ago she saw me on account of leucorrhœa. She had leeches applied occasionally. On admission, the lips of the uterus were very tender on pressure, with an induration in the cervix, giving almost the feeling of carcinoma, together with an offensive discharge. Potassa caustica was applied to the lips and neck of the uterus about twice a week for about eighteen times. Ergot was administered, and as the growth was rubbed down, the uterus pushed the fibroid growth forward. The result was complete removal of all fibroid deposit with entire relief from pain, leaving a small round os uteri with normal tissue around it.

CLINICAL MEMORANDA.

FRACTURE OF THE TRACHEA.

THE singularity of the following accident induces me to report it. I was sent for to a middle-aged woman, who, while hanging out some clothes, slipped off the chair on which she was standing, and fell forwards against its back, from which the top rail was missing. She fell forcibly, and struck the trachea against a sharp upright spindle. I found considerable contusion of the surrounding parts, and an abrasion over the trachea. The cartilaginous rings were crushed ; there were slight expectoration of blood and extreme general emphysema. I applied a large compress of cotton-wool over the part, and retained it *in situ* by straps of plaster. She made a good recovery in about ten days.

EDWARD DRUMMOND, M.D., Oldham.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORT ON THE TREATMENT OF SICK-HEADACHE.

[*Continued from p. 684 of last number.*]

INFIRMARY FOR EPILEPSY AND PARALYSIS.

DR. LOCKHART CLARKE has found guarana very successful in several cases of severe and protracted sick-headache; but, in two cases under his care, it has generally either altogether failed, or only somewhat alleviated the pain. In some cases, it will succeed only when given at the approach of the headache, before the pain becomes severe. Constipation also appears to interfere with the beneficial effects of the medicine.

ABERDEEN ROYAL INFIRMARY.

Dr. FIDDES has, during the past two years, availed himself of the use of guarana in the treatment of cases of sick-headache, and in some cases with immense benefit. His experience has led him to believe that it is the remedy for sick-headache, in doses of ten grains for the adult.

Dr. ANGUS FRASER cannot say that the results obtained by him have been very favourable. In most of the cases guarana did no good at all; and in the few cases in which it appeared to act beneficially, it seemed to be little more than a substitute for a cup of good strong tea or coffee. The remedy has long been a popular one in France, and it seems to do good as often and to fail as often as most popular remedies do.

Dr. DYCE DAVIDSON says that, so far as his experience of guarana for the cure of sick-headache goes, he cannot say that he has found it followed by the beneficial effects which the experience of others would have led him to expect. In those cases in which he has made use of it, he has found it exceedingly fallacious in its results. In some cases it undoubtedly afforded relief to the headache; whereas in others, which were to all appearances exactly similar, its use was attended by no benefit whatsoever, even though used in far larger doses than those which in other patients were productive of benefit. When gastric derangement was present, or when the patient was suffering from the effects of excessive indulgence in alcoholic liquors, it proved perfectly useless. It appears, indeed, to Dr. Davidson to be a curative agent for sick-headache in no ways superior to its congeners tea and coffee, and to be suitable only for those cases in which common experience finds that these much used beverages prove beneficial.

ST. THOMAS'S HOSPITAL.

BRIEF NOTES OF CASES IN DR. MURCHISON'S WARDS.

[*Concluded from p. 684 of last number.*]

THE following two cases are well contrasted; they illustrate the difficulties of the prognosis of heart-disease in young subjects. The first shows the necessity for carefully watching the progress of these cases; and the second is a good instance of the wonderful vitality, or power of resisting disease, which children often possess.

A pale, delicate-looking page-boy, was admitted on October 26th. He had suffered from slight shortness of breath for three months, but had been able to run up and down stairs; he had only been laid up a week with pain in the left side, and increased dyspnœa on exertion.

On admission, the heart's apex was found beating in the fifth space just within the nipple. There was a loud systolic mitral murmur at the apex; the second sound at the base was accentuated. The area of dulness was scarcely larger than normal. Pulse 112, regular; appetite fair. The lungs were clear. He was ordered tincture of bichloride of iron and tincture of digitalis. On November 20th, he complained a good deal of palpitation and dyspnœa on exertion, but got up daily. On the 28th, there was some œdema of the legs; the urine was free from albumen. On December 2nd, he was not so well. There was dulness over the lower three inches of the right lung posteriorly, with subtubular breathing and coarse crepitation. There was less swelling of the legs. He died suddenly the same evening.

Necropsy.—The heart was very large and much dilated. There were a few small recent vegetations on the mitral valve, which was very incompetent; the aortic valves were competent. The heart's substance was soft, but of good colour. There were patches of pulmonary apoplexy in both lungs.

E. F., a stout, thick-set boy, aged 11, was admitted on November 3rd, 1871. He had had rheumatic fever four and a half months previously, and had ever since suffered from dyspnœa on exertion, pain across the chest, cough, and occasional slight hæmoptysis. When convalescent from the rheumatism, he had general dropsy, which, however, did not last long.

On admission, the heart's apex beat in the sixth space, an inch and a quarter outside the nipple; the transverse cardiac dulness measured three and a half inches. There was a loud systolic mitral murmur audible over the whole præcordium. The lungs were clear. The liver was somewhat enlarged; there was no ascites, nor œdema of the legs. The urine contained one-fourth of albumen. He was ordered digitalis and iron. The albuminuria soon disappeared, but in December he got a sharp attack of rheumatism with pericarditis, followed by double pneumonia. At the end of January 1872, the albuminuria suddenly returned; the cardiac hypertrophy had increased, the liver reached below the umbilicus, and there was some anasarca. Under the use of ammonia, ether, and digitalis, he improved; but in February he had symptoms of embolism in the left leg—sudden pain in the left swelling of the leg, tenderness in the ham, etc. The urine again contained one-fourth of albumen. In March the general œdema increased, and ascites rapidly supervened. On March 18th, the circumference of the abdomen was thirty-four inches. The calves of the legs were freely punctured, infusion of digitalis, four times the pharmacopœial strength, was applied on fomentations round the loins, and purgatives were ordered. Under these remedies the dropsy disappeared; but on April 18th, the ascites had not diminished. The abdomen was tapped, after which the urine at once became more abundant and contained less albumen, and the liver diminished in size. On August 6th, the abdomen measured twenty-five inches. There was no ascites. The urine was free from albumen, and the lungs clear. The edge of the liver could be felt two inches above the umbilicus. The heart-sounds were much as on admission, but the transverse dulness had increased to four and a half inches. He was made an out-patient. On November 13th, he was readmitted with orthopnœa. The pulse was 120, small, and weak. The heart's apex beat in the sixth space, an inch and a half outside the nipple. The area of cardiac dulness measured five inches across, and reached to the upper border of the second rib. There was a loud and prolonged systolic mitral murmur. The lungs were pretty clear. The liver-dulness measured seven and a half inches in the mammary line, and the edge could be felt at the level of the umbilicus. There was slight ascites, but no anasarca. The urine contained one-fifth of albumen. Under digitalis and iron, he again improved rapidly; the albumen disappeared from the urine; and on December 4th he was up, and looked as if there was little the matter with him.

The effect of the digitalis fomentations on this boy were most marked; they were applied several times at intervals, and each application was followed by marked increase in the excretion of urine. He had, moreover, taken digitalis internally for some time before the external application was tried, but with little benefit, so far as the effect on the kidneys was concerned.

Singularly Infrequent Pulse.—A pale, grey-haired woman, aged 66, with marked arcus senilis, was admitted in November on account of occasional fits, or lapses, lasting a few seconds only, but accompanied by complete loss of consciousness. The only noticeable feature in the case was her pulse, which, on cursory examination, was only twenty-six per minute. With care, however, a much weaker beat could be felt immediately after each of the twenty-six; this was followed by a long pause. The same thing could be more readily made out by auscultation over the heart. There was no abnormal sound with the heart, and evidence only of slight dilatation. She was improving somewhat on good diet, with iron and rest.

KING'S COLLEGE HOSPITAL.

OPERATIONS, SATURDAY, DECEMBER 14TH, 1872.

Amputation of the Thigh for Diseased Knee and Necrosis of End of Femur.—Mr. John Wood performed this operation on a boy who had been in the hospital for four months, the disease of the joint having lasted for eleven months. In its course there had been acute inflammation of the knee and swelling of the thigh, and Mr. Wood had thought he would have to remove a portion of the thigh-bone; but, as it was possible that the swelling might have been the result of simple induration of the tissues, he waited to see if any change would take place without interference. The disease made no progress towards cure; and, on examining his chest, some parts of the lungs were found consolidated, and the evidence of consumption was clear in the upper part of one lung. This determined Mr. Wood to amputate the leg at

once, rather than wait any longer or try excision, and particularly as every now and then there were marked exacerbations of the disease, and the boy's health was failing. It requires fair health to stand the long progress of cure in excision, which this boy had not. Mr. Wood amputated in the ordinary way by making anterior and posterior flaps; but, before doing so, he made a preliminary incision at the inner side of the joint to ascertain the exact condition of the femur. This was found to be necrosed; and, after the removal of the limb, the upper end of the tibia was found to be denuded of cartilage: the ligaments of the joint were matted together; gelatinous degeneration extended up both before and behind the femur to a considerable extent; and osteophytic growths were found on the femur. It was then evident that excision could have done nothing for such a case.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1872.

MEMBERS who have not yet paid their subscriptions for the year now closing are reminded that they were due in advance on the 1st of January last. In accordance with the laws of the Association, the issue of the JOURNAL will be suspended in the case of all members whose subscriptions remain unpaid on the 31st instant.

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 28TH, 1872.

MR. STANSFELD'S INSPECTORS.

DECIDEDLY Mr. Stansfeld ought to lecture his inspectors for mutiny and insubordination. It is impossible to suspect that the old bottles have proved unequal to contain the new wine, and that the entire ignorance of sanitary subjects which characterises Poor-law inspectors has prevented them from rapidly assimilating the new views and new information which Mr. Stansfeld has poured into them as his chosen negotiators under the Public Health Act. Nevertheless, we fear that they can only be cleared of a charge of hopeless incapacity and utter failure in their important functions, by assuming that they have wilfully perverted the sense of their instructions.

Mr. Stansfeld's recent declaration to the deputation of the South-Eastern Branch was sufficiently clear and explicit. He said: "I quite admit that it is of very great importance that the medical officer of health should be a high class man, and that he should be adequately paid. Under the power of joint appointments which I expressly took in the Act, and under the orders recently issued, my policy would be to favour joint appointments of medical officers of health, so that you might hope to obtain the services of men of position and reputation and influence in the localities in which they live There are many cases in which you might have combined appointments for unions and local boards, and it would be even possible, in some cases, you might succeed in having only one appointment for a whole county." He added, with reference to the payment of Poor-law medical officers for services specially rendered under the Public Health Act: "I understand your proposition to be, that if there is a medical officer appointed, his requirements will probably involve some increased labour on the part of Poor-law officers, for which the latter ought to be paid. The proposition appears to be a fair one, but the question will arise whether you should simply increase his salary as Poor-law medical officer, or whether you should pay him proportionately in respect to the sanitary work he performs. That is a subject under my consideration, but it does not belong to me only. I must reserve any positive expression of opinion until I have consulted my colleagues." There are occasions, Mr. Stansfeld considered, in which Poor-law medical officers would be the best medical officers of health; but he expressly announced that his policy was the combination of Poor-law districts to form a sufficient sanitary area. This declaration was made with great form and at considerable length, and was spread throughout the country by the daily press.

It is not a little curious, therefore, to find "the experienced negotiators", whom Mr. Stansfeld declared he had selected to expound his views, communicating to assembled Boards of Guardians schemes altogether at variance with the policy of the President of the Local Government Board, and all varying one from the other. Mr. Doyle, in South Wales, has busily employed himself in advising the guardians of each district to appoint for each its Poor-law medical officer as medical officer of health until the end of the parochial year, and in persuading the Poor-law medical officers to accept the invidious duty without any fixed salary, and to rely upon the liberality of the guardians for adequate remuneration. The members of the medical profession are said to be a credulous body, not very well experienced in business arrangements; at any rate, they have been readily persuaded by Mr. Doyle to accept these arrangements, or no arrangements, and to undertake an elaborate and laborious inquisition of their districts, and to report without fear or favour upon the sanitary shortcomings of the properties of their neighbours, friends, and employers, trusting to them afterwards to pay them well for the agreeable documents.

Mr. Hawley, on the other hand, the well-remembered hero of the report on Cheltenham Infirmary, has his own opinions on the subject and his own scheme, which are alike opposed to the policy of the President, and to the plans of the negotiator who holds in his hands the sanitary destiny of North and South Wales. Mr. Hawley is plenipotentiary for Hampshire and the adjoining counties. He differs as much in opinion from Mr. Doyle on all essential questions of health-administration, as Mr. Doyle does from Mr. Stansfeld. On the one hand, he is of opinion that the district medical officers are never the proper persons for holding health-appointments; and on this head he considers that Mr. Stansfeld and Mr. Doyle are both entirely wrong. He thinks "that they have plenty to do in their own districts without having additional duties imposed on them, and that, if they were appointed medical officers of health as well as Poor-law medical officers", the accounts as well as the duties must clash with each other. On the other hand, he is of opinion that there is no danger in small areas. "It had been objected", he observed lately at a meeting of the Hampshire local authorities specially convened to hear the words of wisdom, "that local influences would weaken the power of a medical officer; but as they were always highly honourable men, that objection was not a valid one". It is impossible not to admire a *naïveté* so uncompromising, and a conviction so unhesitating, that it is a right rule of government to appoint of forethought a class of officers under circumstances calculated to place their interests in opposition to their duties, and to subject them of *malice prepense* to local influences constantly operating to weaken their authority. Mr. Hawley has his own scheme, just as Mr. Doyle has his. It is to parcel out Hampshire into five districts, with the appointment of a medical officer in each at a salary of £500 a year, and to entirely dissociate them from the Poor-law medical system. In fact, he said, "the law entirely dissociates the Poor-law medical officers from the public health officers". Dr. Bond, of the Hartley Institute, followed him in a speech of considerable power and intelligence, in which he demonstrated the advisability of connecting the Poor-law medical officers with the health organisation, by appointing them as deputies, and paying them for the information furnished, on the plan laid before the President by the British Medical Association.

As the scheme propounded by Mr. Hawley was in direct opposition to that of every other known authority, it is not surprising that the meeting passed unanimously a resolution directly negativing it. The scheme which they did adopt is the worst that has been promulgated; namely, that it was desirable at present, to avoid expense, to appoint medical officers for small areas. Such a result is not only ignominious to the inspector, but discreditable to the Government whom he misrepresents, and injurious to the country. Surely it is time that all this muddle and contradiction should cease. It ought not to be difficult for Mr. Stansfeld to find negotiators capable of understanding the scope of

his policy, and of expounding it to local authorities in such a way as to avoid contradiction and confusion, and to obtain some general uniformity of plan in administering the Public Health Act as satisfactorily as its defective construction will allow.

THE title of the Lumleian Lectures at the Royal College of Physicians, by Dr. Barnes, which we announced to appear in the BRITISH MEDICAL JOURNAL, should have been stated as "On Convulsive Diseases of Women" (not of "Women and Children").

ST. THOMAS'S HOSPITAL PHYSICAL SOCIETY.

A MICROSCOPICAL *soirée* was given on Thursday evening, December 19th, to the students of St. Thomas's Hospital, by the President and Secretary of the Physical Society of that hospital (Mr. Wagstaffe and Dr. Evans). Nearly two hundred of the students and staff attended; and specimens of healthy and morbid anatomy, etc., were exhibited. Among the most attractive were sections of the eye by Mr. Stewart, the lung by Mr. Rainey, Cohnheim's experiments by Mr. Anderson, and the spectroscope by Dr. Stone.

MEDICAL MICROSCOPICAL SOCIETY.

THE second general meeting of this Society was held at St. Bartholomew's Hospital on Friday, December 6th, Mr. W. Morrant Baker in the Chair. Mr. Jabez Hogg gave some account of the work done by the Provisional Committee of which he was chairman. The Secretary (Mr. Groves) read a code of rules, which were adopted with a few amendments. The following gentlemen were elected as officers. *President:* Jabez Hogg, Esq. *Vice-Presidents:* H. Lawson, M.D.; J. F. Payne, M.B. *Treasurer:* T. C. White, Esq. *Honorary Secretaries:* C. H. Golding Bird, Esq.; J. W. Groves, Esq. *Committee:* Mr. H. E. Symons (St. Bartholomew's), Dr. M. Bruce (Charing Cross), Mr. E. C. Baber (St. George's), Mr. A. E. Durham (Guy's), Dr. U. Pritchard (King's College), Mr. J. Needham (London), Mr. Giles (St. Mary's), Mr. B. T. Lowne (Middlesex), Mr. E. A. Schäfer (University College), Mr. George Cowell (Westminster). *Cabinet and Exchange Committee:* Mr. E. C. Baber, Mr. J. Needham, Dr. U. Pritchard, Mr. F. Ward. The place of meeting was not decided upon, but the meeting will take place on the third Friday in each month, from October to July inclusive, and the subscription will be 10s. *per annum* without any entrance fee. Intending members are requested to forward their names, qualifications, or medical school and addresses to Mr. T. C. White, 32, Belgrave Road, S.W., or to Mr. J. W. Groves, St. Bartholomew's Hospital, Smithfield, E.C. The next meeting, of which due notice will be given, will take place on January 17th, 1873.

BETEL-NUT CHEWING.

THE Eastern correspondent of the *New York Mail* writes to that paper:—There is a fascination in betel nut more extraordinary than in a tobacco-passion. The consumption of the latter in chewing alone, in the United States, is a modern phenomenon. An inveterate chewer may have moral resolution enough to break off the habit, though it rarely happens that an effort is made to do so, as an apology is found for continuing a practice that is positively destroying the foundations of health. Once addicted to chewing tobacco, to abandon it is an achievement few have the happiness to perform, notwithstanding the melancholy mortality of men in the meridian of life who are constantly being destroyed by the subtle influence of that strange plant on the nervous system. Thus, sudden palsy of the heart, palsy of a limb, palsy of one-half the tongue, and even instantaneous death, are traceable by physicians to excessive use of tobacco. But the vice of betel-nut chewing, however, is still more remarkable. When the habit is established, there seems no retreat. Each victim wears out his teeth, gums, digestion, and dies with an unsatisfied longing for another quid. Betel-nut trees thrive in most parts of tropical India, the Indian Archipelago, and the Philippine Islands. They grow up gracefully about thirty feet, rarely more than eight inches in diameter. It is an areca catechu. Penang is the universal name of the nut in those places where it is produced: hence Pulo Penang means a betel-nut island. At six years of age, the tree commences bearing nuts of the size of a small pullet's egg, of a bright yellow colour, enclosed in a husk similar to the cocoa-nut; within is a spherical nut, very much like a nutmeg. Broken, a bit of it is wrapped up with a piece of unslaked lime in a peculiar leaf, the siri betelpiper, extensively cultivated for that purpose. The gums and mucous membrane of the mouth are quickly stained a brick-red; the teeth crumble to a level with the gums; and in that condition an inveterate betel-chewer is wretched without a supply. There are large plantations of betel-nut trees in Java to meet the demand for home-consumption and distant provinces. To augment the pleasure, those who can afford it add tobacco to the lime.

PRIZES AT THE ACADEMY OF SCIENCES.

THE following prizes are announced for the years 1873, 1874, and 1875. *Physical Sciences.* Three gold medals, each of the value of 1,000 *francs*, for essays on the following subjects: "The history of the genetic phenomena which precede the development of the embryo in diœcious animals in which reproduction takes place without copulation;" "The process of fecundation in mushrooms;" "The distribution of the marine animals of the coast of France." The essays, written or printed, must be sent in before June 1st, 1873.—Three *Lacaze prizes*, each 10,000 *francs*, will be awarded in 1873 for the essays which shall have contributed most to the progress of Physiology, Physics, and Chemistry.—The *Montyon prize* for statistics, a gold medal of the value of 453 *francs*.—The *Barbier prize*, 2,000 *francs*, for the most valuable discovery in surgery, medicine, pharmacy, or medical botany.—*Alhumhert prize*, a gold medal, of the value of 2,500 *francs*, for an essay on the mode of nutrition of mushrooms.—*Desmazières prize* of 1,000 *francs* for the best work on cryptogamic botany published during the preceding year.—*Thore prize* of 200 *francs* for the best essay on European cellular cryptogams, or on the habits and anatomy of some species of European insect.—*Fors-Mélicocq prize* of 9,000 *francs*, for an essay on the botany of the North of France.—*Prize in Medicine and Surgery*, 5,000 *francs*, for an essay on the therapeutical application of electricity.—The *Bréant prize* for the discovery of a cure for cholera or of its causes.—*Montyon prizes* for works or discoveries useful to the healing art, or which point out the means of rendering unhealthy occupations wholesome.—*Serres prize* of 7,500 *francs* for the best work on "General Embryology, considered in its Application, as far as possible, to Physiology and Medicine."—*Godard prize* of 1,000 *francs* for the best memoir on the "Anatomy, Physiology, and Pathology of the Genito-urinary Organs."—*Montyon prize*, a gold medal of the value of 764 *francs* for the best essay, printed or written, on experimental physiology.

DEATH FROM CHLOROFORM IN KING'S COLLEGE HOSPITAL.

ON Saturday, December 14th, a man named Sullivan, aged 35, was brought into the theatre of King's College Hospital to have his leg examined by Mr. Henry Smith and necrosed bone removed, or the limb amputated at the thigh. Six weeks ago, the knee of his left leg was excised for long-standing disease, but the result was unfavourable. Little or no ankylosis took place, and the disease extended down the leg. His health failed so greatly that Mr. Smith held out amputation to him as the only likely remedy. To this the man tardily consented, on condition that, if the limb could be saved by the removal of dead bone or in any way, it would be saved. He had inhaled chloroform for about five minutes, when signs of distress came on and he struggled violently to push the inhaler from his mouth. This was looked upon as only the common effect of anæsthetic excitement; but in one or two minutes more it was followed by a sudden cessation of the heart's action, a sudden gasping for breath, a brief struggle, and death. Artificial respiration was immediately had recourse to, and tried for about ten minutes, but in vain. The galvanic battery was then applied for

about ten minutes more, artificial respiration being also continued, but to as little purpose. Mr. Smith remarked that, although this event had happened, he was satisfied that no blame was attachable to Mr. Moss, the chloroformist, who invariably was most careful in the administration of anæsthetics in King's College Hospital.

MR. CARDEN OF WORCESTER.

WE have to announce the death of Mr. Carden of Worcester, one of the ablest, most respected, and most widely consulted representatives of surgical science in the provinces. Mr. Carden had for many years won the confidence of the profession and the public in Worcester and the surrounding counties, and was the leading and most trusted local consultant. Mr. Carden would, had he lived, probably have received the honour, at no distant date, of being elected a President of the British Medical Association. The matter had already been discussed. Our readers will deplore in his death the loss of a popular, able, upright, and energetic man, and an accomplished and reliable surgeon. His principal contributions to science were made in these pages. Carden's method of amputation by single flap (BRITISH MEDICAL JOURNAL, 1864) has found a permanent place in surgical literature and practice.

MR. HOLMES COOTE.

WE have to chronicle the death of Mr. Holmes Coote, Senior Surgeon and Lecturer on Surgery of St. Bartholomew's Hospital, at about the age of fifty-six. It is seldom that so sad a fate has to be recorded of a man occupying an eminent position in a learned profession. While actually surgeon and lecturer on surgery at St. Bartholomew's Hospital, this unhappy gentlemen breathed his last this week in a public lunatic asylum, and has left his family destitute. Incipient brain-disease, brought on, probably, by the pressure of anxieties and misfortunes, had interfered with Mr. Coote's professional pursuits, although, until the last few months, not disabling him from attending to his hospital work. The kindness of his colleagues in performing his duties has enabled him to retain lately the title and emoluments of an office of which he at last became unequal to the duties. Mr. Coote began life under circumstances of great promise. A skilful anatomist and an active teacher, a surgeon of some fertility and resource, not unskilled in the use of the pen, or disinclined to use it, well placed at one of our great hospital schools, his friends anticipated for him a brilliant career. Mr. Coote filled with credit many offices of importance. Besides taking a large and useful share in educating successive annual generations of students, he served in the Crimean hospitals with honour, and has since held office as one of the Commissioners under the Contagious Diseases Acts, and as an Examiner in Surgery of the Royal College of Surgeons. His contributions to Holmes's *System of Surgery* were respectable, and his earlier anatomical writings (one of which received the College Triennial Prize in 1845) were of some repute. A career so well begun was sadly and even tragically ended. His friends and pupils, remembering his many good qualities, will not, it may be hoped, be slow to render kindly and seasonable aid to his family.

SANITARY MAPS.

OUR correspondents on this subject will be glad to hear that geological models of England and Wales, constructed by Mr. William Topley, F.G.S., of the Geological Survey, and Mr. James B. Jordan, Mining Record Office, will be ready early in January. They are on a scale of four miles to one inch horizontal and 2000 feet to one inch vertical, and are coloured to represent the geological features. The model of the Wealden district and that of the Thames Basin will be ready early in January. Both Mr. Topley and Mr. Jordan are well known to our profession, especially the former, who afforded much assistance to Dr. Buchanan in his late investigations on subsoil moisture in relation to phthisis in the south-east of England; he has also studied the relations of soil to disease, and is the author of several most interesting papers on the comparative agriculture of England and Wales, the geology of the Straits of Dover, and the geology of the Wealden in relation to agriculture. Mr. Jordan has published a most useful map of the geology of London and its neighbourhood, and is much esteemed by his colleagues as a most painstaking and careful labourer. Their names are indeed a guarantee that the work they promise will be as complete as our present knowledge can make it; and we feel sure that those who saw the beautiful models exhibited in August last at Brighton, will indorse our opinion that they are calculated to be of essential service to our profession in sanitary matters, and in the investigation of the causation of disease in relation to soil as well as to climate, so far as the latter is influenced by the former. Mr. Topley well remarks, in one of his papers, that agriculture depends mainly on climate, climate mainly on contour, and contour mainly on geological structure. We shall again refer to these model maps, and show how material an aid they are calculated to afford in the solution of many of the difficulties with which the future medical officer of health will have to contend under the new Public Health Act, and how useful they will be in regulating the use of the mass of facts relating to disease which we already possess, and which we are continuously accumulating.

THE DEMONSTRATORSHIP AT CHARING CROSS HOSPITAL.

THE following letter relates to the extraordinary resolution passed by the Committee of the Charing Cross Hospital, of which last week we discussed the character.

Liverpool Royal Infirmary School of Medicine, Dec. 24, 1872.

Sir, I am personally unknown to Dr. Murie, and possibly little known to the profession; but I beg sincerely to thank you for the well-merited sympathy you have shown him in the matter of the Charing Cross Hospital appointment. Dr. Murie's work is so thoroughly well known to the profession, and to scientific workers generally, that I should have thought Charing Cross Hospital would have been more honoured in offering Dr. Murie its demonstratorship, than he possibly could have been in accepting it.

I have the honour to be, yours truly,
MILLEN COUGHTREY, M.B., C.M.Edin.,
Demonstrator of Anatomy.

ON A RESURRECTIONIST.

THE following lines have their own historical interest, as relating to a past state of things which concerned anatomical students, and are worthy of a place in our columns, if only for their epigrammatic wit and finish. They appear in *Blackwood's Magazine* for November 1872.

"Here lies an honest man, my brothers,
Who raised himself by raising others.
Anxious his friends from soil to save,
His converse still was with the grave.
To rescue from the tomb his mission,
He took men off to the physician;
And strove that all, whom death releases,
Should rest, if not in peace, in pieces.
So here he waits his resurrection,
In hopes his life may bear dissection."

THE CASE OF ALFRED BAKER.

WE have received an authentic version of the facts relating to the death of Alfred Baker in Millbank Prison, which differs very widely from that published in the daily papers, on which we last week commented. It appears that the prisoner was not examined by the surgeon, but by the assistant-surgeon, who happened to be on duty on the evening of his arrival, as well as on the following (Sunday) morning. He did *not* die immediately on leaving the pump; on the contrary, he attended the morning service in the prison chapel, and afterwards ate the whole of his very substantial dinner without making any further complaint of illness. His death did not take place till five in the afternoon. It was quite sudden, and a few minutes previously he had been conversing unconcernedly with his warder. All this was fully stated at the inquest, but the single reporter present naturally omitted these prosaic details. The jury, however, being in possession of all the facts of the case, made no remarks reflecting on the officers of the prison, but returned a simple verdict of "Death from natural causes". There is not, we learn, the slightest reason to suppose that the man's death was hastened a moment by the assistant-surgeon's oversight. The medical

duties at Millbank are exceedingly heavy, and there are but two medical officers to discharge them. Thousands of prisoners pass through their hands in the course of twelve months, and yet such is the care taken in the examinations that this is the first time that a death has occurred under these circumstances. Sharing the common fate of public officers, the medical officers receive no public credit for the innumerable cases in which they come to accurate conclusions; but the very first time that an error is committed it is made the most of in the papers. This, however, is not, we fear, easily to be avoided. The prisoner has no friend so powerful or who ought to be so watchful as the reporters and writers of the public press. We are happy to redress the wrong done to the surgeons; but the facility with which they are able to appeal for such redress may reconcile them to a temporary annoyance, arising out of a watchfulness which it is the first and most sacred duty of the press to maintain over the sufferings of the helpless and the condemned.

TYPHOID FEVER AT MOSELEY.

ONE of the healthiest and pleasantest suburbs of Birmingham is now suffering from a severe attack of typhoid fever. The cause is not far to seek. Though Moseley is a wealthy and handsome suburb, there is no drainage. The water-closets of the houses run into dumb wells, and the contents of these soak through the sandy soil into the wells of drinking-water. The inhabitants are justly roused to a sense of their danger; and the sanitary authority, the King's Norton guardians, have resolved to appoint a medical officer and an inspector of nuisances; and the local press urges the sanitary authority to ask Mr. Stansfeld to send them at once a competent inspector from the Local Government Board. This outbreak of fever is one among many examples which come under our notice of the results of wilful neglect of sanitary laws. A correspondent writes to the *Birmingham Daily News* that he has impressed on the local board the necessity of draining Moseley, and that they gave as their reasons for a policy of happy inaction—first, that the proprietor of a certain public bath in the neighbourhood had a prescriptive right to certain springs of water, which any system of drainage would divert; second, that the borough of Birmingham, to which naturally a system of sewers would tend, having enough to do with its own sewage, would not allow any more drains to be made connecting with the drains of the borough. We trust that these interested motives will no longer prevent Moseley from obtaining an efficient system of drainage.

DR. PYLE'S ELECTION TO THE GENERAL MEDICAL COUNCIL.

ON this subject, to which we have already referred, the *Durham Chronicle* has the following.

"The recommendation of the principals of the College of Medicine at Newcastle, although backed up by the principals of Durham University, has been set aside. . . . We have no wish to say anything in disparagement of Dr. Pyle, we have no word to say against the personal motives which actuated him in allowing himself to be placed in competition with Dr. Humble. To be chosen a member of so illustrious an assemblage as the General Medical Council is doubtless an object of laudable ambition, and, providing that position has been won by commanding talents, any man succeeding in such an object is entitled to the highest honour and respect, not only of the members of his own profession, but of the public at large. We are afraid that Dr. Pyle cannot lay claim to any such congratulations. He has not won marked distinction in the profession he has chosen; his scientific attainments cannot for a moment be measured with those of Dr. Humble, and he is absolutely unknown in the medical world except as an ordinary practitioner. How, then, it may be asked, does it come to pass that a gentleman with such negative qualifications should have been preferred to so skilful a man as Dr. Humble? The simple answer is, the genius of jobbery has accomplished it. The professional intellect of Newcastle and the classical intellect of Durham University have been overborne by the stolid qualities of the country parson. Every electioneering device was resorted to in order to secure Dr. Pyle's return; votes were brought from a distance, carriage paid; members of Convocation were created by *ad eundem* degrees, and the payment of fees; and the ordinary members of Convocation were swamped by this sudden eruption of a new force. We do not say these proceedings were illegal; but they were, at any rate, unconstitutional. Lord Brougham once said, when a conflict of opinion arose between the House of Lords and the House of Commons, that it would be perfectly legal to strengthen the House of Lords by the Sovereign marching a battalion of guards into the House and elevating them to the Peerage; but it would be in the highest degree unconstitutional. And so it is that, by a legal but perfectly unconstitutional exercise of power, Dr. Pyle has been pitchforked into the General Medical Council, and has thus superseded a very much abler man. Much has been done of late years to revive the fallen fortunes of the Durham University, and no little good has been accomplished under the new *régime*, but we have no hesitation in saying that such proceedings as we are adverting to, besides exciting the general indignation of the medical profession, can scarcely fail to bring discredit, if not contempt, upon the University."

OBSCENE PUBLICATIONS.

AT Marlborough Street on Saturday, Mr. J. Davidson, Mr. J. Romilly, and Mr. John Dennison, appeared before Mr. Knox (the first named on an adjourned summons), charged with unlawfully selling publicly an obscene book. There was a second summons against the defendants, as persons carrying on a so-called "anatomical museum", called Dr. Kahn's Museum, in Tichborne Street, to show cause why certain obscene books and pamphlets seized on the premises should not be destroyed. Mr. Besley, who conducted the prosecution, said that he might mention that Dr. Kahn had not been in this country for the last eight or ten years, but the museum was carried on by the defendants, who were his partners. After the last examination, one would scarcely have expected that any copies of the work—the whole of which were supposed to have been seized—would be in existence; but a new edition of the work has been extensively advertised in the papers and handbills. It was stated that 8,700 copies had been found on the premises. Mr. Knox committed all the defendants for trial, and said he should require each to find two sureties in £100 each. Mr. E. Lewis applied for smaller bail to be taken in the case of Dennison. Mr. Knox declined to alter the bail, as the defendant Dennison was shown to have comported himself as the principal. Bail was then tendered and accepted.

THE INHABITED HOUSE DUTY QUESTION.

IN the JOURNAL of August 24th, it was stated that a movement had been commenced for procuring an extension of the Act 34 and 35 Vict., cap. 103, to houses, institutions, etc., which are used, or partly used, for professional and business purposes and pursuits in which goods are not exposed for sale, and which, consequently, ought not to be compelled to pay the high rate of duty At a meeting lately held, a report was read and adopted, which stated that about twelve hundred gentlemen of the learned and other professions, with gentlemen of business and other persons concerned in the question, had signed petitions to Parliament in support of the proposal. It was resolved that a public meeting should be held at the London Tavern at an early date, of which due notice will be given; and that the metropolitan and other members be invited to attend; and that, in the interim, the ward-clubs should be communicated with, for the purpose of enlisting their sympathy and support in the cause.

PRESCRIPTION OF ERGOT BY MIDWIVES.

AFTER an elaborate discussion, the Academy of Medicine in Paris has adopted the following conclusions in reply to the question lately submitted for its consideration as to the propriety of allowing midwives to prescribe ergot. 1. Notwithstanding its inconveniences, ergot presents such advantages in obstetric practice, that it is necessary to authorise midwives to prescribe it. 2. Article 32 of the law of the 19th Ventose, year XI, which stipulates that midwives must be examined on the theory and practice of accouchement, on the accidents which may precede, accompany, and follow labour, and on the means of treating them, recognises by implication their right to prescribe ergot. 3. This right is in antagonism with the laws, ordinances, and decrees which confine the prescription of poisonous substances (of which ergot is reckoned as one) to medical men and veterinarians. 4. To put an end to

this contradiction, the most simple plan would be to authorise *pharmaciens* to deliver ergot to midwives on the presentation of a prescription signed and dated by themselves.

MEDICAL SERVICE OF THE FRENCH ARMY.

THE French Minister of War has appointed a commission to inquire into the reform required in the sanitary department of the army. The principal points submitted for consideration are, the separation of the sanitary staff from the *intendance*, the causes which impede the completion of the medical staff, and those which cause the withdrawal of a large number of deserving officers before the age at which they should retire.

THE NEW ZEALAND INSTITUTE.

WE have before us the fourth volume of the *Transactions and Proceedings of the New Zealand Institute*, a bulky volume of about 450 pages, which, with its copious supply of illustrations, not only speaks well for the present aspect of science in that colony, but augurs favourably for its future progress. The Institute is of a kind that is much required in our own country. It is a Government establishment "for the promotion of science, literature, and art"; and it is connected with a number of affiliated societies scattered through the provinces, which are to Otago, Canterbury, Nelson, Wellington, and Auckland what the Royal Society of London is to England, that of Edinburgh to Scotland, and the Royal Irish Academy to Ireland. The New Zealand Institute has been in existence only five years, having been founded under an Act of the General Assembly in 1867. But, in the interval, it has managed to publish four goodly sized volumes full of illustrations, and containing a large number of valuable scientific papers, connected more especially with the fauna, flora, and geology of the colony itself. From the appendix to the volume before us, we learn that the membership represents 600 or 700 persons, of whom no fewer than 37 are members of the (legitimate) medical profession. These are "ordinary members." But there is a very limited class of "honorary members," who seem to be appointed after a form of candidature almost as thoroughly searching as that of the competitors for honours in the French Institute or Academies. Though provision is made for thirty appointments, but twelve have yet been filled up. Of these twelve, one half are members of the medical profession, those representing Britain being Professor Owen, Professor Flower, and Dr. Hooker of London, and Dr. Lindsay of Perth. The non-medical members include Darwin and Agassiz. Of the incorporated societies, only one honorary member has yet been appointed—viz., Dr. Lindsay of Perth, by the Otago Institute. The grounds on which these jealously guarded honours have been conferred in his case are (1), so far as concerns the New Zealand Institute—"In recognition of the services he has rendered to New Zealand by his publications on the natural history of the South Island"—the larger half of the colony; and (2), *quoad* the Otago Institute, "that Dr. Lindsay was the first person to make the suggestion that an University should be established in Dunedin.....He was one of the few well instructed naturalists who had personally examined the botany of Otago. He had always taken a great interest in the province; had published an interesting book, *Contributions to the Botany of New Zealand*, which was chiefly devoted to the plants of Otago; and had, at the time of the Intercolonial Exhibition held in Dunedin in 1865, made some valuable presents to the province, which were now in the museum thereof."

SCOTLAND.

THE EDINBURGH TOWN COUNCIL HEALTH-COMMITTEE.

THIS Committee has begun its work. Dr. Littlejohn, the Medical Officer of Health, has been directed to submit a report on the duties of his office and the staff and organisation he considers to be necessary to ensure the proper sanitation of the city. Dr. Littlejohn was further requested to report on certain burial-grounds and their alleged nuisances.

DR. MCKENDRICK concluded on the 20th instant a course of lectures in the Museum of Science and Art, Edinburgh, on the Senses in Man and the Lower Animals. These lectures have been most successful.

FEMALE MEDICAL EDUCATION IN THE EDINBURGH ROYAL INFIRMARY.

AT the meeting of the managers of the Royal Infirmary, held on Monday, the following resolution was passed: "That the managers of the Royal Infirmary resolve to admit females already enrolled in the students' register for Scotland to receive clinical instruction, at a separate hour from that at which male students are admitted into the hospital, and in a stated number of wards, containing eighty beds, to which the female students must confine their visits; and remit to a subcommittee to make the requisite arrangements and alterations."

IRELAND.

AT a meeting of the Council of the Royal College of Surgeons, held last Tuesday, Mr. William Stokes, jun., surgeon to the Richmond Hospital, was elected Professor of Surgery in the room of Mr. Hargrave, resigned.

WE understand that the University of Dublin, the King and Queen's College of Physicians, and the Royal College of Surgeons, have agreed upon a scheme for a joint examining board. The Queen's University, however, and the Apothecaries' Hall still stand aloof.

PUBLIC HEALTH (IRELAND) BILL.

WE have reason to believe that, in the proposed Public Health (Ireland) Bill, the dispensary district will be taken as the unit of area for sanitary purposes, and that every medical officer of a dispensary district will be made *ex officio* a medical officer of health of the union in which his dispensary district is situate. This arrangement will map out the rural parts of Ireland into sanitary districts with an average area of fifty square miles each. Taking the individual house as the unit of sanitary work, the last census gives an average of about two thousand houses for each district. In urban districts, in addition to the dispensary medical officers, the urban sanitary authority will appoint a legally qualified medical practitioner as a medical officer of health. If he be not a dispensary medical officer, his remuneration will be wholly at the charge of the funds of the urban sanitary authority. If he be a dispensary medical officer, he will be additionally remunerated, from the same fund.

LOCAL GOVERNMENT AND SANITARY DEPARTMENT.

THE Finance Committee of the Sunderland Board of Guardians have recommended that the salaries of the medical officers shall be increased as follows: Dr. Evans, from £100 to £150; Mr. Taylor, from £60 to £75; Mr. Shaw, from £40 to £50; and Dr. Blumer, from £60 to £75.

MEDICAL OFFICERS OF HEALTH.

SIR,—As I am not a Poor-law medical officer, I am in a position to make a few disinterested remarks on a paragraph at page 672 of the JOURNAL for December 14th. In it, allusion is made to a suggestion of Mr. Henley that the sanitary work of district medical officers would be fairly remunerated by a payment estimated at about 20 to 30 per cent. on their present receipts. If this supposes them merely acting as deputies to a medical officer of health for a larger district, I should consider the suggestion a good one. I see nothing in the Act, however, providing for the appointment of such deputy medical officers; and I should think it will much more generally be the case that the district medical officer will be appointed the responsible health-officer.

In these cases, if the long list of arduous and important duties is to be properly performed, the remuneration, to be at all adequate, should not, as a rule, be less than the amount of salary as Poor-law medical officer; and, where such salary is much below the average, it should be calculated on a basis of from at least £5 to £7 per 1,000 of population.

In this immediate neighbourhood, Chiswick, with a population of 8,508, has appointed a medical officer of health at a salary of £80; and Acton, with a population of 8,307, has resolved to give a similar salary.

I hope the parochial medical officers will be true to themselves, and not accept work at the low scale of payment which they in most cases receive for their present public labour.

I am, etc., GEORGE D. BROWN.

Henley Villa, Ealing, W., December 17th, 1872.

THE COCKERMOUTH RURAL SANITARY BOARD.

THE Cockermouth Rural Sanitary Board have had a meeting to discuss the best means of carrying out the Public Health Act. Mr. Basil Cane, the local government inspector for the district, was present. Mr. Cane explained to the meeting how it was advisable to appoint a medical officer over a large area, and one debarred from private practice. After some discussion it was agreed, "That this committee recommends that the district to be served by a medical officer include the Cockermouth Union, the Cockermouth Board of Health, the Keswick Board of Health, and the Workington and Maryport Boards of Trustees;" and also, that a medical officer, be appointed at a salary of from £400 to £600 per annum, including expenses, as may be agreed upon, on the terms that his whole services be given to the duties of his appointment. It was decided to defer the consideration of the acceptance or non-acceptance of the Government grant till a future meeting.

CORRESPONDENCE.

A COLLEGE FOR THE DAUGHTERS OF MEDICAL MEN.

SIR,—A visit to the Epsom College on "Founder's Day" convinced me more fully of the value of that excellent school for the education of the sons of members of our profession. In your JOURNAL of the 14th inst., I regret to find it stated that declining health renders it necessary that two of our most distinguished surgeons should find it necessary to appeal to the subscribers of Propert's College for admission for their sons. What about the education of the daughters of our profession? In answer to this question, allow me once more to offer a suggestion on their behalf. The British Medical Association will hold their next annual meeting in London. I venture to hope that by such aid as the press can give to this benevolent object, we may look forward for an announcement from the chairman of that meeting that the funds collected will justify the erecting of a college for the education of the daughters of medical men. To accomplish this very desirable object, I beg to suggest that every registered medical man do volunteer or be invited to subscribe one guinea to the building fund. The subscribers to your JOURNAL alone number, I believe, 5,000. Let us hope that each and all of them may do this much at least, whilst from the more affluent liberal donations may be expected to flow in.

Declining health and advanced years have caused me to retire from my profession, yet I shall be glad to open a subscription for a female college by subscribing my guinea. I will also be glad to take up my residence in the suburbs of London, if by doing so I can aid in the good work I herein propose.

I am, etc.,

Cheltenham, December 17th. WILLIAM DALTON.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 19th, 1872.

Banham, Henry French, Cambridge
Bryan, Clement Frederick, Humberstone, Leicester
Davison, William John, Upper Bedford Place, W.
Dixon, John Francis, Bournemouth
Kennedy, Thomas Augustus, Cavan, Ireland
Hall, Frank Algernon, Newmarket
Needham, Walter, Manchester
Pink, Thomas, Greenwich
Shaw, Walter, Hereford

The following gentlemen also on the same day passed their primary professional examination.

Carter, Albert, Guy's Hospital
Cumming, William Richard, St. Mary's Hospital
Grindrod, Charles Frederick, St. Mary's Hospital
Haslam, Thomas Henry, St. Thomas's Hospital
Hooper, Alfred, Guy's Hospital
Paley, James Hewitt, Guy's Hospital
Pocock, Walter, St. Thomas's Hospital
Rogers, Edward Coulton, Guy's Hospital
Steavenson, William Edward, St. Bartholomew's Hospital

As Assistants in compounding and dispensing medicines.

Hopkinson, Stephen, Ashover, Derbyshire
Cox, Edwin Joseph, Red Hill, Surrey
Gardner, James Richard, Plymouth
Griffiths, Evan, Truro

MEDICAL VACANCIES.

THE following vacancies are announced:—

ADDENBROOKE'S HOSPITAL, Cambridge—House-Physician and House-Surgeon: each £65 per annum, board, and residence.
BELFORD UNION, Northumberland—Medical Officer for the East District; £25 per annum.
BIRMINGHAM LYING-IN CHARITY—Medical Officer.
BOLNESS and CARRIDEN, Linlithgowshire, united Parishes of—Medical Practitioner.
CHELSEA, BROMPTON, and BELGRAVE DISPENSARY, Sloane Square—Surgeon.
CLINICAL HOSPITAL and DISPENSARY FOR CHILDREN, Manchester—House-Surgeon: £60 per annum, residence, and board.
DORSET LUNATIC ASYLUMS, near Dorchester—Assistant Medical Officer for the Forston Asylum: £100 per annum, board, and apartments.
GENERAL LYING-IN HOSPITAL, York Road, Lambeth—Physician-Accoucheur.—Physician-Accoucheur for Out-patients.
DENTAL HOSPITAL OF LONDON—House-Surgeon: £40 per annum.
GERMAN HOSPITAL, Dalston—Honorary Assistant-Physician.
HERTFORDSHIRE GAOL, Hertford—Medical Officer.
HERTS REFORMATORY, Hertford—Medical Officer.
INDIAN MEDICAL SERVICE—Sixteen Assistant-Surgeons.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
KILDALTON, in Islay—Medical Officer: £70 per annum, including medicine for the paupers.
LEDWICH SCHOOL OF ANATOMY, MEDICINE, and SURGERY—Lecturer on the Practice of Medicine.
LEITH HOSPITAL—House-Surgeon.
LEXDEN and WINSTREE UNION, Essex—Medical Officer and Public Vaccinator for District No. 9: £90 per annum, and fees.
MANCHESTER ROYAL INFIRMARY, DISPENSARY, LUNATIC HOSPITAL, or ASYLUM—Honorary Medical Officers..
METROPOLITAN FREE HOSPITAL, Devonshire Square—Hon. Assistant-Physician.
MOSS-SIDE BOARD OF HEALTH—Medical Officer of Health: £52:10 per annum.
NATIONAL HOSPITAL, Newman Street—Consulting Physician.—Physician.
NAVAL MEDICAL SERVICE—Assistant-Surgeons.
NEATH URBAN SANITARY DISTRICT—Medical Officer of Health: £30 per annum.
NEWPORT (Mon.) INFIRMARY AND DISPENSARY—Resident Medical Officer.
NEWPORT (Mon.) ODD FELLOWS MEDICAL AID ASSOCIATION—Assistant-Surgeon: £60 per annum, board, and residence.
OLDHAM, Borough of—Medical Officer of Health: £400 per annum, offices, stationery, etc.
PATELEY BRIDGE UNION RURAL SANITARY DISTRICT—Medical Officer of Health.
PLOMESGATE UNION, Suffolk—Medical Officer for the Earl Soham District: £60 per annum.
RADCLIFFE, Lancashire—Medical Officer of Health.
ROYAL COLLEGE OF SURGEONS, England—Member of the Court of Examiners.
ROYAL PORTSMOUTH HOSPITAL—Female Superintendent for the Lock Wards: £40 per annum, rooms, and washing.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL—Surgeon.
ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon: £75 per annum, board, residence, and washing.
ST. BARTHOLOMEW'S HOSPITAL—Surgeon and Lecturer on Surgery.
UNIVERSITY OF EDINBURGH—Chief Assistant in the Chemical Laboratory.
VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea—Registrar and Pathologist.
WALLASEY DISPENSARY—House-Surgeon; £100 per annum, furnished residence, coals, and gas.
WANDSWORTH DISTRICT—Public Analyst.
WEST DERBY, Lancashire, Local Board of—Medical Officer of Health: £100 per annum.
WORCESTER GENERAL INFIRMARY—House-Surgeon: £100 per annum, board, and lodging.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

MORE.—On December 14th, at Rothwell, Northamptonshire, the wife of James More, M.D., of a son.

DEATHS.

KNIGHT, George Campbell, M.D., at Frome, Somerset, aged 52, on December 10th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY .....Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY .....Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Annual Meeting. Election of Officers and President's Valedictory Address. Dr. Mitchell, "On a Case of Abortion"; Dr. Heywood Smith, "On a Case of *Post Partum* Hæmorrhage"; and other papers.

THURSDAY.—Hunterian Society, 8 P.M. Dr. Peacock, "On Cases of Rheumatism treated by Blisters." Council, 7.30 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. DURHAM'S name should have appeared, in our list of intending contributors, as Surgeon to, and Lecturer on Anatomy at, Guy's Hospital.

MR. EDWARD HOME.—We will have the subject looked up.

MEDICAL ETIQUETTE.—In accordance with the recent resolution of the Committee of Council, we would suggest to Mr. Fielding (Alfreton) to bring the matter which he describes under the notice of the Council of his Branch.

MR. IKIN'S paper on the Progress of Public Hygiene will have early insertion.

ABDOMINAL PUNCTURE IN TYMPANITES.

SIR,—The subject of the use of the fine trocar for the relief of tympanites, which occupied a place in several of your issues some months ago, has been reverted to by Mr. Jessop in his valuable paper on the Surgical Uses of the Pneumatic Aspirator, contained in the JOURNAL of December 7th. I think I may opportunely call the attention of those gentlemen to whom he refers as anxious for the honour of having introduced it to the profession, to the answer to the forty-sixth question in Munro's *Theory and Practice of Surgery*, published in the year 1800—seventy-two years ago—where they will find this mode of treatment not only recommended, but how to carry it out very carefully described (as it was then performed).

I am, etc. GEORGE LONGBOTHAM.

21, Park Square, Leeds, December 11th, 1872.

MEDICAL EMIGRATION.

SIR,—Seven years' experience of medical life in Canada has convinced me that it is no field for an Englishman to practise in, and my advice to your correspondent, A. B. C., who asks for information upon the subject, is, Don't go. Should he establish himself in a town, he will be obliged to keep up appearances as much as at home, and his expenses would be equally great. If, on the other hand, he put up his shingle in the country, he will have to work very hard, and take his fees, after giving long credit, in the produce of the country. Apart from these drawbacks, he will find himself opposed wherever he settles by colonial medical men, who, as a rule, are intelligent men, possessed of sound practical knowledge, and supported by local interests, which gives them the pull over professional gentlemen from the old country.

I am not biassed by prejudice in the advice which I give; on the contrary, I am much attached to the colony, and were I possessed of a small income and independent of my profession, the Canadian Dominion is where I would make my home, for there is a charm about the country which captivates almost every Englishman who goes there. But I must not occupy more of your valuable space. A book I wrote last year, and placed in the hands of Mr. Stanford of Charing Cross, will give A. B. C. every information he requires if he emigrate in the capacity of doctor, farmer, agriculturist, sportsman, or small capitalist.

I am, etc., HARVEY J. PHILPOT.

East Dulwich, S.E., November 1872.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

DR. DALTON'S last letter was inserted recently; and we shall feel the greatest pleasure in learning that his charitable exertions are successful, and in inserting further communications from him on the subject. The communication which he has addressed to us since writing the letter which appears in the current number of the JOURNAL, appears to have been written under an erroneous impression.

CONTEMPORARY MEDICAL REVIEWING.

THE review on Modern Works of Surgery, recently published, has excited some hostile comment among our contemporaries. It has, however, apparently been received with great satisfaction by our readers generally, as a salutary protest against the worthlessness of ordinary reviewing in the medical papers, has produced quite a budget of congratulatory letters, some of them from very eminent members of the profession. A hospital surgeon asks us to call attention to a passage in Mr. Bryant's book at p. 446, in which the author, in recommending the use of *cotton*-wool, expresses the opinion that that *directly off the sheep* is best. This, no doubt, the author will be glad to explain or correct in a future edition; as also the description of the figures at p. 908, where a section of bone, showing the characters of mollities ossium figures as a normal specimen, and *vice versâ*.

Mr. WICKHAM BARNES.

SIR,—In reference to paragraph headed "Mr. Wickham Barnes," allow me to protest against the term manœuvres being applied in conjunction with my name. What action I have taken in this matter has been of a perfectly disinterested character and "above-board," without reference to political or party combinations. The paragraph in question would also lead your readers to suppose that I had forwarded to you a personal communication, when in fact it was an official letter from the President of the Local Government Board, a communication which I never expected would have met with refusal.

You also refer to the opinions of six members of Council: allow me to state that eleven were present and voted for the resolutions, the largest number that have ever attended a Council meeting of our Association.

I am, etc.,

December 1872. J. WICKHAM BARNES.

*** The resolutions in question were prepared without communication with the President of the Council, and brought forward without notice at an ordinary Council meeting called for other business, at which none of the provincial members were present, whose interests were dealt with so freely.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion, Dec. 21st; The Manchester Guardian, Dec. 25th; The Ulster General Advertiser, Dec. 21st; The Scotsman, Dec. 23rd; The Bath Express, Dec. 21st; The Eastern Morning News; The Northwich and Winsford Guardian; The Royal Leamington Spa Courier; The Bucks Advertiser; The Bucks Herald; The Durham Chronicle; The Glasgow Herald; The Cardiff and Merthyr Guardian; The Newcastle Daily Chronicle; The Sheffield Times; The Whitehaven News; The Bacup and Rossendale News; The Bacup Times; The Gloucestershire Chronicle; The Birmingham Daily Post; The North Wales Chronicle; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

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